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NEW SOUTH WALES.

VOTES

AND

PROCEEDINGS

OF

THE LEGISLATIVE ASSEMBLY

DURING THE SESSION

OF

1869,

WITH THE VARIOUS DOCUMENTS CONNECTED THEREWITH.

IN TWO VOLUMES.
VOL. II.

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1869.

LEGISLATIVE ASSEMBLY.
NEW SOUTH WALES.

VOTES AND PROCEEDINGS.
SESSION 1869.

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LEGISLATIVE ASSEMBLY.
NEW SOUTH WALES.

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1869.

NEW SOUTH WALES.

ROAD TRUST ACCOUNTS.

(FOR THE HALF-YEAR ENDING 31 DECEMBER, 1868.)

Presented to Parliament in accordance with the provisions of the several Acts.

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ROAD TRUST ACCOUNTS.

No. 1.

THE Commissioners of the South Head Roads Trust, for the Half-year ending 31st December, 1868.

ACCOUNT OF RECEIPTS AND DISBURSEMENTS.

Dr.			Cr.		
RECEIPTS.			DISBURSEMENTS.		
1868.		£	s.	d.	
Dec. 31.	To 6 months' rent of toll-gates to date ..	1,680	0	0	
	„ Balance against Commissioners, viz.— overdraft at bank	5,630	9	5	
		£	7,310	9	5
1868.		£	s.	d.	
Dec. 31.	By Balance from last half-year	5,638	5	2	
	„ Secretary and Surveyor's salary	50	0	0	
	„ Miscellaneous expenditure:—				
	Mr. O'Brien, balance of interest	2	2	8	
	Tools	3	7	6	
	Mrs. Deane, interest on mortgage	200	0	0	
	Mr. Goodin, law costs	7	12	4	
	Petty expenses	1	15	2	
	M'Carthy, Son, & Donovan, Bank Solicitors' costs	5	18	4	
	Bank interest, overdraft	82	0	2	
					302 16 2
	„ Expenditure on undermentioned Roads, viz.:—				
	Old South Head Road:—				
	Mr. O'Brien, for blue metal	278	8	0	
	Do., for white metal	96	12	0	
	Wages, ballast, &c.	389	2	4	
					764 2 4
	New South Head Road:—				
	Mr. O'Brien, for blue metal	75	0	0	
	Goodlet & Smith, for drain pipes	7	16	0	
	Wages, ballast, &c.	320	6	0	
					403 2 0
	Glenmore Road, wages, &c.				92 16 6
	Darling Point Road, do.				46 11 3
	Point Piper Road, do.				5 11 0
	Watson's Bay Road do.				7 5 0
					£ 7,310 9 5

For the Commissioners of the South Head Roads Trust,—

16 March, 1869.

T. W. SMART, Hon. Treasurer.
GERARD PHILLIPS, Secretary.

No. 2.

ABSTRACT of Receipts and Expenditure of the Maitland Road Trust, from the 1st July to 31st December, 1868.

Dr.			Cr.		
1868.		£	s.	d.	
July 1	To Balance in Bank	0	15	9	
Dec. 31	„ Rent of Falls Punt	148	5	0	
	„ „ Hinton	127	10	0	
	„ „ Largs	31	5	5	
	„ Arrears, Hawley & Guilfoyle	10	0	0	
	„ Miscellaneous	6	0	4	
		£	323	16	6
1868.		£	s.	d.	
Dec. 31	By Secretary—Salary	37	10	0	
	„ Repairs to punt	79	1	8	
	„ New boat, Largs Ferry	10	0	0	
	„ Repairs to wharves and approaches	6	15	0	
	„ New wheels and pumps	7	1	2	
	„ Removing punts for repairs, &c.	14	12	8	
	„ Loan to Phoenix Park Road	8	0	0	
	„ „ Four-mile Creek	2	10	0	
	„ Rent of office	19	10	0	
	„ Services of custodian	3	0	0	
	„ Fencing	5	0	0	
	„ Law expenses	4	5	4	
	„ Printing	5	12	9	
	„ Surveyor	1	1	0	
	„ Miscellaneous	2	10	0	
	„ Balance in Bank	58	13	0	
	„ Cash in hand	58	8	11	
					117 6 11
					£ 323 16 6

Audited and found correct,—

WILLIAM KEATING, }
JOHN BOWDEN, } Auditors.

STEPHEN SCHOLEY, Warden.
THOMAS HUGHES, Secretary.

3

No. 3.

CAMPBELLTOWN ROAD TRUST.

THE Commissioners of the Campbelltown Road Trust in Account Current, for the Half-year ending 31st December, 1868.

Dr.

Cr.

DATE.	PARTICULARS OF SUMS RECEIVED.	AMOUNT.	DATE.	PARTICULARS OF SUMS EXPENDED.	AMOUNT.
1868.		£ s. d.	1868.		£ s. d.
July 1	To Balance from June.. .. .	22 2 9	Aug. 3	By Labor on road, J. Stanford	6 0 0
Dec. 31	„ Six months' rent of Denham Court Toll Gate	36 0 0	Sep. 24	„ „ G. Sladen	0 12 6
			„ 30	„ Poles, J. Rudd	1 2 0
			Oct. 2	„ „ Graham & Larkin	2 2 0
			„ 12	„ „ T. Sweeney	0 11 0
			Nov. 20	„ „ J. Frost	1 2 0
			Dec. 31	„ Labor on road, Gray & Quinn	5 12 6
				„ Advertisements, <i>Herald and Empire</i> ..	2 3 9
				„ Secretary's salary, six months	15 0 0
				„ Stamps, 5s. 6d.; stationery, 8s.	0 13 6
				„ Sundries	0 10 0
				„ Balance	22 13 6
		£ 58 2 9			£ 53 2 9

We certify to the correctness of the above Account,—

Campbelltown, 30 January, 1869.

THOMAS CHIPPENDALL, }
JOSEPH WARBY, } Commissioners.

No. 4.

RETURN of Receipts and Expenditure of the Commissioners of the Richmond Road Trust, for the Half-year ending the 31st December, 1868.

Dr.

Cr.

DATE.	PARTICULARS OF SUMS RECEIVED.	AMOUNT.	DATE.	PARTICULARS OF SUMS EXPENDED.	AMOUNT.
1868.		£ s. d.	1868.		£ s. d.
July 1	To Balance on hand	87 2 0	Jan. 7	By Peter Winter, balance, new toll-house ..	5 0 0
„ 25	„ Rent of Blacktown tolls for June ..	20 16 8		„ Dixon & M'Pherson, balance, new bridge	54 0 0
Aug. 15	„ „ „ July ..	20 16 8		„ B. Isaacs, printing	0 4 0
Nov. 13	„ „ „ August, September, and October	30 0 0		„ Secretary, quarter's salary	7 10 0
Dec. 1	„ Rent of Blacktown tolls for November ..	10 0 0	Dec. 31	„ Do., postages, &c.	0 10 0
				„ Margaret Seymour, use of room	3 0 0
				„ L. White, advertising	1 5 2
				„ Secretary, quarter's salary	7 10 0
				„ Do., postages, &c.	0 5 0
				„ Balance on hand	89 11 2
		£ 168 15 4			£ 168 15 4

EDWARD POWELL, }
GEO. M. PITT, }
JOSEPH ONUS, } Commissioners.
SLOPER COX, }

1869.

LEGISLATIVE ASSEMBLY.

NEW SOUTH WALES.

ROADS.

(MEMORANDUM RESPECTING CESSNOCK ROAD ACCOUNTS.)

Ordered by the Legislative Assembly to be Printed, 7 October, 1869.

Memo. respecting delay in verification of Cessnock Road Accounts.

I WAS busy preparing the Abstracts of the Public Accounts for 1868 when the Cessnock Road papers were referred to me ; and as they appeared to refer only to the adjustment of advances, and not of an urgent nature, I put them aside, intending to deal with them on the completion of these Statements. Before I had time, however, to take them up, I received instructions to commence the preparation of the Supplementary Estimates, and Estimates for 1870, which, in addition to my ordinary duties, more than occupied the whole of my time, and I have frequently had to remain in the office to 10 o'clock at night.

GEORGE LAYTON,
Accountant.

The Treasury,
7 October, 1869.

1869.

LEGISLATIVE ASSEMBLY.

NEW SOUTH WALES.

ROADS.

(MEMORANDA RELATIVE TO APPOINTMENT OF TRUSTEES FOR THE ROAD FROM THE MAIN HUNTER'S RIVER ROAD TO CESSNOCK.)

Ordered by the Legislative Assembly to be Printed, 6 October, 1869.

HAVING made a statement in the Legislative Assembly, upon information supplied from this office, to the effect that Mr. Eckford, M.P. for the Electoral District of The Wollombi, had recommended certain persons as Trustees for the Road from the Main Hunter's River Road to Cessnock, and that these appointments had been made on the recommendation of that honorable gentleman, and having now reason to doubt the accuracy of this statement, which is denied by Mr. Eckford,—I request that the minute or other authority upon which such appointments were made may be placed before me, and that, if there be any reason to believe that an error has been committed by myself or any officer of the department, the fullest report may be furnished, in order that the matter may be thoroughly understood.

[Urgent.]

W.F.
October 6, 1869.

After careful inquiry into the circumstances of this case, I am inclined to think that the nomination by Mr. Eckford of Trustees was intended by that gentleman for the portion between Wollombi and Cessnock, and not also for the Maitland end—Cessnock to Maitland.

This impression in my mind is confirmed by the tenor of the minutes indorsed on the papers, which state that Mr. Eckford merely desired to name new Trustees for road *in his Electorate*.

If this is the fact, it is clear that the money available for the portion in question, viz., Cessnock to Maitland, was by an oversight—clearly not by Mr. Eckford's advice—handed over to the new Trust. This clerical error was solely through my failure to realize and understand the result of the substitution of the new Trustees for the Maitland Road Trust, who legally have charge of the portion of road. I offer, therefore, this as an explanation of *my* blunder, as I am afraid it must be considered.

H.F.

1869.

LEGISLATIVE ASSEMBLY.
NEW SOUTH WALES.

CESSNOCK ROAD.
(RETURN RESPECTING.)

Ordered by the Legislative Assembly to be Printed, 19 October, 1869.

RETURN to an *Order* made by the Honorable the Legislative Assembly of New South Wales, dated 29th September, 1869, That there be laid upon the Table of this House,—

“ A copy of all Correspondence, Documents, and Minutes, which have
“ passed between the Government and any person or persons respecting the
“ expenditure of the grant for the repair of the Cessnock Road for the year
“ 1868.”

(Mr. Wilson.)

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3.	Under Secretary for Lands to Commissioners, Maitland Road Trust. 24 December, 1868	4
4.	Same to J. Eckford. 11 January, 1869	4
5.	J. Eckford to Secretary for Lands. 12 February, 1869	4
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7.	Same to same do. 20 May, 1869	17
8.	Same to same do. 11 June, 1869	22
9.	Under Secretary for Lands. 23 June, 1869	23
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11.	J. Eckford to same (enclosure). 20 August, 1869	24
12.	S. Scholey to same. 24 August, 1869	25
13.	Same to same. 30 September, 1869	25
14.	Minute of Secretary for Lands. 5 June, 1869	26

CESSNOCK ROAD.

No. 1.

J. ECKFORD, Esq., M.L.A., to THE SECRETARY FOR LANDS.

Sydney, 11 December, 1868.

SIR,

I herewith enclose a report of the proceedings of the Maitland District Council, as taken from the *Maitland Mercury*, in which my name is mentioned. You will perceive it was moved and seconded the matter should lie over until the next meeting. As I am not aware what the report can mean only from hearsay, I trust the Government will not take any action upon it without first hearing me. I respectfully beg leave further to refer you to some remarks of the Warden, which are underlined, wherein he has stated I have had frequent opportunities of giving information if I desired to do so. The fact is I distinctly stated, at the last meeting held on the third Tuesday in last month, that any information the Warden or Councillors required of me I was prepared to give; this, therefore, does not show I was not willing to give any information in my power.

I have, &c.,
JOSEPH ECKFORD.

[Enclosure in No. 1.]

Extracts from *Maitland Mercury*.

CESSNOCK Road Matters.—The Warden, referring to a statement made at the last meeting, questioning the power of the Council to appoint Committees of investigation out of its body, read the charter appointing the Council, which gave the power which had been disputed. The District Council Act imparted similar authority. The Warden also made allusion to a threat made by a Commissioner recently, that he would, if he got another Councillor with him, remove the Warden; and pointed out that the Warden was placed in his position, not by the Commissioners but by the Governor under charter, and that therefore no vote of the Council could remove him, or operate to remove him; if by any chance his removal was desired, he would be called upon by the Government to show cause against it. He further went on to define the powers of the Warden, and the responsibilities of his office, and regretted that inquiry into what he considered demanded inquiry had been arrested by the action of a Commissioner. A charge had been made against the Warden and the Secretary for permitting a man named Sheridan to inspect certain vouchers in the office, but this charge he begged most distinctly and emphatically to deny. He also denied that he had imputed fraud to any Commissioner. He proceeded to defend himself against what he conceived to be aspersions upon his character as an honest man, and pointed to his career in East Maitland as a defence against such aspersions.

Under legal advice he had visited Sydney and seen the Minister for Lands, who had directed that a report in writing, detailing all the particulars of the case, should be submitted to him, and he (the Minister for Lands) had promised to take such action as was necessary, without casting any responsibility of the proceedings upon either him as Warden or upon the Council. The Minister had directed him to submit the statement to the Council, and have it adopted by the Trust if possible, but whether it was agreed to or not, to forward it to him. A report of the circumstances of the case in which the Committee of investigation had made inquiries, had accordingly been drawn up by Mr. R. W. Thompson, and was now before the Council. This report was made up from the documents in the office, and from the result of the Committee's inquiry. He begged to move that the report be adopted.

Councillor Bowden seconded the motion.

Councillor Keating thought the Council ought to wait till Councillor Eckford was present—he was the person referred to principally in the report, and perhaps if he were present he might give some information to the Council which would clear up some of the matters referred to. He moved, as an amendment, that the discussion be deferred to the next meeting, and that Councillor Eckford be called upon to explain.

Councillor M'Mahon seconded the amendment, as he agreed that it was most advisable that Councillor Eckford should be present.

Councillor Bowden did not recognize the necessity for delay in adopting the report which would give the information desired by the Minister for Lands; the matter would come before the Council again when Councillor Eckford was present, and no charge of imputation was made against that Councillor.

Councillors Noble and O'Brien agreed with Councillor Bowden that there was nothing to be gained by delay, nor would any injustice be done to Councillor Eckford.

The Warden replied, and pointed out that Councillor Eckford had had previous opportunities of giving information if he had desired to do so, and as he had not furnished such information it was to be presumed that he was either unable or unwilling to furnish it; therefore nothing would be gained by delay in adopting the report, and he trusted the resolution would be carried. He hoped the mover of the amendment would withdraw it. This Councillor Keating declined to do; and the amendment and motion being then put, the motion was then carried by a majority of one.

After a short interval Councillor Keating moved that the Editor of the *Maitland Mercury* be requested to withhold the report of the preceding discussion till after next meeting.

Councillor M'Mahon seconded the motion.

The Warden must oppose the motion, as he could not see why the report should be withheld from the public. It would make the Council very little if any portion of its business was suppressed—any attempt at suppression would throw suspicion on the proceedings of the Council. Whatever he had said he was not ashamed of, and he thought it would be inadvisable to withhold any reports of their business. He did not think there should be any dictation to the Press as to the course it should take in reporting their proceedings.

Councillor Bowden did not think the usual course of things should be interfered with in this case.

The motion was put and lost; and this being all the business, the Council rose.

No. 2.

[N.B.—This Report was originally received at the Lands Department, on 17th December, *unsigned*, and was returned again signed, on 5th January, 1869.]

S. SCHOLEY—REPORT OF MAITLAND DISTRICT COUNCIL.

REPORT of the Maitland District Council respecting the alleged expenditure of a portion of the sum of three hundred and fifty pounds voted by the Legislative Assembly for the repairs of a portion of the Wollombi Road between West Maitland and Cessnock, submitted for the information of the Honorable the Minister for Lands.

The Council does itself the honor to report that on or about the 4th day of June last, the sum of £350 was placed by the Colonial Treasurer to the credit of the Council in the Bank of New South Wales, Sydney, for the purpose of enabling the Council to execute certain necessary repairs on the Wollombi Road, between West Maitland and Cessnock, a distance of fourteen miles or thereabouts, and that six months was granted for the expenditure of that sum.

That in the month of May last the various roads within the Maitland District were allotted to the charge of various Councillors by vote of the Council, and amongst others the Wollombi Road was allotted to the charge of Mr. Joseph Eckford, assisted by the Warden, Mr. Stephen Scholey, but by some error of the Clerk of the Council, the Warden's name was not inserted in the minutes.

2. That on the 6th of October last the Warden obtained certain information which induced him, on the 12th of October, before 6 o'clock a.m., to visit that part of the Wollombi Road which was then immediately under repair, for the purpose of ascertaining whether the men who were said to be working on the said road came to their work in due time, and as to how the work generally was being carried on. The Warden then found that nearly all the men were not at work in due time, that up to a quarter past 7 the overseer, Patrick Doran, whose duty it was to set the men to work, to keep their time, and to carry out the instructions of the directing Councillor, was not on the ground.

3. That at the time the said Patrick Doran was lodging on week-days at the house of Mr. Joseph Eckford, at the charge of 5s. per week.

4. That one Solomon Israel and one Patrick Kinneally were carters said to be employed on the said work, neither of whom were at work up to half-past 8 o'clock on the morning of the 12th of October; but the Warden ascertained from one of the labourers, named James Moylan, that Mr. Eckford had instructed the carter, Solomon Israel, not to come to work until Wednesday the 14th of October.

5. That on Tuesday the 27th of October, the usual pay-day, Mr. Eckford presented to the Warden, at the office of the Council, the order bearing that date, a copy of which is sent herewith, and on inquiry being made it was ascertained from Mr. Eckford that Solomon Israel, the carter, claimed for thirteen days' work with his horse and cart, at 12s. per day, and that Patrick Kinneally, the other carter, claimed for nine days' work, at the same rate. Mr. Eckford had at that time all the vouchers for the expenditure of the said sum in his possession, and on Mr. Eckford's requiring a cheque, in accordance with the order before mentioned, the Warden refused to give a cheque until all the vouchers were produced and in the office. The Warden believing, from information which had been previously furnished to him, that both Israel's and Kinneally's accounts of their work were false, sent the Secretary of the Council to them to endeavour to obtain from them a written statement of these accounts, which, however, the Secretary was unable to obtain from them; but the Warden the same evening obtained further information from John Sheridan, who had been keeping a book of the time of all the men, which at once confirmed the impression he had previously formed, that Israel's and Kinneally's accounts (as stated by Mr. Eckford) were both false, inasmuch as Israel had only worked nine days instead of thirteen, for which he claimed, and Kinneally had only worked two days instead of nine, for which he claimed.

See enclosure to
No. 6, dated
27 October, 1868.

6. That at the time of the Warden's refusing to give Mr. Eckford a cheque, he requested Mr. Eckford to have all the workmen down at the office on Thursday the 29th of October, that he might examine them as to the work they had really done, and Mr. Eckford promised that the men should be there.

7. That on Thursday all the men, including Israel and Kinneally, but excepting Doran, the overseer, came to the office of the Council, and the Warden then examined all the labourers, particularly as to the time made by Israel and Kinneally. None of the men at first appeared willing to give any information, but at length Moylan and Sheridan made certain statements, copies of which are hereto annexed, marked A and B. Israel was afterwards brought in and examined by the Warden, in the presence of the Secretary and of Mr. Eckford, and he then stated that he had worked thirteen days, commencing from Monday the 12th of October; that he had worked that very day, and begun work at 6 o'clock, and had carried Doran, Sheridan, Hennessy, Moylan, and Walsh, out to the work in his cart, this being the very day on which the Warden was on the work, and found that up to half-past 8 o'clock he was not on the work nor going to it; and that Sheridan, Moylan, and Hennessy were on the ground—the first at ten minutes past 6 and the two latter at ten minutes past 7; and that Doran and Walsh were not there at all. The Warden then declined to pay Israel for any more than nine days, which he at last accepted, but persisted to the last that he had worked thirteen days and was entitled to be paid for them. Kinneally also insisted that he had worked nine days, but he could not say when he begun work or when he finished, and he was only paid for two days.

See Enclosures to
No. 6.

8. The Warden being convinced, from what he had seen himself and from the information derived from Sheridan and Moylan, that Israel had attempted, by false pretences, to obtain payment from the Council for four days' work which he had never performed, caused proceedings to be taken against him for the attempt; but on the case being brought before the Bench at East Maitland, an objection was raised by Israel's attorney, Messrs. Mullen and O'Meagher, that no offence had been committed in law. The Bench however dismissed the case, not upon the grounds so raised, but because, in their opinion, the Warden had the means within his power of ascertaining whether the statement made by Israel was true or false.

9. That a Committee, consisting of the Warden and Councillors Keating and Bowden, was appointed to inquire into the whole matter relating to the expenditure of the said money; and from the inquiries which they have made, they believe that the sum of £109 5s. 10d., as shown by the account sent herewith, marked C, has been paid in excess of what has been really earned; that several amounts are entered in the vouchers, copies of which are also sent herewith, marked respectively D, E, F, G, H, I, J, K, and L, which were never paid, particularly a sum of £4 10s., said to have been paid to John Sheridan, whereas Sheridan declares that he only received £3 12s., and that he signed the voucher in blank, which shows

See Enclosure to
No. 6.
See Enclosures to
No. 6.

shows that sum of £4 10s. as paid to him, and his signature to which is witnessed by Mr. Eckford; and, as far as the Committee has been able to ascertain, no such person as William Thomas, who is said to have earned £7 4s. 8d. by the voucher of the 16th of June, and whose mark or cross to the said voucher is witnessed by Mr. Eckford, was ever known to any of the other men employed on the work, and, as it is believed, no such person was ever employed there.

See Enclosure to
No. 6.

10. That the document marked J, sent herewith, is a copy of a memorandum furnished by Mr. Eckford of the work said to have been done between the 6th and 26th days of October.

See Enclosure to
No. 6.
See Enclosure to
No. 6.

11. That the overseer, Patrick Doran, did not make his appearance before the Council until the 17th day of November, when he came for his wages earned up to the 26th of October, and he was then examined by several of the Councillors, and his examination was written down by the clerk, and a copy thereof is also sent herewith, marked M.

12. That a copy of the time-table kept by John Sheridan, marked N, is sent herewith, to be compared with the vouchers signed by the workmen and witnessed by Mr. Eckford.

STEPHEN SCHOLEY, Warden.
PATRICK O'BRIEN.
JOHN BOWDEN.
JOHN NOBLE.

Dated 15 December, 1868.

No. 3.

THE UNDER SECRETARY FOR LANDS to THE COMMISSIONERS OF THE MAITLAND ROAD TRUST.

Department of Lands,
Sydney, 24 December, 1868.

GENTLEMEN,

The enclosed document, purporting to be a report from the Maitland District Council, in connection with the expenditure of a sum of money on the Wollombi Road, has been handed to the Secretary for Lands by the Warden of your Council, but it is noticed that the communication in question bears no signature, nor is it otherwise authenticated, and I am directed by Mr. Secretary Forster to return the document to you for that purpose.

I have, &c.,
M. FITZPATRICK.

No. 4.

THE UNDER SECRETARY FOR LANDS to J. ECKFORD, Esq., M.L.A.

Sydney, 11 January, 1869.

SIR,

In forwarding for your perusal accompanying document (with enclosures), being a report of the Maitland District Council respecting expenditure on the Wollombi Road between West Maitland and Cessnock, I am directed by the Secretary for Lands to invite you to favour me with any observations you may desire to offer on the subject.

I have, &c.,
M. FITZPATRICK.

No. 5.

J. ECKFORD, Esq., M.L.A., to THE SECRETARY FOR LANDS.

West Maitland,
12 February, 1869.

SIR,

At the first meeting of the Maitland District Council which was held after receiving your letter and report of the Warden of the Council, I attended there for the purpose of having the matter opened up, in order that I might be enabled to forward a proper reply, when, as I arose to speak, I was met by the Warden's moving a resolution, as though he anticipated me in the matter, that anything I had to say should be postponed until next meeting, or for a week. I at once moved as an amendment that I be heard at once, and spoke to the amendment, as being the only possible chance I had of opening up the affair. After I had done, the Warden moved and carried a resolution the matter be postponed until the next monthly meeting, which will take place on Tuesday next, soon after which I will give you my reply, which I am sure must be satisfactory. It is a very good way for Mr. Scholey to try and get himself out of a difficulty, which he knows full well he has placed himself in, both by his treatment to me in this matter, and his collision with members of the Trust, to enable him to get their support, and making up accounts as he said himself was unsatisfactory at the death of the late Secretary, Samuel Wallace, and who he was a bondsman for. His statement in the Council was that several documents were missing, full particulars of which will be given by other members of the Trust.

I am, &c.,
JOSEPH ECKFORD.

P.S.—You are aware the meeting was held and report adopted without me being present, notwithstanding an adjournment was asked and refused to enable me to be present, a report of which I forwarded to you some time ago.

No. 1.

J.E.

No. 6.

No. 6.

J. ECKFORD, ESQ., M.L.A., to THE SECRETARY FOR LANDS.

West Maitland,
23 February, 1869.

SIR,

I beg leave to acknowledge receipt of your letter of the 11th ultimo, accompanied by a Report No. 4 from the Maitland District Council, signed by the Warden and three other of its members, in which letter I am requested to favour you with any observations I may desire on the subject.

In reply thereto, I beg to state in the accompanying report I have touched upon every paragraph (1) that seems to me necessary, giving a full and satisfactory explanation.

I also beg to refer you to the accompanying letters forwarded herewith from Messrs. Keating and (2) M'Mahon (both Councillors), the former a member of the Committee referred to in said report. You will (3) also please refer to a letter I also send, from Mr. Tarpsee, Reporter to the *Maitland Mercury*. The reply (4) would have been forwarded long since, had it not been for the Warden's obstruction at the first meeting of the Council which was held after my receiving said report. I attended for the purpose of bringing the whole matter prominently before the public, making a full statement of everything connected with the case. Scholey, Warden, then succeeded in getting all further discussion postponed for a month, by stating important business matters compelled him to leave immediately for the Clarence. Such does not appear to have been the case, as he never left Maitland other than to go to Sydney—his object evidently was to gain time, no doubt for the purpose of laying some further plot.

I, at the last meeting, held on the 16th instant, succeeded in carrying a resolution that I should be furnished with a copy of the minutes of Committee and which I herewith forward, viz. :—

A desultory conversation took place on 2nd November—no minutes taken; decided in the street by Keating, Scholey, and Bowden, to summon Israel for attempting to obtain money by false pretences, which was done; reply to report showing the result; no further action taken by Committee; Scholey acting solely by himself in his directions to Mr. Thomson to prepare the report, the signatures to which have been improperly obtained, those signing knowing nothing whatever of its truthfulness or otherwise, this being admitted by Mr. Bowden, which will also be seen on reference to the reply.

I therefore, with every confidence, leave this matter in your hands, feeling sure a statement made by Sheridan (after having acted as I have stated in report), a labourer on the road, will not be accepted by you as against mine.

I may further mention, that I have just been informed by Mr. Keating, that long before there was any talk of the Cessnock Road, Scholey told him he knew if I ever got a chance of him I would walk it into him.

I am, &c.,
JOSEPH ECKFORD.

[Enclosures in No. 6.]
(1.)

West Maitland,
23 February, 1869.

Reply to Report of the Warden of Maitland District Council; commencing at paragraph No. 1.

No. 1.—In reply thereto, I beg to state the first paragraph alluded to and marked No. 1 is a falsehood, knowingly made for the purpose of trying to show that he, the Warden, had a right to interfere with the workmen and management of Cessnock Road; he also states that it was a mistake of the Secretary in not entering his name in the minutes of the Council's proceedings; this is untrue, which can be proven by the Councillors, and also the minutes of their proceedings.

No. 2.—With reference to this paragraph, I of course cannot account for the Warden's accusations as to the time the men reached the works; if, as he states, they did not arrive out until nearly 7 o'clock, such might have been the case on some Monday mornings, as they very often had to wait at the blacksmith's for their tools. From conversations I have heard which have taken place, and from what Scholey told myself, others of the men besides Sheridan were there at twenty minutes past 6 o'clock on the same morning. I can further state that I have been in the habit of looking out of my back bed-room window from 5 o'clock to half past 5 o'clock in the mornings, for the express purpose of seeing what time the men went to their work; moreover, on this particular morning I was up earlier than usual (owing to my going to Sydney), and saw the men going through the paddocks (in the direction of where they were employed) at twenty-five minutes past 5 o'clock in the morning, which gave ample time for them to reach their work. It is also stated Doran was the time-keeper. I have asked Doran (for the purposes of scrutiny) when he has come in of an evening before pay-day what time the men had worked, although at the same time I had a tolerable knowledge of these facts, having seen the men in most instances going to and returning from work. I may mention my reasons for being anxious to know the time of the men going to their work in the mornings was in consequence of Sheridan's telling me some time previous (when finding fault with him and others for not doing their work); his statement was the other men idled their time away by not going out at proper hours.

No. 3.—This paragraph speaks of Doran lodging at my house on week-days. Such is not true; but through my having known Doran for the last twelve years, he having worked for me two years out of that time, and knowing him to be a faithful and trustworthy man I allowed him to have his tea and bed five nights in the week at 5s. per week; but I am at a loss to know what this has to do with a charge of misappropriation of money on the roads.

No. 4 speaks of Israel and Kinneally—referring first to Israel. I gave one of the men instructions (on Saturday, 10th of October) to tell Israel not to go out to work before the Wednesday morning following, and on my return from Sydney on the Thursday, 15th, I found he had not been so informed and had gone out to his work as usual; and in my presence he told the Warden, Scholey, he had turned off the main road and went as he always previously had done to the gravel quarry, where he had been employed in carting gravel. From Moylan's statement to Scholey, I am informed by Moylan that on the day in question he never mentioned my name with reference to Israel's time.

No. 5.—As regards me presenting an order for payment of £43 4s. 6d., it is quite correct, believing it then to be due, and I believe so now. Israel claimed for thirteen days; I believe it is justly due to him, notwithstanding I was in Sydney portions of two weeks out of the three weeks that he claims to have worked. Patrick Kinneally's claim is also, I believe, correct; he was sent by me on Tuesday morning the 7th October, to repair some logging beyond Bishop's Bridge (a distance of more than 8 miles from Maitland), with instructions to join Israel on Wednesday 14th of October, for the purpose of carting gravel, where he worked two days, making his claim nine days. The Warden speaks insinuatingly—the vouchers were all in my possession. Such was the case, but it was not a new thing for me to keep the vouchers for the works on the Cessnock Road until the money had been worked out—that duty having been first imposed upon me (the Warden having a protégé and drunken Secretary, Mr. Samuel Wallace) at least two and a half years ago (the said Warden being his bondsman). The Warden asked for the vouchers and said he would not trouble me to take them over, but would send the Secretary the following morning. After having presented the order, I gave the Secretary all the vouchers, telling him there were other men besides those who were working just beyond Stony Creek where our regular workmen were employed. The Warden would wish to make it appear I was the only Councillor who held vouchers, whereas it was the case with others.

No. 6 states, at the time the Warden refused the cheque he requested me to send the men over on Thursday. *Such is not true*, as will be seen by a letter sent herewith from Secretary, marked A, of Wednesday's date, requesting me to send the men over on the following day; and notwithstanding on *same Wednesday* I travelled several miles out on the road in company with the Warden Scholey, he never once mentioned to me anything as to his wishes about paying the men; it was not until half-past 8 o'clock in the evening, when I called at the Secretary's house to know why the money had not been forwarded to enable me to pay the men, the Secretary said "Have you not received my note?" I said I had not, when he informed me the Warden had told him to write me that day, saying he would adhere to the resolutions of the trust, that no more money was to be paid out of the office. I replied I was very glad—that it was an irregularity which had crept in through the acts of a drunken Secretary. Subsequently I went to the post office and there got the note I previously alluded to, and which I annex hereto. I merely mention this to show you what an *unscrupulous* man this Warden is, and the danger men are placed in who come in contact with him. The same evening I saw two of the men and informed them they would have to go to the office, East Maitland, for their money; one of whom (*Israel*) replied he knew it—that Hughes the Secretary had informed him.

Marked A.

No. 7.—The men (with the exception of Doran) went on the following day (Thursday) to the office, and were questioned by the Warden as to their time, Israel and Kinneally persisting in their demand. Israel commenced work on Tuesday, October 7th, and *not* the 12th, as stated by the Warden in *his* report, and I believe he was at work on the Monday, as stated in a previous paragraph. The report further states he Israel had told him, the Warden, on the Tuesday, he had carried out in his cart on that morning, Doran, Hennessy, Sheridan, Moylan, and Walsh. This is another *false statement* of the Warden, *flatly denied* by Israel, and must have been *knowingly* made. The Warden's statement is further untrue, as the men Moylan and Hennessy told him, in *my presence*, that they saw him just riding up to Sheridan as they hove in sight, which would not be more than 150 yards from where Scholey and Sheridan were at the time standing; and from a statement made in a previous portion of *his* report, they must evidently have met by appointment. With regard to the payments to Israel and Kinneally, I believe them to be justly due as demanded by them. The Warden on this particular Thursday called in Walsh, and told him he was demanding a day's pay (*viz.* 6s.) more than was due to him, stating he had not been at work, but at home sick in bed; notwithstanding this, he the Warden paid Walsh this day's wages, and has that amount put on the side of what he is desirous of showing, if possible, as a deficit. As therefore stated, *I believe* the claims made by the men to me are strictly correct.

No. 8.—The report refers to a statement having been made by Moylan in conjunction with Sheridan, as being the cause of the Warden's instituting proceedings against Israel. If you will refer to slip marked A* attached to the report sent in, it will be seen there is not anything to justify the Warden in making such statement on the proceedings taken against Israel; the Bench did not, as stated by the Warden's Solicitor in his report, dismiss the case on such grounds as therein stated, as reference being had to the proceedings will make more fully appear.

No. 9.—This paragraph of the report speaks of a Committee having been appointed, consisting of the Warden and Councillors Keating and Bowden. It's true; but how have they acted? never sat, but met in the street, and decided to summon Israel, which was done, and the foregoing paragraph shows how the matter was disposed of. The report further states, as by the Warden £109 5s. 10d. has been paid in excess of what was really earned, *that several amounts* are entered in the vouchers *which were never paid*. That man Sheridan declares he at one time received payment of £3 12s., whereas £4 10s. had been charged against him; also, that he, Sheridan, had signed vouchers in blank. *The whole of this man's statements* I positively assert *are false*. The report further states *the Committee* cannot ascertain the name of any such person as William Thomas, thereby implying that inquiry had been made, and the other *men found to be correct*, so that this large sum of £109 5s. 10d. dwindles down to £7 4s. 8d. as charged to Thomas, and 18s. as charged to Sheridan, making the *asserted deficiency*, as shown by the report, to be only £3 2s. 8d. But I am *prepared to swear* the whole of those amounts were paid. The paragraph further states a man of that name (William Thomas) was not known to any of the other men. I again assert the signatures and marks were genuine, and were not signed in blank. The report reads in this paragraph as though *it* had been prepared by *the Committee* appointed to report on the expenditure of the Cessnock Road, whereas *no Committee* meetings were ever held, other than a desultory conversation in the street, when Israel was ordered to be summoned, and as admitted by Scholey, the Warden, *no meetings* were held. Bowden, who signed the report, admitted same. Mr. Keating, although one of the Committee appointed as before referred to, was kept in *perfect darkness* as to the proceedings of those with whom he should have been associated in the matter referred to, from Bowden's admission that he did not go to Mr. Thompson, the solicitor. Scholey Warden *did all the work himself*. It will therefore be borne in mind that the Committee never sat upon this report, which they ought to have done; it should have been signed by the Chairman, on behalf of *that Committee*, and *submitted* to the full Council for approval, which was not done. The signatures attached were obtained by the Secretary carrying the report round (*by special request of the Warden*) to the residences of the different persons whose names are appended; the whole of whom could not have had (and indeed which they admit) any knowledge of the circumstances. Bowden, one of the Committee who was appointed, distinctly stated that he signed it, *because he believed what the Warden* had stated. Noble knew of nothing other than the Warden's statements, as also O'Brien, the other *Committee-man* who was on the Committee. Mr. Keating, I need only refer you to his letter, and for Mr. M'Mahon's opinion, by his letter. Also, both these gentlemen *refused* to sign the report when they were *waited on*, giving, as their reasons, that they didn't believe in one word of it (the report) contained.

(2)
(1)

No. 10.—This paragraph is the only truthful one in the whole report. I mentioned the items to the Warden, and he took them down.

No. 11.—With reference to this paragraph, stating *Doran* did not put in an appearance to ask for his wages until November 17th,—this is another falsehood, knowingly put forth by the Warden, as he knows full well on the Tuesday Israel's case was disposed of. Doran, in the presence of at least thirty people, *asked* the Warden for his money, and the Warden *refused* to pay him, when Doran replied he would not come again. The Warden then told him he would make him come many more times yet, notwithstanding this was a regular pay day to labourers by the Council.

No. 12.—This paragraph speaks of Sheridan giving information to the Warden, and of his having kept a time-table. This I know nothing about, further than the time-table as sent by the Warden Scholey in his report, and forwarded to me, is *untrue*, and I give it a *flat denial*, as a most *outrageous* production. I may say, commencing work in June, until Monday, October 12th, I did not miss seeing most of the men going to, returning from, and very frequently *at work*—in the former cases more than half a dozen times. It's very seldom I'm away from home until after 7 o'clock in the evening. Now, to show what this man Sheridan is, I have been compelled (in my capacity as District Councillor) upon many occasions to find fault with him—he *idled his time* away, and put it on the other men. He also *wanted* me to give him work to put up a wooden culvert on the road, me to pay him a certain sum, and then he would *return me* a portion back again. For *daring* to make such a proposal, I rebuked him severely, telling him he should never work an hour on the road whilst I had anything to do with it. *Subsequently* he asked me to give him a promise of employment with a horse and cart on the road, he stating that he had an offer of one on credit so long as I would give the *owner* of it *my word*, he, Sheridan, should have the employment asked for. This I also refused, telling him again it was not my intention to allow him to do any more work on the road. This will give a *specimen* of Mr. Warden's informant, who is capable of *doing* or *saying* anything to suit his own ends, and make friends of "the mammon of unrighteousness."

JOSEPH ECKFORD.

(2.)

Mr. W. Keating to Joseph Eckford, Esq., M.L.A.

Morpeth, 18 February, 1869.

My dear Sir,

As I was present at the district meeting held on the 16th instant, I beg to address the following remarks to you, solely in the cause of truth and justice, and my respect for yourself. As you are aware, I was one of the Committee of *three* appointed to investigate matters in connection with the Cessnock Road; but I was never consulted in any way as to the course the Warden intended to pursue; and I have since learned that he has been carrying out his action in this matter on his own account, as the above Committee, of which I am a member, *never met* to draw up any report whatsoever. A report was drawn up and brought before the Council on the 10th of December, 1868; the Warden moved its adoption; it was carried. How strange that one of those who signed it has since acknowledged that he knew nothing of its contents! I have learned that this

this report, for the most part, was drawn up from the information of a man whom you discharged from the works, and on no account should be relied upon without careful investigation, as it is my opinion the information is unfounded from beginning to end. Although the statement was made that the Warden was connected with you in the supervision of the Cessnock Road, I am perfectly satisfied that such was not the case, and that you, and you only, had the charge of the same. It was also stated that you had ample opportunity of explaining matters to the Council with regard to the report. To this, I can certify that you stated repeatedly that you were willing at any time to explain any of the statements made to the Warden by Sheridan and others, or to rebut any portion of the information of the Warden, and to render every satisfaction to your brother Councillors on all matters connected with the Cessnock Road. It is my opinion that the Warden was determined to follow up the statements of the report upon the mere word of the person referred to.

I should much like to know if the following is true, as stated by the Warden, viz.—that the Hon. the Minister for Lands had directed him to draw up a report, in writing, to forward the same at an early date, and that not only would the Minister take active and necessary measures with regard to it, but also, that no responsibility should be placed either upon the Warden or the Councillors. It really seems singular that the Warden should find it necessary, *under legal advice*, to proceed to Sydney to consult with the Minister, and omit to bring the subject before the Committee appointed by the Council, of which I am a member, for that purpose.

From these and other considerations, I feel dissatisfied with the course pursued by the Warden, and agree with the course you have taken, and your prompt and energetic defence on the first opportunity afforded you of doing so, that there is nothing wrong, and that you are able to justify the expenditure of the Cessnock Road, and rebut the charges contained in the report referred to.

I am, &c.,
WILLIAM KEATING.

(3.)

Mr. T. M'Mahon to Joseph Eckford, Esq., M.L.A.

Phoenix Park, 23 February, 1869.

Sir,

I purpose to state here as briefly as possible my opinion as regards the Cessnock affair. Firstly, I hold that the Warden, although this affair has plainly shown his malice against Mr. Eckford personally, because he does all that lies in his power to hinder (and has attained that end) Mr. Eckford making his explanation in connection with this affair, although Mr. Eckford has at more than one meeting of the Trust declared his willingness to clear the matter up satisfactorily. I confess that I cannot see any justification whatever for such a charge being made, or grounds for such a report. I have looked over all the so-called evidence, and made inquiries of respectable persons that should of necessity know something of the affair; and after giving the matter my fullest consideration I fail to see anything more or less than this;—the Warden is prejudiced against Mr. Eckford, the man Sheridan is more so, because of Mr. Eckford having discharged him (and let me here remark, that it is on this discharged man's statements uncorroborated the whole affair is grounded). The Warden brings this man's statements before the "Trust"—Mr. Eckford being absent at Sydney the same time, and then the majority of the Trust indict him behind his back; and although requested to allow the matter to stand over for a week in order that Mr. Eckford might be present and explain this man's statements away, they, the majority, positively refuse. In conclusion, I cannot refrain from expressing the opinion that Mr. Eckford's name has been unjustifiably dragged before the public in this affair, and have only further to state that I have every confidence in Mr. Eckford now as I had then, that if an opportunity was allowed him to explain, he would have done so satisfactorily to the Trust and creditably to himself.

THOMAS M'MAHON.

(4.)

Mr. W. J. Tarplee to Joseph Eckford, Esq., M.L.A.

West Maitland, 12 January, 1869.

Dear Sir,

In reply to your's, I am sorry to inform you that I have not preserved my notes of the meeting of the Maitland District Council to which you refer, and which I attended in my capacity of Reporter to the *Maitland Mercury*. However, I remember the occasion well, and I have a distinct recollection that you expressed your willingness to give a full report of all proceedings connected with the Cessnock Road, if required by the other Commissioners.

I remain, &c.,
W. J. TARPLEE.

A.

Mr. Thomas Hughes to Joseph Eckford, Esq., M.L.A.

Maitland District Council,
East Maitland, 28 October, 1868.

Dear Sir,

I am requested by the Warden to inform you that it is his intention to adhere to the late decision of the Trust, viz., to pay no more money out of the office. If therefore your men will be in attendance to-morrow afternoon, he will be happy to give them their cheques.

I am, &c.,
THOMAS HUGHES.

Maitland Road Trust.

West Maitland, 16 June, 1868.

To the Secretary.

You will please pay labourer the sum of twenty-five pounds 14/8, for work on Wollombi Road.

£25 14s. 8d.

JOSEPH ECKFORD,
Commissioner.

Maitland Road Trust.

West Maitland, 30 June, 1868.

To the Secretary.

You will please pay labourer the sum of twenty-two pounds 18/, for work and materials on account of Wollombi Road.

£22 18s.

JOSEPH ECKFORD,
Commissioner.

Maitland Road Trust.

West Maitland, 13 July, 1868.

To the Secretary.

You will please pay labourer the sum of twenty-two pounds, for work on Wollombi Road towards Cessnock.

£22.

JOSEPH ECKFORD,
Commissioner.

Maitland

Maitland Road Trust.

West Maitland, 28 July, 1868.

To the Secretary.

You will please pay labourer the sum of twenty-five pounds 9/10, for work on Wollombi Road, from Campbell's Hill Toll-bar towards Cessnock.

£25 9s. 10d.JOSEPH ECKFORD,
Commissioner.

Maitland Road Trust.

West Maitland, 4 August, 1868.

To the Secretary.

You will please pay labourer the sum of fourteen pounds 8/, for work on Wollombi Road, from Toll-bar towards Cessnock.

£14 8s.JOSEPH ECKFORD,
Commissioner.

Maitland Road Trust.

West Maitland, 11 August, 1868.

To the Secretary.

You will please pay labourers the sum of thirty-two pounds eight shillings, for work on Wollombi Road towards Cessnock.

£32 8s.JOSEPH ECKFORD,
Commissioner.

Maitland Road Trust.

West Maitland, 25 August, 1868.

To the Secretary.

You will please pay the sum of thirty-two pounds 16/, for work on the Wollombi Road, from Toll-bar towards Cessnock.

£32 16s.JOSEPH ECKFORD,
Commissioner.

Maitland Road Trust.

West Maitland, 8 September, 1868.

To the Secretary.

You will please pay labourer the sum of thirty-two pounds 16/, for work on Wollombi Road, from Campbell's Hill Toll-bar towards Cessnock.

£32 16s.JOSEPH ECKFORD,
Commissioner.

Maitland Road Trust.

West Maitland, 16 September, 1868.

To the Secretary.

You will please pay Samuel H. Thorpe the sum of sixteen pounds 10/, for work on the Wollombi Road, at Barren's Creek and Bishop's Bridge.

£16 10s.JOSEPH ECKFORD,
Commissioner.

Maitland Road Trust.

West Maitland, 22 September, 1868.

To the Secretary.

You will please pay labourer the sum of thirty-two pounds 16/, for work on the Wollombi Road, from Campbell's Hill Toll-bar towards Cessnock.

£32 16s.JOSEPH ECKFORD,
Commissioner.

Maitland Road Trust.

West Maitland, 6 October, 1868.

To the Secretary.

You will please pay labourer the sum of thirty-two pounds 16/, for work on the Wollombi Road, from Campbell's Hill Toll-bar towards Cessnock.

£32 16s.JOSEPH ECKFORD,
Commissioner.

Maitland Road Trust.

West Maitland, 27 October, 1868.

To the Secretary.

You will please pay labourers the sum of forty-three pounds 4/6, for work on Wollombi Road, from Toll-bar towards Cessnock.

£43 4s. 6d.JOSEPH ECKFORD,
Commissioner.

A.*

Moylan did not know how many days Israel worked since the last payment; commenced work on a Wednesday, and worked all that week and following week; first stated that he had been working all the time; afterwards was not sure.

Hennessy did not know how long Israel had been working; never took any notice who were at work; only had a knowledge of his own time.

B.

Sheridan believed that Israel worked nine days, Carnailly only two days.

Walsh at first did not know what time Israel had made, but afterwards said he thought he was idle for a week.

Israel said he had made thirteen days—commenced work on a Monday.

Carnailly said he (Carnailly) had worked nine days.

No.	Date.	Names.	Amounts as per Vouchers.	Amount stated by Sheridan.	Discrepancy overcharged.
1	1868. 16 June..	Patrick Doran	£ s. d. 5 0 0	£ s. d. 4 0 0	£ s. d. 1 0 0
	" ..	Edward Meagher	4 10 0	4 13 0	.....
	" ..	James Moylan	4 10 0	4 13 0	.....
	" ..	John Sheridan	4 10 0	3 12 0	0 18 0
	" ..	William Thomas	7 4 8	.....	7 4 8
2	30 "	Patrick Doran	4 0 0	3 16 8	0 3 4
	" ..	James Moylan	3 12 0	3 9 0	0 3 0
	" ..	Edmund Meagher	3 12 0	3 9 0	0 3 0
	" ..	John Sheridan	3 12 0	3 9 0	0 3 0
	" ..	Solomon Israel	8 2 0	1 4 0	6 18 0
4	13 July..	Patrick Doran	4 0 0	3 6 8	0 13 4
	" ..	Edmund Meagher	3 12 0	3 12 0	.....
	" ..	James Moylan	3 12 0	3 12 0	.....
	" ..	John Sheridan	3 12 0	3 12 0	.....
	" ..	Solomon Israel	7 4 0	2 8 0	4 16 0
	" ..	Patrick Doran	3 13 4	2 13 4	1 0 0
	" ..	James Moylan	3 6 0	3 6 0	.....
	" ..	Edmund Meagher	3 6 0	3 6 0	.....
	" ..	Thomas Welsh	3 6 0	2 2 0	1 4 0
	" ..	John Sheridan	3 6 0	3 6 0	.....
	" ..	Solomon Israel	6 12 0	0 12 0	6 0 0
	" ..	William Thorpe	2 0 6	.....	2 0 6
5	4 Aug...	John Anderson	7 4 0	.....	7 4 0
	" ..	William Avery	7 4 0	.....	7 4 0
6	" ..	Patrick Doran	4 0 0	3 0 0	1 0 0
	" ..	James Moylan	3 12 0	3 12 0	.....
	" ..	Edmund Meagher	3 12 0	3 12 0	.....
	" ..	Thomas Welsh	3 12 0	3 6 0	0 6 0
	" ..	John Meriaun	3 12 0	3 12 0	.....
	" ..	Sheridan, for timber..	.....	0 5 0	.....
	" ..	Solomon Israel	7 4 0	1 16 0	5 8 0
	" ..	Samuel Boggs	1 1 0	.....	1 1 0
	" ..	James M'Evon	5 13 0	.....	5 13 0
7	26 "	Patrick Doran	4 0 0	4 0 0	.....
	" ..	James Moylan	3 12 0	3 12 0	.....
	" ..	Edmund Meagher	3 12 0	2 14 0	0 18 0
	" ..	Thomas Welsh	3 12 0	3 12 0	.....
	" ..	John Sheridan	3 12 0	3 12 0	.....
	" ..	Solomon Israel	7 4 0	4 16 0	2 8 0
	" ..	Patrick Carnailly	7 4 0	.....	7 4 0
	8 Sept...	Patrick Doran	4 0 0	4 0 0	.....
	" ..	James Moylan	3 12 0	3 12 0	.....
	" ..	Thomas Welsh	3 12 0	3 12 0	.....
	" ..	John Sheridan	3 12 0	3 12 0	.....
	" ..	Solomon Israel	7 4 0	3 0 0	4 4 0
	" ..	Jeremiah Hennessy..	3 12 0	.....	3 12 0
	" ..	Patrick Carnailly	7 4 0	.....	7 4 0
9	15 "	Samuel Abthorpe	16 10 0	.....	16 10 0*
10	22 "	Patrick Doran	4 0 0	4 0 0	.....
	" ..	James Moylan	3 12 0	3 12 0	.....
	" ..	Thomas Welsh	3 12 0	3 12 0	.....
	" ..	Jeremiah Hennessy ..	3 12 0	3 12 0	.....
	" ..	John Sheridan	3 12 0	3 12 0	.....
	" ..	Solomon Israel	7 4 0	3 0 0	4 4 0
	" ..	Patrick Carnailly	7 4 0	.....	7 4 0
11	16 Oct..	Patrick Doran	4 0 0	4 0 0	.....
	" ..	James Moylan	3 12 0	3 12 0	.....
	" ..	Thomas Welsh	3 12 0	3 12 0	.....
	" ..	Jeremiah Hennessy ..	3 12 0	3 12 0	.....
	" ..	John Sheridan	3 12 0	3 12 0	.....
	" ..	Solomon Israel	7 4 0	3 18 0	3 6 0
	" ..	Patrick Carnailly	7 4 0	3 0 0	4 4 0
12	29 "	James Moylan	5 8 0	5 8 0	.....
	" ..	Thomas Welsh	5 8 0	5 2 0	0 6 0
	" ..	Jeremiah Hennessy..	5 8 0	5 8 0	.....
	" ..	John Sheridan	6 0 0	6 0 0	.....
	" ..	Solomon Israel	7 16 0	5 8 0	2 8 0
	" ..	Patrick Carnailly	5 8 0	1 4 0	4 4 0
	" ..	Patrick Doran	6 0 0	6 0 0	.....
	" ..	Samuel Boggs	1 16 6	.....	1 16 6*
			333 15 0	204 10 8	129 15 4

1868.	Dr.	£ s. d.	1868.	Cr.	£ s. d.
29 Oct.	To discrepancy per Sheridan	129 4 4	16 June.. ..	By paid Sheridan ..	0 3 0
	Per contra	19 18 6	"	" Moylan	0 3 0
			11 August ..	Sheridan, timber ..	0 5 0
			"	S. Boggs, iron-work ..	1 1 0
			15 September.	S. Abthorpe, bridge ..	16 10 0
			29 October ..	Boggs, iron-work..	1 16 6
	Actual discrepancy..	£ 109 5 10			19 18 6

Account as per report marked C.

* Paid in the office.

† Mr. Eckford gave an order for £43 4s. 6d., to pay workmen this last payment—3 weeks.

D.

Treasury Voucher No.

ROAD ACCOUNT.

STATEMENT of Payments by the Commissioners, Maitland Road Trust, out of the sum of £350, received from the Treasury, 4th June, 1868, for Road from Maitland to Cessnock, and for the expenditure of which the period of six months was allowed.

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Statement of Payments on account of the Road from Maitland to Cessnock, out of the sum of £350, received from the Treasury on the 4th June, 1868, and for the expenditure of which the period of six months was allowed.

Date.	No. of Cheque.	In whose favour.	Description of Service performed or Articles supplied.	Period of Service.			Amount.	We the undersigned hereby acknowledge to have received the sums set opposite to our several names, being in full of our demands respectively, for the services specified in this Statement.	Witness to Payments and Marks.
				From	To	Rate.			
1868.		Amount of funds received...							
June 16	9,478	Labourers:—	Work performed				25 14 8		Joseph Eckford.
		Patrick Doran					5 0 0	Patrick Doran.	
		Edmond Meagher					4 10 0	Edmd. Meagher.	
		John Sheridan					4 10 0	John Sheridan.	
		James Moylan					4 10 0	his James + Moylan. mark	
		William Thomas					7 4 8	his William + Thomas. mark	
Do. 30		Patrick Doran	Work performed				4 0 0	Patrick Doran.	Joseph Eckford.
		Edmund Meagher.....					3 12 0	Edmd. Meagher.	
		John Sheridan					3 12 0	John Sheridan.	
		James Moylan					3 12 0	his James + Moylan. mark	
		Solomon Israel					8 2 0	Solomon Israel.	
			Total Expenditure.....£						
			† Balance of funds unexpended.....£						

We certify, upon honor, that to the best of our knowledge and belief, after due inquiry, the expenses charged in the foregoing account were necessarily incurred for carrying on the services therein specified; and that the charges are made either according to authorized rates, or at the lowest prices for which the articles and services charged could be procured at the time they were engaged.

Dated 186 .

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Treasury Voucher No.

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Date.	No. of Cheque.	In whose favour.	Description of Service performed or Articles supplied.	Period of Service.			Amount.	We the undersigned hereby acknowledge to have received the sums set opposite to our several names, being in full of our demands respectively, for the services specified in this Statement.	Witness to Payments and Marks.
				From	To	Rate.			
			Amount of funds received ...						
		Labourers :—	Work performed						
July 13		Patrick Doran					4 0 0	Patrick Doran.	Joseph Eckford.
		John Sheridan					3 12 0	John Sheridan.	
		Edmond Meagher					3 12 0	Edmd. Meagher.	
		James Moylan					3 12 0	his James + Moylan. mark	
		Solomon Israel					7 4 0	Solomon Israel.	Joseph Eckford.
28		Patrick Doran	Work performed				3 13 4	Patrick Doran.	
		John Sheridan					3 6 0	John Sheridan.	
		Edmond Meagher					3 6 0	Edmd. Meagher.	
		James Moylan					3 6 0	his James + Moylan. mark	
		Solomon Israel					6 12 0	Solomon Israel.	
		Thomas Welsh					3 6 0	his Thomas + Welsh. mark	
		William Thorpe					2 0 6	William Thorpe.	
			Total Expenditure.....£						
			† Balance of funds unexpended£						

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				From	To	Rate			
August 4			Amount of funds received						
		John Anderson				7 4 0	John Anderson.	Joseph Eckford.	
		William Avery				7 4 0	his William + Avery. mark		
		Patrick Doran				4 0 0	Patrick Doran.		
		Edmond Meagher				3 12 0	Edmd. Meagher.		
		James Moylan				3 12 0	his James + Moylan. mark		
		John Sheridan				3 12 0	John Sheridan.		
		Thomas Welsh				3 12 0	his Thomas + Welsh. mark		
		Solomon Israel				7 4 0	Solomon Israel.		
		Samuel Boggs.....				1 1 0	Saml. Boggs.		
		James M'Avoy				5 13 0	his James + M'Avoy. mark		
			Total Expenditure.....			£			
			Balance of funds unexpended.....			£			

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Treasury Voucher No.

ROAD ACCOUNT.

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Date.	No. of Cheque.	In whose favour.	Description of Service performed or Articles supplied.	Period of Service.			Amount.	We the undersigned hereby acknowledge to have received the sums set opposite to our several names, being in full of our demands respectively, for the services specified in this Statement.	Witness to Payments and Marks.
				From	To	Rate.			
			Amount of funds received ..						
Aug. 25		Patrick Doran				4 0 0	Patrick Doran.	Joseph Eckford.	
		Edmond Meagher				3 12 0	Edmd. Meagher.		
		James Moylan				3 12 0	his James × Moylan. mark		
		John Sheridan				3 12 0	John Sheridan.		
		Thomas Walsh				3 12 0	his Thomas × Walsh. mark		
		Solomon Israel				7 4 0	Solomon Israel.		
		Patrick Kinneally				7 4 0	his Patrick × Kinneally. mark		
Sept. 8		Patrick Doran				4 0 0	Patrick Doran.		
		James Moylan				3 12 0	his James × Moylan. mark		
		John Sheridan				3 12 0	John Sheridan.		
		Thomas Welsh				3 12 0	his Thomas × Welsh. mark		
			Total Expenditure....£						
			† Balance of funds unexpended....£						

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Date.	No. of Cheque.	In whose favour.	Description of Service performed or Articles supplied.	Period of Service.			Amount.	We the undersigned hereby acknowledge to have received the sums set opposite to our several names, being in full of our demands respectively, for the services specified in this Statement.	Witness to Payments and Marks.
				From	To	Rate.			
			Amount of funds received ..						
Sept. 15	12346	Samuel Althorpe	Work performed	16 10 0	Saml. his + Althorpe. mark	
			Total Expenditure....£						
			† Balance of funds unexpended....£						

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ROAD ACCOUNT.

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				From	To	Rate.			
			Amount of funds received..						
Sept. 8		Solomon Israel					7 4 0	Solomon Israel.	Joseph Eckford.
		Jeremiah Hennerry					3 12 0	Jeremiah Hennerry.	
		Patrick Kinneally					7 0 0	Patrick + Kinneally. mark	
22		Patrick Doran					4 0 0	Patrick Doran.	
		James Moylan					3 12 0	James + Moylan. mark	
		John Sheridan					3 12 0	John Sheridan.	
		Thomas Welsh					3 12 0	Thomas + Welsh. mark	
		Jeremiah Hennerry					3 12 0	Jeremiah Hennerry.	
		Solomon Israel					7 4 0	Solomon Israel.	
		Patrick Kinneally					7 4 0	Patrick + Kinneally. mark	
			Total Expenditure....£						
			† Balance of funds unexpended....£						

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				From	To	Rate.			
Amount of funds received ..									
1868.		Labourers:—	Work performed						Joseph Eckford.
Oct. 6		Patrick Doran.....				4 0 0	Patrick Doran.		
		John Sheridan.....				3 12 0	John Sheridan.		
		Jeremiah Hennessy				3 12 0	Jeremiah Hennessy. his		
		James Moylan.....				3 12 0	James + Moylan. mark his		
		Thomas Welsh				3 12 0	Thomas x Welsh. mark		
		Solomon Israel				7 4 0	Solomon Israel. his		
		Patrick Kinnally				7 4 0	Patrick x Kinneally. mark		
		Total Expenditure£						
		† Balance of funds unexpended....£							

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				From	To	Rate.			
Amount of funds received									
Oct. 29	116423	James Moylan	Work performed				5 8 0	his James + Moylan. mark	
	116424	Jeremiah Hennessy	"				5 8 0	Jeremiah Hennessy.	
	116425	John Sheridan	"				6 0 0	John Sheridan.	
	116426	Thomas Walsh	"				5 8 0	his Thomas + Walsh. mark	
	116427	Solomon Israel	"				5 8 0	Solomon Israel.	
	116428	Patrick Cornially	"				1 4 0	his Patrick + Cornially. mark	
Nov. 3	116433	Samuel Boggs	Material supplied				1 16 6	Saml. Boggs.	
		Total Expenditure.....£							
		† Balance of funds unexpended.....£							

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Date.	No. of Cheque.	In whose favour.	Description of Service performed or Articles supplied.	Period of Service			Amount.	We the undersigned hereby acknowledge to have received the sums set opposite to our several names, being in full of our demands respectively, for the services specified in this Statement.	Witness to Payments and Marks.
				From	To	Rate.			
1868.			Amount of funds received...						
Nov. 17	116437	Patrick Doran	Work performed	...	...	...	6 0 0	Patrick Doran.	
			Total Expenditure.....£						
			† Balance of funds unexpended.....£						

We certify, upon honor, that to the best of our knowledge and belief, after due inquiry, the expenses charged in the foregoing account were necessarily incurred for carrying on the services therein specified; and that the charges are made either according to authorized rates, or at the lowest prices for which the articles and services charged could be procured at the time they were engaged.

Dated

1868

(Signatures)* {

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Report marked M.

Maitland District Council,
East Maitland,
November 17, 1868.

Patrick Doran, examined by the Warden:—Do you keep a book by which you can give us an idea of Israel's time on the road? No, I keep no book.

Do you know your own time—were you at work on Monday, 12th October? I worked on 12th October.

Was Israel there that day? I do not know.

Did you keep a return of the men's time? I was in the habit of doing so, and gave it to Mr. Eckford.

Was Welsh at work on that day? Could not say with confidence—have forgotten.

Was Israel at work on the day I was out at Bishop's Bridge? I do not know; I cannot say.

By Mr. Bowden.] Can you tell how long each man worked? I only remember from day to day.

By the Warden.] Was Hennessy at work full time? I do not know.

Do you know how long each man worked during last pay time? I did, and gave a return to Mr. Eckford. I do not know how long Israel worked, nor Carnailly, nor Moylan, Hennessy, Welsh, Sheridan, nor myself.

Where was Mr. Eckford when you gave the last account of time? I was giving an account of last time to Mr. Eckford, at his house, when he was called away. I did not give it to him in High-street, to my recollection. I only kept an account of the men's time for a fortnight at a time on a slip in my pocket.

August, 1868.

	£	s.	d.
P. Doran, 12 days—6s. 8d. per day	4	0	0
J. Moylan, 12 days—6s. per day	3	12	0
F. Welsh, 12 days—6s. per day	3	12	0
J. Sheridan, 12 days—6s. per day	3	12	0
J. Israel, carter, 5 days—12s. per day	3	0	0
Paid by cash, September 9th	17	16	1
P. Doran, 12 days—6s. 8d. per day	4	0	0
J. Moylan, 12 days—6s. per day	3	12	0
F. Welsh, 12 days—6s. per day	3	12	0
T. Hennessy, 12 days—6s. per day	3	12	0
J. Sheridan, 12 days—6s. per day	3	12	0
J. Israel, carter, 5 days—12s. per day	3	0	0
Paid by cash, September 23rd	21	8	0
P. Doran, 12 days—6s. 8d. per day	4	0	0
J. Moylan, 12 days—6s. per day	3	12	0
F. Welsh, 12 days—6s. per day	3	12	0
T. Hennessy, 12 days—6s. per day	3	12	0
J. Sheridan, 12 days—6s. per day	3	12	0
J. Israel, carter, 6½ days—12s. per day	3	18	0
P. Kennelly, carter, 5 days—12s. per day	3	0	0
Paid by cash, October 7th, 1868	25	6	0

October,

October, 1868.

	£	s.	d.
P. Doran, 12 days—6s. 8d. per day	4	0	0
T. Moylan, 12 days—6s. per day	3	12	0
T. Welsh, 11 days—6s. per day	3	6	0
T. Hennessy, 12 days—6s. per day	3	12	0
J. Sheridan, 12 days—6s. per day	3	12	0
J. Israel, carter, 9 days—12s. per day	5	8	0
P. Kennelly, 2 days—12s. per day	1	4	0
Due on the 19th October. Not paid	24	14	0
P. Doran, 6 days—6s. 8d. per day	2	0	0
T. Moylan, 6 days—6s. per day	1	16	0
T. Welsh, 6 days—6s. per day	1	16	0
T. Hennessy, 6 days—6s. per day	1	16	0
J. Sheridan, 6 days—6s. per day	1	16	0
Due and ending October 26th. Not paid	9	4	0
	£33	18	0

See Report marked N.
1868.

Thursday, May 28th, Moylan and Maher commenced work.
Tuesday, June 2nd, Doran and Sheridan commenced.

	£	s.	d.
P. Doran, 12 days—6s. 8d. per day	4	0	0
E. Maher, 15½ days—6s. per day	4	13	0
J. Moylan, 15½ days—6s. per day	4	13	0
J. Sheridan, 12 days—6s. per day	3	12	0
Paid, June 17th. By cash received	16	18	0
P. Doran, 11½ days—6s. 8d. per day	3	16	8
J. Moylan, 11½ days—6s. per day	3	9	0
E. Maher, 11½ days—6s. per day	3	9	0
J. Sheridan, 11½ days—6s. per day	3	9	0
J. Israel, carter, 2 days—12s. per day	1	4	0
Paid, June 30th. By cash received	15	7	8
P. Doran, 10 days—6s. 8d. per day	3	4	8
E. Maher, 12 days—6s. per day	3	12	0
J. Moylan, 12 days—6s. per day	3	12	0
J. Sheridan, 12 days—6s. per day	3	12	0
J. Israel, carter, 4 days—12s. per day	2	8	0
Paid, July 14th. By cash received	16	10	8
July, 1868.			
P. Doran, 8 days—6s. 8d. per day	2	13	4
J. Moylan, 11 days—6s. per day	3	6	0
E. Maher, 11 days—6s. per day	3	6	0
F. Welsh, 7 days—6s. per day	2	2	0
J. Sheridan, 11 days—6s. per day	3	6	0
J. Israel, carter, 1 day—12s. per day	0	12	0
Paid, July 28th. By cash received	15	5	4
P. Doran, 9 days—6s. 8d. per day	3	0	0
J. Moylan, 12 days—6s. per day	3	12	0
E. Maher, 12 days—6s. per day	3	12	0
F. Welsh, 11 days—6s. per day	3	6	0
J. Sheridan, 12 days—6s. per day	3	12	0
Do. 4 pieces of timber, 1s. 3d. each	0	5	0
J. Israel, carter, 3 days—12s. per day	1	16	0
Paid, August 12th. By cash received	19	3	0
P. Doran, 12 days—6s. 8d. per day	4	0	0
J. Moylan, 12 days—6s. per day	3	12	0
E. Maher, 9 days—6s. per day	2	14	0
F. Welsh, 12 days—6s. per day	3	12	0
J. Sheridan, 12 days—6s. per day	3	12	0
J. Israel, carter, 8 days—12s. per day	4	16	0
By cash, August 26th, Paid	22	6	0

No. 7.

JOSEPH ECKFORD, Esq., M.L.A., to THE SECRETARY FOR LANDS.

West Maitland,
20 May, 1869.

SIR,

I have the honor to forward herewith a statement of charges against the Warden of the Maitland District Council, which I think will show clearly the reason that induced him to make the unjust attack upon me he did in December last, whilst I was in Sydney, knowing as he did that I was aware of the accounts being all in a state of disorder, and that he had with James Wallace made them up, with a view no doubt of saving himself from being called upon to make up the deficient amounts, and also of bond entered into by him for the faithful discharge of the duties of the deceased Secretary, Samuel Wallace.

I may also mention, that shortly after the accounts were made up, Mr. Jas. Wallace got in as Station-master on the Railway line at Stony Creek, having obtained it, as the Warden Scholey told me, by his influence with the late Minister for Works.

With reference to the abstracts of accounts, you have nothing to do but send to Mr. Lane at the Treasury, who will furnish you with the originals of what I now send extracts.

It has been reported the Warden intends resigning. If such is the case, I trust his resignation will not be accepted until these matters are all properly cleared up.

I am, &c.,
JOSEPH ECKFORD.

Honorable Colonial Treasurer, for such verification as may be necessary, and such information as can be afforded on the subject of the accounts submitted.

W.F.—June 4th, 1869.

Under Secretary for Finance. B.C. of M.F.—7 June, /69.

[Enclosures in No. 7.]

West Maitland,
20 May, 1869.

STATEMENT of charges against the Warden of the Maitland District Council, for the consideration of the Minister for Lands.

1. That Stephen Scholey, Warden, after the death of Samuel Wallace, Council Clerk, on 13th of August, 1867, did, according to his own admission, make up accounts which were then in arrear, and which he stated were so. It will be remembered the Warden was the bondsman of Samuel Wallace for the faithful discharge of his duties.

2. That it will be seen, in reference to the abstracts of expenditure for 1867, on the Roads from East Maitland to Oak Vale, from Oak Vale to Brokenback Gap, from East Maitland to Raymond Terrace, from Morpeth to Four-mile Creek, and from East Maitland to Paterson *via* Dunmore Bridge, out of seventy-one payments made in favour of the different parties, only six payments have been witnessed by Samuel Wallace; whilst on the other hand, I find on inquiry at the Treasury the whole of the cheques have been countersigned by the deceased, Samuel Wallace, with the exception of nineteen, which were countersigned by James Wallace, who succeeded his brother Samuel on the 20th of August, some seven days after his death, as will be seen by the statement of accounts sent herewith, and which can be verified by applying to the Treasury for the original abstracts, and to the Bank for copies of cheques.

3. With regard to the signatures of some of the men, more especially John Scotling and William Marters, you will find that in several instances they appear as marksmen, yet at the same time they appear as having written their names. It is also desirable to draw your attention to the difference of the dates of payments as shown by the abstracts, being in every instance prior to the dates of the cheques, which will be also found on inquiry at the Treasury and as shown by the accompanying statement of accounts.

4. That it is also desirable to draw your attention to an item of 2s. 10d. appearing in the abstract of expenditure on the Road from Oak Vale to Brokenback, whilst at the same time I have information from the Treasury that it appears in ledger as (£1 5s. 6d.) one pound five shillings and sixpence.

5. The next matter is two payments which will be found in the abstract of expenditure on the Road from Maitland to Raymond Terrace, in brackets, for three pound cheque, No. 101,141, in payments of thirty shillings each. It will be found on inquiry at the Treasury, the cheque thus numbered is made payable to Scotling, and not Farry, as the abstract would make it appear.

6. That it will be also found on inquiry at the Treasury, that a payment of four pounds appears on the abstracts of 1867, for the Road leading from East Maitland to Paterson *via* Dunmore Bridge, to have been made to John Ford, by a cheque No. A 8,591, and which is entered in the cash book one pound ten shillings, as given me from the Treasury, four pounds not in it. I have stated before, the dates of the cheques are all subsequent to the dates of payments as shown on the abstracts, but in this latter case (Ford's) it is most glaring; as the date of payment as shown on the abstract is July 1st, and the cheque dated August 13th. I may here mention, in every instance that payments are made by the District Council to the party who is receiving payments in person, the abstract is signed and the cheque handed over immediately after; and when it happens that payments are made by the Warden and Secretary, the party receiving the cheque, or whoever he may have passed it to, would have to go to one of the Commissioners and get his signature; I have in that way signed many.

7. As a further proof, I also forward copies of statements from three men, *viz.*:—Michael Martin, who appears on the abstract of expenditure from Morpeth to Four-mile Creek as having received a sum of (£33 1s. 3d.) thirty-three pounds one shilling and three-pence, and who positively asserts he never received any such sum of money in his life from the Maitland Road Trust, and that he never received any payments from James Wallace in his life but once, neither did he ever sign any abstracts for payments but the once. John Farry also states he never received a cheque for (£11 19s. 6d.) eleven pounds nineteen shillings and sixpence, as you will find charged against him in the abstract of expenditure from Morpeth to Four-mile Creek, and that he never received any payments in his life from James Wallace, nor ever did he sign any abstracts to any person other than the deceased Secretary, Samuel Wallace, in these matters. Perhaps it would be advisable to ascertain from the Treasury the number of blank cheques forwarded to the District Council, and the number returned as mutilated (if any), and also as having been given in payment. Another instance is that of a man named William Lloyd, who asserts that James Wallace went to him a year or two after he had received a payment from Samuel Wallace, to obtain his signature, and did so obtain it to an abstract for the amount, notwithstanding he had, at the time he received the money from the deceased Samuel Wallace, signed abstract for its payment.

8. That Stephen Scholey, Warden, did also pay for repairing a punt which was sunk in the river at Largs Ferry, when it was so paid for, and who has stated to me, in reply to a question I asked relative to it, that such payment was made upon the certificate of James Herp. If I am rightly informed by Councillors Keating and M'Mahon, Herp met the Committee where the punt was lying, including the Warden, who takes upon himself the duties of a member of all Committees *ex-officio*, owing to his position. He, Herp, only stated he thought the punt would tighten after a little, so as to be able to do its work, but gave no certificate to that effect. In this case I shall also refer you to copies of documents in my possession, sent herewith, obtained by me from Councillors M'Mahon and Keating, both being members of this Punt Committee, and who objected strongly to its being paid for—even went so far as to enter a written protest against it; District Councillor O'Brien being also one of the Punt Committee, his brother-in-law, Robert Lloyd, the contractor for its repair, which is said to have been executed under the supervision of this Councillor O'Brien, and paid for by him, and who has not sought the honor of re-election.

9. This said punt has since been raised at a very great expense, and a man for some days prior to Tuesday last, 18th instant, been kept for the purpose of baling out the water, when in the absence of the Warden at our last meeting we passed a resolution that she should be floated on to the slip, to save further expense.

JOSEPH ECKFORD.

MEMORANDUM

MEMORANDUM of Expenditure on Roads under supervision of M.D.C., as obtained from Colonial Treasurer, and copied from Abstracts sent in by the Warden as correct.

Date.	Number.	Name of Parties said to have received moneys.	Amount charged.	Witness to Abstracts in payment of Moneys.	Secretary countersigning and filling in Cheques and Dates of same, 1867.
MORPETH TO FOUR-MILE CREEK.					
1867.			£ s. d.		
9 Mar.	47,212	Michael Martin	1 4 0	James Wallace	Samuel Wallace 22 Mar.
2 April	47,236	Do.	6 10 0	Do.	Do. 6 April.
20 "	A 8,553	John Farry	1 16 0	Do.	Do. 26 "
27 "	A 8,555	Do.	6 0 0	Do.	Do. 18 May.
10 May	A 8,561	Do.	11 19 6	Do.	Do. 18 "
1 June	A 8,570	Michael Martin	1 16 0	Do.	Do. 5 June.
1 "	A 8,571	John Farry	1 16 0	Do.	Do. 5 "
6 "	A 8,577	Michael Martin	1 0 0	Do.	Do. 15 "
2 Aug.	B 12,695	Neil O'Donnell	5 0 0	Do.	Do. 7 Aug.
23 "	49,408	Michael Martin	33 1 3	Do.	James Wallace 4 Sept.
1 Oct.	49,445	Do.	4 17 3	Do.	Do. 4 Dec.
OAKVALE TO BROKENBACK.					
4 Feb.	9,791	John Dondican	0 2 10	Samuel Wallace	Samuel Wallace 22 Feb.
6 April	A 7,240	Tobias Wynne	3 16 0	Do.	Do. 11 April.
12 Mar.	A 7,213	Thomas Turner	15 18 6	Do.	Do. 14 Mar.
14 "	A 7,214	Henry Hector	22 17 5	Do.	Do. 30 "
16 "	A 7,215	John Birch	27 5 3	Do.	Do. 19 "
EAST MAITLAND TO OAKVALE.					
26 Mar.	A 7,224	Michael Martin	6 0 0	James Wallace	Samuel Wallace 11 April.
6 April	A 7,239	Do.	12 0 0	Do.	Do. 13 "
6 "	A 7,242	John Scotling	3 3 0	Do.	Do. 11 "
6 "	A 7,243	Neil O'Donnell	3 6 0	Do.	Do. 20 "
20 "	A 7,250	John Scotling	2 17 0	Do.	Do. 4 May.
20 "	A 8,551	Neil O'Donnell	2 11 0	Do.	Do. 4 "
20 "	A 8,552	William Marters	3 0 0	Do.	Do. 11 "
4 May	A 8,558	Do.	3 0 0	Do.	Do. 29 "
4 "	A 8,559	John Scotling	2 17 0	Do.	Do. 8 "
4 "	A 8,560	Neil O'Donnell	2 17 0	Do.	Do. 18 "
18 "	A 8,563	John Scotling	3 6 0	Do.	Do. 29 "
18 "	A 8,564	Neil O'Donnell	3 6 0	Do.	Do. 22 "
18 "	A 8,566	William Marters	6 0 0	Do.	Do. 29 "
31 "	A 8,569	Do.	5 10 0	Do.	Do. 5 June.
19 June	A 8,583	Do.	5 4 0	Do.	Do. 28 "
14 "	A 8,584	John Scotling	3 12 0	Do.	Do. 4 July.
29 "	A 8,590	Do.	2 8 0	Do.	Do. 10 "
1 July	A 8,593	William Marters	4 10 0	Do.	Do. 10 "
12 "	A 8,598	Do.	5 10 0	Do.	Do. 17 "
12 "	A 8,599	John Scotling	3 6 0	Do.	Do. 17 "
27 "	B 12,687	Do.	3 12 0	Do.	Do. 3 Aug.
9 Aug.	B 12,699	William Marters	5 10 0	Do.	James Wallace 14 "
23 "	A 9,411	John Scotling	3 3 0	Do.	Do. 31 "
23 "	A 9,411	John Scotling	3 12 0	Do.	Do. 31 "
EAST MAITLAND TO RAYMOND TERRACE.					
15 June	28,585	John Farry	6 0 0	James Wallace	Samuel Wallace 19 June.
15 "	48,586	Neil O'Donnell	6 0 0	Do.	Do. 19 "
6 July	48,595	John Farry	7 0 0	Do.	Do. 13 July.
29 Oct.	101,191*	John Farry	1 10 0	Do.	Do. 2 Nov.
29 "		* Drawn in favour of Scotling.			
27 July	B 12,688	John Farry	1 10 0	Do.	Do. 2 "
27 "	B 12,689	Michael Martin	1 10 0	Do.	Do. 31 July.
23 Aug.	A 49,406	John Farry	1 10 0	Do.	Do. 7 Aug.
23 "	A 49,409	J. A. Downing	26 15 0	Do.	James Wallace 4 Sept.
6 Sept.	A 9,418	Neil O'Donnell	12 0 0	Do.	Do. 31 Aug.
6 "	A 9,418	William Lloyd	3 3 9	Do.	Do. 11 Sept.
6 "	A 9,424	Neil O'Donnell	3 3 9	Do.	Do. 20 "
13 or 15 Sep.	A 9,426	Do.	3 16 0	Do.	Do. 20 "
8 Oct.	101,103	Do.	1 1 6	Do.	Do. 16 Oct.
EAST MAITLAND TO PATERSON <i>vid</i> DUNMORE BRIDGE.					
13 June	A 8,582	James Cummings	2 8 10	Samuel Wallace	Samuel Wallace 19 June.
22 July	B 12,680	Do.	3 0 0	James Wallace	Do. 3 Aug.
11 "	B 12,681	David Poyke	1 15 0	Do.	Do. 3 "
27 "	B 12,686	John Lawrence	1 0 0	Do.	Do. 21 "
1 "	A 8,591	John Ford	4 0 0	Do.	James Wallace 13 "
<small>(£1 10s. in Cash Book. £4 not in it.)</small>					
17 "	D 12,667	Lawrence Hines	3 15 0	Do.	Samuel Wallace 20 July.
24 Sept.	A 9,438	James Leonard	1 8 0	Do.	James Wallace 5 Oct.
22 Oct.	101,135	John Mitchell	3 10 2	Do.	Do. 2 Nov.
6 Aug.	B 12,697	John Wilcox	4 5 0	Do.	Samuel Wallace 21 Aug.
6 "		(Died on 13 Aug.)			
6 "		S. Fairhall	2 5 0	Do.	Do. 21 "
20 "	A 9,404	John Wilcox	2 15 0	Do.	James Wallace 28 "
20 "	A 9,405	S. Fairhall	2 5 0	Do.	Do. 28 "
3 Sept.	A 9,415	Do.	3 0 0	Do.	Do. 14 Sept.
3 "	A 9,416	John Wilcox	2 10 0	Do.	Do. 14 "
3 "	A 9,417	Henry Cooper	3 15 0	Do.	Do. 14 "
6 "	A 9,419	John Vidler	4 4 0	Do.	Do. 14 "
6 "	A 9,420	Charles Stout	4 4 0	Do.	Do. 14 "
	A 9,421	Mathew Murphy	25 0 0	Do.	Do. 14 "

Memorandum as to Tender.

COUNCILLORS Keating, M'Mahon, and O'Brien, Committee for Falls Punt, on a certain day opened tenders, when we found one of them not signed. Of course we felt angry. When O'Brien intimated he knew something about it, we ordered him out; he brought it back signed by Robert Lloyd, it being the second honest tender, and which we accepted. We saw the punt after she was reported as completed; we said we could not consent to take her, as the work was not performed according to contract, and we, of course, brought up a report to that effect, marked *. At that meeting the Warden and Council were all but unanimous that the punt could not be accepted if it did not meet the approval of the Sub-committee appointed to supervise it, and further affirmed it. The meeting had no power to interfere in the matter. These remarks were from the Warden's lips; and we now declare that the punt repairs were paid for against our consent, as we are certain no further repairs were done to her between the date of our report and the acceptance, and therefore, consistently with our duty, could not accept the punt as properly repaired according to annexed specification.*

WILLIAM KEATING.
THOMAS M'MAHON.

Copy of Specification.

THE two underneath ends old zinc taken off, thoroughly scraped, to be lined with inch hardwood boards, to be inspected by at least two of the persons appointed for that purpose, to be caulked, pitched and tarred outside on the Hinton side as the punt now lies, two planks to be replaced, to be caulked, pitched, and tarred, and one new stanchion, and on the opposite side, same end, to be served in like manner, between decks to be scraped and tarred, and floor to be replaced, to be caulked and tarred same as above. This work to be done either by tender for the whole or labour only.

We certify the within was not carried out in any respect.

WILLIAM KEATING.
THOMAS M'MAHON.

* Morpeth, 13 May, 1869.

Report in Committee with the Falls Punt.

MR. O'BRIEN, one of the Committee, reports her completed, and yesterday we with Mr. O'Brien inspected her; and as we considered her not according to contract, we have thought better to lay the matter before the whole of the Commissioners, for their consideration:—

1st. On examination we find that the punt makes from 2 to 3 inches of water as she now lies on the slip at a tide; should she be loaded, there is a possibility of her even making more.

2nd. The deck seams are open, and until the same are caulked and tarred she is not fit for use. This work we consider to be in the contract, and ought therefore to be done before accepting her as completed.

3rd. The extras which were pointed out, and for which the charge was £4 10s. The next is the painting. If we are correct, there was, I believe, a resolution authorizing £2 10s. The charge made is £5, which was thought excessive by a majority of those appointed for that purpose.—Dated 22 October, 1868, and laid before Council.

WILLIAM KEATING.
THOMAS M'MAHON.

True copy of papers in our possession.

After the Falls Punt being accepted.

She was placed in charge of James Elsely and Richard Elsely who gave us a report, being placed there for the purpose of ascertaining her true state (a minute of which, as follows, was read to the Council), viz. :—

From 7 p.m. to 4 a.m. next morning, 89 zinc buckets was leaked in; on following day, 94 buckets, from 4 a.m. to 6 p.m.; and then from 6 p.m. to 5 a.m. next morning, 86 buckets.

The above-named men were employed to take the Punt to Largs Ferry, where she was supposed to be worked. After arriving at Largs, they said unless the punt was kept continually pumped out, they were of opinion she would not float, which was verified by the fact that she was at the bottom of the river in the morning, and the contractor paid for her whilst in that position, notwithstanding we as members of the Committee appointed for the purpose of seeing into the proper repair of this punt, protested against her being paid for.

WILLIAM KEATING.
THOS. M'MAHON.

West Maitland, 19th May, 1869.

I, John Farry, beg to certify that I never received in my life a cheque £11 18s. 6d. from the Maitland Road Trust, neither did I ever in my life receive any payment from James Wallace, for work performed by me on account of the said Maitland Road Trust; and further, if any abstracts are witnessed by James Wallace, for payments received by me, they are forgeries, having been always paid by the deceased, Samuel Wallace, to whom I always signed abstracts.

Witness—J. HOLMES.

his
JOHN × FARRY.
mark.

I, Michael Martin, do hereby certify that I never received any moneys from James Wallace, on account of work performed by me for the Maitland Road Trust, but once, and for which I signed an abstract. I further state that I never received a sum of thirty-three pounds one shilling and threepence, in one cheque, in my life, from the said Trust; neither did I ever put my mark to any abstract for moneys received by me from the Maitland Road Trust to any person but the deceased Samuel Wallace, with the exception of the once, as above stated. If there are any abstracts signed by me and witnessed by James Wallace, they are forgeries.

West Maitland, May, 14th, 1869.

Witness—J. HOLMES.

his
MICHAEL × MARTIN.
mark.

Morpeth, 18th May, 1869.

I, William Lloyd, do hereby certify that I did, at the request of Mr. James Wallace, sign a voucher, he being then Secretary to the Maitland Road Trust, for moneys that I did receive from his brother, the then Secretary, between one and two years before the time of the said James Wallace requesting me to sign again, which I do now assert I signed at the time of my receiving payment of the money in question.

Witness—THOS. M'MAHON.

WILLIAM LLOYD.

Copy of Registration of the death of Samuel Wallace.

Samuel Wallace, 30 years; died at East Maitland, 13 August, 1867, of ramollissement of the brain; buried 15 August, 1867, in the Wesleyan Burial-ground, Oakhampton Road.

J. Eckford, Esq., M.L.A., to The Minister for Lands.

West Maitland,

15 February, 1869.

MEMORANDUM as against Scholey's report. He says his name was proposed in conjunction with Mr. Eckford's to take charge of the Wollombi Road, and that by mistake the Secretary omitted his name from the minutes. Such is not true—Messrs. M'Mahon and Keating, both Councillors, can prove to the contrary, as the road was placed under my entire control. He further states there is a deficiency amounting to £109 5s. 10d., and upon making inquiry he further states he cannot find out the name of William Thomas, and that John Sheridan states £4 10s. is charged against him; whereas he had only received £3 10s. Now William Thomas' account, amounting to £7 4s. 8d., added to 18s. he states Sheridan denies receiving, will only make £8 2s. 8d.; this report implies further that, after his (Scholey's) inquiry not finding the man Thomas, the remainder of the men not being mentioned, he must be satisfied they were on the works, or why particularize the name of Thomas. The report further states Sheridan said he signed the vouchers in blank. Such is not truth, which the original vouchers, when produced, will show that the different payments were all completed at one time with the same ink and pen. Scholey is well aware the Secretary told him, when I gave him the vouchers I distinctly stated there were names in them of men who had been working miles beyond where the party regularly kept were working, and that those men were placed at different parts where the road required most looking to. The Warden has stated I had promised to have all my men over at the office for the last payment. This is not true. I knew nothing of Scholey's intentions, notwithstanding I travelled several miles with him on the same day he alludes to, until 9 o'clock on the same evening. He states I made him that promise, and then it was not from him Scholey, but personally from the Secretary, and a short time afterwards by letter through the post from the Secretary asking me to send over my men to the office. With regard to the report, it was prepared by a solicitor, and afterwards taken back to the same solicitor to copy. Councillors M'Mahon and Keating both state the report is not the same as that passed at the meeting, when it was brought back, and notwithstanding three Councillors signed it, viz. :—Bowden, Noble, and O'Brien, certifying to its truthfulness, and when asked subsequently by me why they signed a document they knew nothing about, their answer was they believed Mr. Scholey—so that upon his statement they stake their honor. Scholey has also stated I had been repeatedly asked to give an explanation, which is not true; I challenged discussion upon the matter only through what I had heard from parties in no way connected with the District Council, and from the Warden's manner he seemed satisfied. About a month afterwards he was in Sydney, and telegraphed to the Secretary on Friday, January 1st, to call a special meeting for Wednesday, January 6th, of the *Maitland Road Trust*, knowing as he (the Warden) did full well, Parliament was to meet on the day previous, and that notice would be given of Parkes' want of confidence motion for the following day, so that it was impossible for me to be in both places. It was most singular, when I arrived in Sydney the day previous to the session opening under the then Government, I met a gentleman returning from the picnic given to the late Government by the present Opposition, and he said to me—"Why they said you would not be here." It would therefore seem as the Warden Scholey, knowing as I do he is a strong partisan of the late Government, more especially Parkes, it was a matter made up amongst them, that if I attended Parliament they would have the chance of carrying what they liked in the District Council; and on the other hand, if I stayed here, his friend Parkes would have had another chance for power. I say, unhesitatingly, Scholey never should have been placed in such a position as that of Warden; and further, I may say, I prevented Mr. Cowper, four years and upwards ago, from placing this man in the Commission of the Peace, he having been recommended as a person fitted for that position; that is one thing why this man should try to injure me. Upon serious reflection I concluded that my parliamentary duties were of more importance than attending the District Council, and I wrote to Mr. Councillor Keating requesting him, if any discussion took place relative to the Cessnock Road under my charge, to move it be postponed until the regular monthly meeting to be held on the Tuesday following, which was refused by the meeting; one of them (Bowden) stating it was of importance it should be entered upon at once, therefore the report, drawn up by Thomson, solicitor, cut and dried by Bowden and Scholey, was submitted and adopted, with instructions that it should be forthwith sent to the Minister for Lands. At the next meeting Mr. Councillor Keating asked the Warden "had any answer been received to the report?" and was told "no"; he then asked "whether or not the report had been forwarded?" and the Warden answered "it had only that moment been received from the lawyer who had it for copying." Keating then moved it should be forwarded forthwith; Bowden, who only a few days previous said it was of so much importance to adopt and forward the report, moved an amendment that it be not sent forthwith. The Warden is fully aware that he has done wrong, he knows full well the man Israel intends to enter an action against him for the way in which he has acted towards him as regards myself. He (the Warden) is a man I have not spoken to for some time past, having at a public meeting heard him tell a gross falsehood against a gentleman of high position and character. I shall, as soon as the District Council Meeting is over to-morrow, send you a proper reply, and would have done so long before this, had it not been for the obstacles thrown in my way by the Warden. The first opportunity I had, which was at our monthly meeting, to-morrow is four weeks ago, I rose in my place to move resolutions relative to the matter. The Warden at once stopped me, and moved a resolution that I should not be heard, which was seconded by Bowden. I immediately moved, as an amendment, that I be heard at once, and spoke to the amendment, after which the Warden moved and carried that no further discussion take place until the next meeting, which is to-morrow. I may also add, the Warden is aware it is the intention of Councillors M'Mahon and Keating to report him for misappropriation of public funds, and also for making up accounts himself upon the death of the Secretary, Wallace, who (he the Warden stated) had left the accounts all in a mess, and that several documents were missing. I forward you a letter received from one of the *Mercury* reporters, as also one each from Keating and M'Mahon, both Councillors. The excuse Scholey made for so long a postponement was that he wanted to go to the Clarence, which could not have been the case, as he did not go. The Secretary, Samuel Wallace, after his death, was succeeded by his brother, James Wallace; the former's surety was Mr. Scholey, the present Warden. I may also add, the fact of me having been elected for the Municipal Council, polling 570 votes in a small place like this, is a sufficient refutation in itself to such trumped-up statements as those made by Scholey. This statement should read December instead of January, that Scholey called the meeting, when I went down to the opening of Parliament by your Government.

JOSEPH ECKFORD.

Mr. John Keating to The Minister for Lands.

Sydney, 2 June, 1869.

Sir,

I beg leave most respectfully to inform you that I have known Mr. Joseph Eckford for the last twenty years, a great part of which he has been before the public as a consistent Member of the Legislative Assembly. He has recently been returned, for the third time, as a Member of the Maitland District Road Trust, by the united Electorates of West Maitland, East Maitland, and Morpeth. I believe the above-named gentleman to be thoroughly honest and straightforward in principle, and incapable of degrading his name and character, as also of ruining his family prospects and future public usefulness, by the misappropriation of public money. He informs me he can account for every farthing that has been placed in his hands by the Trust, for road construction and improvement. Should this be borne out, Mr. Eckford has been much injured regarding the Cessnock Road; and, under present circumstances, I feel satisfied that he will come out of the matter with clean hands, and prove himself to be a man of sterling honesty and truth.

I have, &c.,

JOHN KEATING,
Morpeth.

The Warden.—Councillor Eckford, in a long address, in which he gave his reasons for the course he was taking, moved,—“That this meeting is of opinion that the last resolution be transmitted to the Government, in order that they may inquire into the desirability and fitness of the present Warden, Stephen Scholey, being allowed to preside over the deliberations of this Council any longer, being one of importance, and second to no other in this Colony, save the Legislature.” This resolution was seconded by Councillor William Keating, and supported by Councillor John Keating, and carried unanimously.

Maitland District Council.—An adjourned meeting of this Council was held in the office, East Maitland, on Tuesday afternoon. Present—The Warden, Councillors Eckford, J. Keating, Bowden, W. Keating, and M'Mahon. The minutes of the last meeting were read and confirmed, after some little discussion as to an alleged omission.

Motion

Motion for adjournment.—The Warden moved the adjournment of the Council for a week, in order to have the opportunity of disclaiming any intention to act discourteously to any member of the Council, in postponing the last meeting, or to offer an insult to any Councillor. In postponing the meeting on the ground that the newly-elected Councillors were not gazetted, he had only followed a course that had been pursued under similar circumstances about four years ago. He had asked Mr. Hughes (the Secretary) to write circulars postponing the meeting, because he had thought it far better to do so, and he had been particular in desiring that the circular should contain all necessary apologies for the necessity that had arisen for taking the step. With respect to the fence across the road at the Hinton Ferry, he thought the Commissioners were wrong in entering upon that matter, and listening to the statements of a man in his (the Warden's) absence; he denied most strongly that he had anything to do with the erection of the fence in question; that had been the work of Councillor O'Brien, who had been empowered by the Council to superintend the erection of a fence at the Hinton Punt-house, and he (the Warden) had never interfered with the fencing. He trusted these explanations would clear him from the charge of intending to act discourteously, and that the Council would withdraw the motion, which involved a censure upon him for interfering with work without warrant. A desultory discussion followed, in which Councillors M'Mahon, J. Keating, J. Eckford, and W. Keating took part, and it was stated by Commissioners, and by Lloyd, the contractor for the fencing, that the Warden had given the requisite authority for the construction of the cross-fence. This the Warden again denied, and Councillor Eckford was proceeding to address the Council on the motion for adjournment, and was making some allusion to the manner in which charges against him had been treated, when Councillor Bowden withdrew, and the Warden intimated that if Councillor Eckford continued to speak on the matter he was then referring to, he would leave the Chair. Councillor Eckford said he did not intend to refrain from the course he was taking; whereupon the Warden left the Chair, saying, as he did so, that he adjourned the meeting for a week. Councillor M'Mahon was then moved into the Chair, and after a lengthy speech from Councillor Eckford, the latter moved the following resolution:—"That the conduct of the Warden, in quitting his Chair this evening, without the slightest provocation, is an insult to the Council; more especially as it was an adjourned meeting. His object could only be for the purpose of preventing public business from being transacted, as he stated, on abruptly vacating the Chair, that he adjourned the meeting." Councillor John Keating seconded the resolution, and after being supported by Councillor William Keating, it was carried unanimously.

Charter of the Trust.—After some conversation it was decided to make application to the Colonial Secretary for a dozen copies of the Charter of the Maitland Road Trust, for the use of members of the Council.

No. 8.

JOSEPH ECKFORD, Esq., M.L.A., to THE SECRETARY FOR LANDS.

West Maitland, 11 June, 1869.

SIR,

I herewith forward a statement of expenditure on the Road from East Maitland towards Newcastle for 1867, under the supervision of Stephen Scholey, Warden, and which has been verified by the Treasury officers. You will find, on looking at the abstracts themselves, James Wallace has signed them as Secretary on July 20th, July 26th, and August 5th, whereas you will see Samuel Wallace was Secretary and signed the cheques on those days as per accompanying statement. The Warden cannot make any excuse, as this irregularity or improper entry is for works carried on under his own control, no person whatever having anything to do with the supervision of said road but himself.

I find from information received from the Treasury yesterday, there is a slight mistake made in my report against Scholey with reference to the dates of cheques being subsequent to the dates of payments; now being more fully informed, I find what I believe to be dates of cheques was dates of payments in bank—every other thing is correct.

I need not again remind you as to cheque No. 101141, made in favour of Scolting for £3 on October 29th, and which shows by the abstracts to have been paid to John Farry, in two payments of 30s. each. The payment, if my information from the Treasury is correct, was witnessed by Jas. Wallace and cheque signed by Saml. Wallace, who had as you will see died on 13th August previously. The names written in red ink were done at the Treasury.

I am, &c.,

JOSEPH ECKFORD.

[Enclosure.]

NEWCASTLE MUNICIPALITY TO EAST MAITLAND.

Date of Cheque.	No. of Cheque.	Parties receiving payment.	Amount.	Witness to payment of Amounts.	Secretary signing Cheque.	Date of Cheque.
1867.			£ s. d.			
20 July	B 12679	James Wilson	0 17 6	Jas. Wallace, Secretary, was not Secretary until 20th August, after the death of his brother ...	Saml. Wallace.	
		Thos. Hanrahan	1 5 0			
		Jas. Baldwin.....	1 5 0			
		Philip Ryan	1 5 0			
		Saml. Fordham.....	2 15 0			
26 July	B 12683	Saml. Fordham.....	2 4 0	Jas. Wallace, Secretary...	Saml. Wallace.	
		Jas. Baldwin	1 0 0			
		Thos. Hanrahan	1 0 0			
5 Aug.	B 12696	Philip Ryan	1 0 0	James Wallace, Secretary	Jas. Wallace.	
24 Sept.	9437	Patk. Scanlon	3 2 6			
	9437	Geo. Wakely	6 0 0			
	9436	Henry Jackson.....	1 5 9			
4 Oct.	101101	Geo. Wakely	1 3 9			
8 Oct.	101106	John Scotling	4 7 0			
"	101107	Wm. Marters	5 0 0			
"	101108	Patk. Carroll	2 2 0			
"	101109	Mil. Curran	2 2 0			
"	101110	Mil. Hanrahan.....	1 16 0			
16 Oct.	101122	John Scotling	1 17 6			
"	101123	Wm. Marters	3 12 6			
"	101124	Patk. Carroll	1 17 6			
"	101125	Mil. Curran	1 17 6			
"	101126	Patrick Moran.....	2 7 6			
"	101127	Mil. Hanrahan.....	1 7 0			

The above works were carried out under the supervision of Stephen Scholey, Warden.

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No. 9.

THE UNDER SECRETARY FOR LANDS to THE WARDEN, DISTRICT COUNCIL, MAITLAND.

Department of Lands,
Sydney, 23 June, 1869.

SIR,

In forwarding the accompanying copy of a statement made to this office by Mr. Eckford, on ^{11 June, 1869.} the subject of certain irregularities in the accounts of your Trust, carried out under your supervision, I am directed by the Secretary for Lands to request that you will favour me with any observations that you may think fit to offer in the matter.

I have, &c.,
M. FITZPATRICK.

No. 10.

THE WARDEN, DISTRICT COUNCIL, MAITLAND, to THE MINISTER FOR LANDS.

East Maitland,
29 June, 1869.

SIR,

I do myself the honor to acknowledge the receipt of your communication dated 23rd June, 1869, accompanied by a statement of irregularities supposed by Mr. Eckford to exist in the accounts of the Maitland Road Trust, and have much pleasure in furnishing herewith such observations as may plainly show to you that the object of Mr. Eckford's letter is not to promote or protect the public interest, nor yet to ensure a more efficient system in the working of the Trust of which he is a member. Referring to the first subject endeavoured to be formed into the substance of a complaint as to the expenditure of public moneys on the Road from East Maitland to Newcastle for 1867, and stated as follows—"You will find, on looking at the abstracts themselves, James Wallace has signed them as Secretary, on July 20th, July 26th, and August 5th, whereas you will see Samuel Wallace was Secretary and signed the cheque on those days as per accompanying statement. The Warden cannot make excuse, as this irregularity or improper entry was for works carried on under his own control, no person whatever having anything to do with the said road but himself." This egregious irregularity may be easily explained. In compliance with the unanimous consent of the Maitland Road Trust, Mr. James Wallace acted in conjunction with his brother, Mr. Samuel Wallace, as Secretary to that body, for several months previous to the death of the latter, which took place on the 13th August, 1867. Mr. Samuel Wallace, as the duly appointed Secretary, continued to countersign the cheques, and the signatures upon abstracts referred to may have been witnessed as stated by James Wallace, or they may form portion of several abstracts which were not completed until after Mr. Samuel Wallace's decease, although the cheques were signed and paid by him on the dates named.

Mr. Eckford is fully cognizant of this, and with every circumstance connected with these matters, and his retentive memory must still retain the fact that he waited with me (by appointment of the Trust), upon the Under Secretary for Finance and Trade, to confer with him with reference to their adjustment. In consequence of Mr. Samuel Wallace's illness previous to his death, and his brother, James Wallace, having only performed a portion of the labour which devolved upon the Secretary, the abstracts were not prepared as usual; we consequently requested to be supplied with a statement of cheques which had been given in payment of wages. The Under Secretary advised that a declaration should be made by the members of the Trust, to the effect that they believed the moneys voted had been faithfully expended. To this I objected, and determined to trace the matter from the information in my possession. Having no data but the butts of cheque books, I had every payment transcribed, waited upon every individual who had received payments and obtained their signatures, thus preparing the required abstracts, which upon completion corresponded *in toto* with the sums received from the Government.

These abstracts were received by the Auditor General without any comment, and as stated in Mr. Eckford's letter of the 11th instant, verified by the Treasury. Mr. Eckford having concurred and willingly assisted in carrying out these matters, it is certainly strange that in his capacity of Commissioner he should have so long retained to himself these imaginary errors without bringing them under the notice of the Trust or the Government. With reference to the second discrepancy, the information from the Treasury seems to imply that a previous report was sent in by Mr. Eckford, and the inaccuracy having been proved to have emanated from an oversight by himself, his satisfaction is expressed in the second clause of his letter of the 11th June, hence requiring no answer from me. With reference to the third paragraph, which reads thus—"I need not remind you as to the cheque No. 101141, made in favour of Scotling, for three pounds, on October 29th, and which shows by the abstract to have been paid John Farry in two payments of thirty shillings each. The payment, if my information from the Treasury is correct, was witnessed by James Wallace, and cheque signed by Samuel Wallace, who had, as you will see, died on 13th August previously. The names written in red ink was done at the Treasury." I find, upon reference to the books of the Trust, that upon the 29th October, 1867, cheque 101141, value £3, drawn in favour of John Scotling for work performed on Road East Maitland to Oakvale, and cheque 101142, for a similar amount to labourers on Road East Maitland to Raymond Terrace, where John Farry was employed. The latter cheque was probably received by Farry on account of himself and others engaged with him, and the abstract signed for £1 10s. in two distinct places, which, in the aggregate, would be correct. I believe this to be the reason why Farry's name appears on the abstract, the cheque being entered on the butt and in the day-book as payable to labourers and not an individual.

The cheque could not have been signed by Saml. Wallace, as I find by the minutes of the proceedings of the Trust, dated 20th August, 1867, the following resolution:—"The Warden proposed that the resolution empowering the Secretary to draw cheques be rescinded, and that for the future all cheques be drawn by the Warden. Mr. O'Brien seconded the motion, which was carried unanimously." The purport of this resolution

resolution having been sent to the bank, it is improbable that any cheques would have been paid in contravention to its terms. It is impossible then that the statement with reference to this cheque can be correct if drawn subsequent to the passing of the above resolution, and it certainly must have been unless there is an error in the date. Prior to this all cheques were countersigned by the Secretary, in compliance with the terms of a resolution passed by the Trust on the 18th December, 1865.

If there are any other questions you wish answered, or any additional information required, I will gladly furnish it; and, in addition to my source of proof, the records of the Council and the cheques paid away, which are at any time available upon application to the bank. I believe, without an exception, I can bring forward the several men whose names appear on the abstracts to testify that they are the parties the signatures represent, and received the amounts fixed opposite their respective names.

I have, &c.,
STEPHEN SCHOLEY.

MINUTE OF MINISTER.

THE explanation includes statements at variance with those of Mr. Eckford; some of which may be capable of verification at the Treasury. These papers may therefore accompany the former papers in Mr. Eckford's case already forwarded to that department. W.F.—July 16, 1869.

The Under Secretary for Finance and Trade. B.C., 22 July, /69.—M.F.

No. 11.

J. ECKFORD, Esq., M.L.A., to THE SECRETARY FOR LANDS.
West Maitland,
20 August, 1869.

SIR,

It has been asserted by the Warden, upon two occasions, that he has received an official reply from your office that the charges I made against him amounted to nothing more than a slight irregularity, and that to his charges made against me no reply has yet been received; indeed, he spoke in such a way as would lead the public to think I have, in the opinion of the Government, been guilty of a very gross offence. There was a balance of £22 17s. from last year's grant unexpended, out of which there was due to Israel and Kinnaillly £6 8s., which has been paid these men, leaving still a balance of £16 5s. unexpended. That amount has been forwarded to the Treasury, by order of the Council, the time having long since passed over which was allowed for its expenditure.

I forward herewith a scrip taken from the *Maitland Mercury*, which is an abridged report of the proceedings of the meeting I have already alluded to, in which you will see he has stated you ordered him to pay no money on that road. Believing this statement to be untrue, and only in keeping with his general conduct, I trust you will favour me with a reply as to his truthfulness or otherwise, because the fact of him stating at a public meeting a Minister of the Crown had desired him to do a particular act must leave his hearers in doubt as to its truthfulness or otherwise. He, the Warden, ran away, under the pretence of business matters, to Sydney, and Bowden, as you will see, left under a pretence of illness in his family, which I am informed is untrue. The fact is, these men now know full well they have done me an injustice, and they have left themselves open to me to bring an action against them for slander.

Under the circumstances, I trust you will give me a reply as to the Warden's statements.

I have, &c.,
JOSEPH ECKFORD.

[Enclosures in No. 11.]

Extract from *Maitland Mercury*.

At this stage of the proceedings the Warden said he was obliged to leave for Sydney by the afternoon train, and must vacate the Chair. After some discussion Councillor Eckford was voted into the Chair; but previous to the Warden's withdrawal he was asked the following question by Councillor M'Mahon:—"Has any reply come to hand from the Government to the report sent by you against Councillor Eckford, or to the report sent by Councillor Eckford against you?" The Warden said, in reply to the question—"In reference to the charge sent down against myself, I have received an official reply that the charges amount to a mere irregularity, according to the reading of the Minister for Lands. I am willing to place the documents before the Council. In reference to the charges against Mr. Eckford, there has been no reply from the Government." Councillor M'Mahon then moved—"That the vouchers belonging to Cessnock Road for 1868 be laid upon this table, for the information of the Commissioners, and if correct, to be certified and transmitted to the Government." Councillor J. Keating seconded the motion. The Warden said: In reference to this matter, the whole of the money voted for this road had not been expended, so that the vouchers cannot be returned. There is £16 to be expended, and the Minister for Lands ordered me to pay no money on this road. I object to the vouchers being produced until we have had some communication from the Government. Councillor J. Keating: Have the vouchers ever been kept back before? The Warden: Yes; no vouchers are sent until the money has been all expended. The Warden then left the room, and Councillor Eckford took the Chair. He proceeded to state, at length, the circumstances connected with his management of the Cessnock Road, and to explain the nature of the charges made by the Warden against him, the substance of his remarks being similar to what we have already published; and ultimately the motion was carried unanimously, and the vouchers were laid upon the table. During the speech of Councillor Eckford, Councillor Bowden retired, pleading illness in his family that necessitated his attendance at home. The vouchers being produced, Councillor Eckford explained that he wished to make one correction in them; the sum of 5s. was placed to one man's name, whereas another man ought to have been charged with it. The Councillors would see, if they examined the signatures upon the vouchers, that they were all written at one and the same time with the amounts acknowledged, and not, as was falsely alleged, signed blank and the sums placed against the names afterwards. Councillor M'Mahon moved—"That the balance due to Kinneally, viz., £4 4s., and Israel £2 8s., as per order of Councillor Eckford, on October 27, 1868, be paid at once." Councillor W. Keating seconded the motion, which was agreed to unanimously. The vouchers were then certified to by two Councillors besides Councillor Eckford, and it was determined to forward them to the Audit Office forthwith.

The Council went into committee upon the application of the Fall's puntman, but arrived at no decision; and on resuming, rose.

MINUTE

MINUTE OF THE UNDER SECRETARY FOR LANDS.

HAVE any such communications been addressed to the Warden as herein referred to? What was the nature of the instructions and subsequent communication about payment to the District Council?

M.F.

21 August, 1869.

As such letter as that mentioned by Mr. Scholey has been sent from this office. The communication addressed to the Warden (23 June, 1869) enclosed a statement which had been made to this office that certain irregularities had occurred in connection with his management of the business of the Trust, and requested him to explain; he has not replied, and should perhaps be reminded.

The papers are still at the Treasury, where they were sent for such verification as might be necessary, and such information as could be afforded on the subject of the accounts in dispute.

In the meantime, the issue of further advances to the Maitland Road Trust has been delayed by instructions of the Minister.—27.

No. 12.

THE WARDEN OF THE MAITLAND DISTRICT COUNCIL to THE SECRETARY FOR LANDS.

Maitland District Council,

East Maitland, 24 August, 1869.

SIR,

I do myself the honor to bring under your notice certain proceedings which took place in this Council Chamber, on Tuesday, 17th instant, when the following Commissioners were present, viz.:—Mr. Joseph Eckford, Mr. John Keating, Mr. William Keating, and Mr. Thomas M'Mahon.

On the day in question, after conducting the usual preliminary business of opening the meeting, I vacated the Chair, explaining to the Commissioners that I had to leave for Sydney that afternoon, and accordingly left the Chamber. During the course of the meeting it was proposed by Mr. M'Mahon,—“That the vouchers belonging to Cessnock Road for 1868 be laid on this table, for the information of the Commissioners, and if correct to be certified and transmitted to the Government.” Motion seconded by Mr. John Keating, and carried unanimously.

The Secretary produced the vouchers, which were examined by the Commissioners; and on being asked by Mr. Eckford if they were satisfied that they were correct, and the Commissioners expressing themselves in the affirmative, Mr. M'Mahon moved—“That the balance of moneys due to Kinneally, £4 4s., and Israel, £2 8s., as per order drawn by Mr. Eckford on October 27th, 1868, be paid at once.” Motion seconded by Mr. Wm. Keating, and carried unanimously.

Proposed by Mr. M'Mahon—“That the vouchers being considered correct be forwarded, together with cheque for balance to the Treasury at once.” Motion seconded by Mr. John Keating, and carried unanimously. Cheques were then drawn, signed by Mr. Joseph Eckford as Chairman, Mr. John Keating, and Mr. Wm. Keating, and handed over to the parties named; that in favour of Treasury has also been forwarded to the Auditor General.

From information in my possession, I am led to believe that the money thus paid to Kinneally and Israel was not earned by them, and is portion of a dispute in reference to the Cessnock Road grant for 1868, and of which full particulars are now in your office.

I have to call your attention also to the following resolution of 20th August, 1867, which was moved by the Warden, seconded by Mr. O'Brien (then a Commissioner), and carried unanimously, Messrs. Eckford and M'Mahon being present,—“That for the future all cheques be drawn by the Warden.”

I have, &c.,

STEPHEN SCHOLEY,

Warden.

MINUTE OF MINISTER FOR LANDS.

I CANNOT quite understand why this information is given, as it is not the duty of the Government to regulate the proceedings of elective bodies such as District Councils, whose members are responsible to their constituents and to the district—not to the Government. There is undoubtedly a responsibility due to the Government by the District Council of any district, not by individual members, with reference to moneys entrusted by the Government, or by a Parliament, to be expended by the Council. For this money the Council in such case has to account to the Government. This paper however may be submitted with the other papers at the Treasury.

W.F.—August 30th, 1869.

Under Secretary for Finance. B.C., 30 Aug., /69.—M.F.

No. 13.

THE WARDEN OF THE MAITLAND DISTRICT COUNCIL to THE SECRETARY FOR LANDS.

West Maitland,

30 September, 1869.

SIR,

With reference to my former report on the subject of the appropriation of the sum of £350, No. 2. placed to the credit of the Maitland District Council in the Bank of New South Wales, to be expended on that portion of the Wollombi Road lying between Maitland and Cessnock, I now do myself the honor to report further, that I have made inquiries personally from a great number of people who were able to

give me information on the subject of the names, business, and residences of persons living in the district of Wollombi, particularly in the neighbourhood of Cessnock, as well as along the Wollombi Road on this side of Cessnock, and in the neighbouring districts of Mount Vincent and Black Creek, which inquiries have extended from February last to the present time; and that I have also caused similar inquiries to be made by others, with the view of ascertaining whether such persons as William Thomas (a marksman), William Avery (a marksman), and John Anderson, mentioned in my previous report as having been paid certain amounts for work alleged to be done on the before-mentioned portion of the Wollombi Road, such payments being made by Mr. Joseph Eckford, did work, as was alleged, on that portion of the road between Bishop's Bridge and Cessnock, at or about the time mentioned in the vouchers, or whether in fact there were any persons of those names, and answering the descriptions given, in those districts.

The result of these inquiries is, that there were not, at or about the time stated in the abstracts and vouchers, any men of the names of William Thomas, William Avery, and John Anderson, at work on the before-mentioned road, nor were there at that time, nor for some time before nor since that time, any men of that description or of those names residing in the before-mentioned districts.

I have, &c.,
STEPHEN SCHOLEY.

No. 14.

MINUTE OF SECRETARY FOR LANDS.

PENDING investigation into certain charges and counter-charges between and against the Warden of the District Council of Maitland upon matters of account, I consider it advisable that no issues of public money to the Council in question shall be made for the time being; or, in case there should be any cases of urgency having reference to local expenditure under supervision of the Council, let all cases of the kind be submitted, without delay, for further inquiry and decision.

W.F.—5 June, 1869.

THE whole of the papers connected with the questions in dispute between Mr. Eckford and the Maitland District Council have been despatched to the Treasury, for verification of the facts stated by the former, and for other information. The moneys usually allotted to the Maitland District Council have been already placed to the credit of that body, but I find are not yet operated on by them; they stand unexpended in the bank. In accordance with this decision, a sum of £14, proposed to be issued to the Council for the Embankment and Approaches to Pitnacree Bridge will I conclude be retained for the present.

The matter to await report from Treasury?

Yes. W.F.—14 June, 1869.

Memo. respecting delay in verification of Cessnock Road Accounts.

I WAS busy preparing the Abstracts of the Public Accounts for 1868 when the Cessnock Road papers were referred to me; and as they appeared to refer only to the adjustment of advances, and not of an urgent nature, I put them aside, intending to deal with them on the completion of these Statements. Before I had time, however, to take them up, I received instructions to commence the preparation of the Supplementary Estimates, and Estimates for 1870, which, in addition to my ordinary duties, more than occupied the whole of my time, and I have frequently had to remain in the office to 10 o'clock at night.

GEORGE LAYTON,
Accountant.

The Treasury,
7 October, 1869.

1869.

LEGISLATIVE ASSEMBLY.

NEW SOUTH WALES.

ROAD-METAL QUARRIES AT PROSPECT.

(CORRESPONDENCE, &c., RESPECTING.)

Ordered by the Legislative Assembly to be Printed, 8 October, 1869.

RETURN to an *Order* made by the Honorable the Legislative Assembly of New South Wales, dated 2nd February, 1869, That there be laid upon the Table of this House,—

- “ Copies of all Correspondence, Minutes, and other Papers, in the possession of the Government, having reference to—
- “ (1.) The granting or handing over by any less tenure the ‘ Road-Metal Quarries’ at Prospect, to the Municipal Council of Sydney.
- “ (2.) Any Branch, or proposed Railway Branch or other Road, to the Prospect Quarries, for conveying ‘ Metal’ to Sydney.
- “ (3.) The resumption by the Government of the land about the Prospect Quarries, together with a tracing of all Plans or Surveys in connection with the above subjects.
- “ (4.) The cost of the Surveys, a Book of Reference giving the data from which the original survey commenced, and the data from which the subsequent survey commenced; also, particulars as to what portion of the said reserved land formed the original driftway; the area of the reserved land, distinguishing the area of the driftway from the whole area resumed.”

(*Mr. Tunks.*)

SCHEDULE.

NO.	PAGE.
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ROAD-METAL QUARRIES AT PROSPECT.

No. 1.

MR. E. J. STATHAM *to* THE COMMISSIONER FOR ROADS.

Parramatta, 11 July, 1865.

SIR,

I think it extremely desirable that some steps be taken for the proper management and control of the Prospect Quarry.

This quarry is of great extent, is near the road, and has considerable natural advantages for working. The Western Road depends on it for its supply of metal for a length of twenty miles, and there is sufficient stone in the quarry to last many years. I have been informed that there is a Government reserve of 2 acres at the quarry, with a right of road to it. The boundaries of this reserve are at present undefined. Proprietors of adjoining land lay claim to portions of the quarry, to which I think they are not entitled, and exact a royalty from contractors. The road fenced off, as an approach to the quarry, is so narrow that in wet weather it soon cuts up and becomes impassable, the only egress then being through adjoining land, for which the proprietor exacts a toll of 3d. a load.

The contractors, when quarrying stone, take no trouble to remove the spoil, which they merely throw back; consequently the best parts of the quarry are choked up.

I beg leave to suggest that I be authorized to take possession and management of the quarry. For that purpose it will be necessary to furnish me with a description of the reserve, in order to mark the boundaries.

I have, &c.,
E. J. STATHAM.

No. 2.

THE COMMISSIONER FOR ROADS *to* THE SURVEYOR GENERAL.

Department of Public Works,
Roads Branch,
Sydney, 28 July, 1865.

SIR,

It being desirable that the boundaries for the Prospect Quarry should be defined, in order to arrange for its proper management and control, will you be good enough to favor me with a tracing of the boundaries of said quarry, with statement of any particulars respecting same which may be in your possession.

I have, &c.,
WILLIAM C. BENNETT,
Commissioner and Engineer for Roads.

No. 3.

THE SURVEYOR GENERAL *to* THE COMMISSIONER FOR ROADS.

Surveyor General's Office,
Sydney, 1 August, 1865.

SIR,

In reference to the request made in your letter of the 28th ultimo, I have the honor to forward a tracing showing the position of the quarry at Prospect.

2. The 2 acres embracing the quarry were obtained by Government in exchange for 200 acres at Shoalhaven. Appendix A.

I have, &c.,
W. R. DAVIDSON,
S.G.

No. 4.

MR. E. J. STATHAM *to* THE COMMISSIONER FOR ROADS.

Parramatta, 8 September, 1865.

SIR,

On examination I find that the boundaries, as shown in the tracing received from the Surveyor General, are obliterated by the cutting up of the properties, so that I cannot define the position of the quarry with any degree of accuracy. It would be better to have a proper survey made, and the boundaries of the quarry and road definitely marked.

I have, &c.,
E. J. STATHAM.

This

This can only be done by the local surveyor, or some one acquainted with the boundaries. The Surveyor General might be requested to have the quarry marked out, as there appears to be serious encroachment on it.—W.C.B.—11/9/65.

Under Secretary for Lands, B.C., 14 Sept., 1865.—J.R.

Surveyor General, B.C., 16 Sept., 1869.—M.F.

Forwarded to Mr. Surveyor Armstrong, who will be good enough to make the necessary survey, and furnish a plan shewing the position of the quarry., W.R.D., B.C., 20 September, 1865.

Transferred to Mr. Licensed Surveyor Hallen for his attention, B.C., 11 May, 1866.—Wm. THOMAS, for the Sur. Genl.

No. 5.

MR. RICHARD W. COX *to* THE SECRETARY FOR LANDS.

Greystanes, Prospect,
January, 1867.

SIR,

I have the honor, under the provisions of section (10) ten of the Crown Lands Alienation Act of 1861, and of rule 15, made in pursuance thereof, to apply to you to cause the roads over my estate, called Greystanes, in the parish of Prospect and county of Cumberland (a tracing whereof is appended hereto, and which roads are on such plan coloured yellow), *to be closed*, and to request that I may become the purchaser thereof, under the provisions of the aforesaid section.

Appendix B.

The road marked blue on the plan, and running along the eastern boundary of the estate, is a public road, and is regularly used as such.

The roads intersecting my estate were reserved in accordance with the old practice with respect to Veterans' Grants, of which the estate is composed, but are not now required for public use or convenience, and have been rendered unnecessary by the road above mentioned.

The roads sought to be closed have never been used as such, but have been fenced in with the estate for a period of upwards of forty years, to the best of my information and belief.

I have, &c.,
RICHARD W. COX.

Referred to Mr. Licensed Surveyor Hallen for his report, as to whether the closing of the roads herein applied for would inconvenience the public, either now or at some future time.—F. P. ADAMS, D. Surv. G., B.C., 17 Feb., /67.

No. 6.

MR. LICENSED SURVEYOR HALLEN *to* THE SURVEYOR GENERAL.

108, Pitt-street, Sydney,
2 May, 1867.

SIR,

In conformity with instructions from the Deputy Surveyor General, B.C. 17 February, 1867, I have visited the estate called "Greystanes," belonging to Richard W. Cox, Esq., situate in the parish of Prospect and county of Cumberland, and inspected the boundaries of the estate as now fenced in, but am unable to state the area of these roads in consequence of one of them being 5 chains wide in Meehan's plan of portion of Prospect, and the others appearing of various widths.

I would therefore respectfully suggest that the present boundaries of the estate be surveyed (which would not exceed four days), and then, supposing the straight road on its eastern side (blue) to be in its correct place, to deduct the areas of the farms from the gross contents to give the area of the roads. Until this be done it will be impossible to place the roads, so as accurately to judge (if stopped up) whether the public would be inconvenienced now or at any future time. I would further state that it is highly important for the interest of the Government that the position of these roads should be ascertained, as very valuable blue-stone for road-making abounds in these hills; and if the roads in question run through where this stone is, valuable public quarries may be made.

These hills being very lofty the quantity of metal will be serviceable for ages; and by making a tramroad from them to run over Prospect Creek, to join the road from Smithfield to Fairfield Railway Station, the metal could be distributed thence along the line.

These quarries would be far more valuable than that at the driftway at Pennant Hills, the metal of better quality, less laborious to get, and being situated on high hills the loaded carriages by judicious management may be made, to a great extent, draw up the empty ones.

I have, &c.,
EDWARD HALLEN.

No. 7.

MR. LICENSED SURVEYOR HALLEN to THE SURVEYOR GENERAL.

108, Pitt-street, Sydney,
18 May, 1867.

SIR,

In accordance with your minute of instructions, B.C. 11 May, 1866, I have made a survey of ^{See No. 4.} the Quarry at Prospect, purchased by the Government from Mr. John Tarlington, and find that where the contractors are now quarrying is not upon it but partly upon a reserved road 2 chains wide, and on Butler's 50 acres grant (now Mrs. Fitzpatrick's). The site of the purchased quarry is now under cultivation and is cropped with corn, and has no indication of having stone upon it.

The ridge (*vide plan*) runs along the crooked fence and rises from the opening of the quarry to K, ^{Appendix C.} its highest point, whence it slopes towards the west more abruptly than towards the east.

I would suggest respectfully that the reserved road be marked out till it reaches the Western Road, and that its entire width of 2 chains be kept, in order that the rubbish may be deposited thereon to keep the front of the quarry (now used) open, for at present it is so blocked up that there is no escape for the water, in consequence of this rubbish not being carted away.

There is abundance of blue-stone on this ridge, extending from north to south as far as the southern side of Prospect Hills, and from their elevation favourable for cartage to the main road.

I had great difficulty in fixing the purchased quarry, in consequence of the fences in its vicinity being in their wrong places, which caused me to take a wider range to fix it from some point which I could not doubt, which point I found at Rowe's south-west corner of his 60 acres grant.

I have, &c.,
EDWARD HALLEN.

Tracing from plan of Mr. Hallen's survey now forwarded for the use of the Commissioner and Engineer for Roads.—J. S. ADAM, for S.G., June 19, '67.

No. 8.

THE SURVEYOR GENERAL to MR. LICENSED SURVEYOR HALLEN.

MR. LICENSED SURVEYOR HALLEN is requested at his early convenience to furnish a sketch, showing the position and extent of the driftways, roads, unalienated lands, and the quarry referred to in his report on the application of R. W. Cox to purchase certain roads and driftways at Prospect.—P.F.A.—B.C., 1 June, 1867.

Report and sketch returned, 31st August, 1867.—EDWARD HALLEN, Licensed Surveyor.

No. 9.

MR. LICENSED SURVEYOR HALLEN to THE SURVEYOR GENERAL.

108, Pitt-street, Sydney,
31 August, 1867.

SIR,

In conformity with a minute of instructions of the Deputy Surveyor General, B.C., 1st June, 1867, to furnish a sketch showing the position and extent of the driftways, roads, unalienated land, and the quarry referred to in my report, 67/13, on the application of R. W. Cox, Esquire, to purchase certain roads and driftways at Prospect, county of Cumberland,—I do myself the honor to report that I have made a general survey of the boundaries of the Prospect Hill—from Hassall's 100 acres grant, on the south side of Prospect Creek, along the whole of the 5 chains driftway to Deveny's 100 acres, on the south side of Toongabee Creek, as well as westerly from the western side of this driftway to the road bounding the west side of Kennedy's grant of 160 acres—and find that the length between Hassall's and Deveny's 100 acres grant is 2 chains 85 links longer than specified in all the grants and roads on that driftway, and that from the north-east corner of Williams's grant of 50 acres, on the Prospect Creek, the distance running west to Morley's 100 acres grant, is 64 chains 45 links. These lengths I have taken as a basis to compile the accompanying sketch, and find that the unlocated piece of land of 5 acres, marked A, is on the top of Prospect range well cropped with blue-metal, of which I send you a sample; and that the 2½-chain and 2 chain roads, which bound its south and east sides, are full of the same metal; also, that the 2-chain road, along Kilby's No. 26 allotment, is equally well provided with the same material.

The farms from No. 20 (Herbert's Grant) to Butler's Farm No. 32, are with the road contiguous, and no doubt were laid out originally from the same starting point; but the farms Nos. 7, 4, 3, 8, and 8, to the south of the 2½-chain road between Nos. 7 and 20 farms, have evidently been run from a line between Hassall's 100 acres, and Nos. 4 and 3, as the existing fences show, thus leaving this 2½-chain road 285 links wider, as shown on the sketch.

The driftway between Williams' and the Limeburner's 50 acres is the balance left after marking off Martin's 30, and the Limeburner's and Williams's 50, acres. Vide E on plan.

Nos. 8 and 8 are two farms of 30 and 20 acres, afterwards made into one grant of 50 acres to Morley, with the 2½-chain road left between to give access to Trace's 50 acres. Vide D on plan.

The position of Trace's 50 acres I have fixed by starting from a point 650 links south of the termination of the dividing line between Harris and Smith's 65 acres and Dunlop's 30 acres, and working round Donovan's, Cleaver's, and Boaghan's farms to the south-west corner of Trace's 50 acres, by the lengths and bearings given in Mechan's plans; but Trace's farms, instead of 50 acres is a 60 acre farm, according to his dimensions. The

Vide C on plan.
Vide D on plan.

The balance left shows the space between Morely and Trace's farms, and also between Trace's, Slaughter's, and Stanbury's farms.

From what I have seen during my survey I am of opinion that it would be contrary to the public interest that any of the roads or driftways should be shut up till the corners of the unalienated land be defined from actual survey, and durable corner-posts fixed to define the boundaries of public property.

I have, &c.

EDWARD HALLEN,
Licensed Surveyor.

No. 10.

THE SURVEYOR GENERAL to THE UNDER SECRETARY FOR LANDS.

It is recommended that this matter be referred to the Under Secretary for Public Works, with a view to ascertain the portions of driftway required for public quarries, after which the necessary roads may be proceeded with. The Surveyor is of opinion that land to the value of £500 is available.

For the Surveyor General,
P. F. ADAMS.

The Under Secretary for Lands, B.C., 2 October, 1867.
Under Secretary for Works, B.C., 10 October, 1867.—M.F.
Mr. Bennett, for report, B.C., 11/10/67.;

No. 11.

MR. P. J. DOUGLAS to THE COMMISSIONER FOR ROADS.

Cleveland House, Redfern,
6 November, 1867.

SIR,

I have the honor to report that in accordance with your instructions [verbal] I have examined the Prospect Hill in order to ascertain what portions of the reserved roads and driftways it would be desirable, in view of their probable sale, to keep in possession of the Government, as quarries for the supply of blue-metal for the Western Road.

On examining the locality I found it evident that, by retaining possession of two reserved roads unused, and for other purposes useless, in the immediate neighbourhood of the present quarry, stone in unlimited quantity and of easy access could be permanently secured.

On referring to Mr. Surveyor Hallen's sketch it will be seen that there is a reserved road 2 chains wide, leading from the Main Western Road up the northern slope of the hills to the present quarry, crossing the first ridge and extending beyond to the second or southern ridge of hills near Fenton's grant. It will also be seen that where it crosses the first ridge this road is joined at right-angles by another road $2\frac{1}{2}$ chains wide.

By keeping possession of the 2-chain road as far as the summit of the northern ridge, and reserving also the $2\frac{1}{2}$ -chain road for a distance of (say) 5 chains on each side of the point of intersection, a quarry of more than 5 acres in extent, with abundance of stone cropping out from the surface, would be secured within little more than a mile of the Western Road, the heavy traffic to which would be all down hill. This quarry, however, would hardly be required for years yet, as the 2-chain road itself leading up to it would produce an almost inexhaustible supply of metal if the present quarry, which is partly upon it, were worked on within its boundaries in a southerly direction. To work it more effectually, however, it would be desirable to make the road run along the back-bone of the northern slope instead of as at present, just on the western side. An arrangement no doubt could be made with the owners of the land to give a chain's width on its eastern slope in exchange for a chain's width on the western, so that the centre of the road might coincide with the line of the ridge, and thus more stone would be gained.

The unalienated plot of 5 acres, marked by Mr. Hallen for a quarry, is on the western slope and not so rich in stone as the summit of the ridge.

If the Government should determine to reserve for quarries the portions of the roads I have mentioned, I would beg to suggest that the areas should as soon as possible be definitely marked out on the ground and fenced in, so that when quarrying begins on a large scale in the early part of next year there need be no encroachment on private property.

I have, &c.,

P. J. DOUGLAS.

No. 12.

THE COMMISSIONER FOR ROADS to THE UNDER SECRETARY FOR PUBLIC WORKS.

MR. Douglas recommends that the portion shown in red be reserved, and reports that it contains sufficient stone to maintain the Western Road for the next fifty years. Mr. Douglas has only looked at the question as it affects the *Western Road*, but as it is difficult to define what quantity of metal will be required for other purposes—the streets of Sydney, Parramatta, and the general roads in the county of Cumberland—I am of opinion that it would be desirable to reserve *all* unalienated land containing blue-metal, with sufficient approaches to same, both from the Western and Southern Railway. The land not containing blue-metal, or not required for approaches to quarries, to be at the disposal of the Survey Department. The land reserved should be defined by permanent marks, and if a plan of it is made a copy or tracing would be useful to this department.

W. C. BENNETT,
13/11/67.
Approved

Approved as suggested by Commissioner for Roads. J.B.—14/11/67.
 Under Secretary for Lands, B.C., 14 Nov., 1867.—J.R.
 For Surveyor General, for report, B.C., 20 Nov., /67.—J.B.W.
 The area which it is proposed to retain appears large, but it may be well to retain it. The roads may now be marked out and any that do not contain metal and not otherwise necessary may be alienated. For the Surveyor General. P. F. ADAMS.—21 Nov.
 Approved. J.B.W.—26 Nov.
 Returned for the information of the Surveyor General, B.C., 28 Nov., /67.—M.F.

No. 13.

THE SURVEYOR GENERAL to MR. LICENSED SURVEYOR HALLEN.

MR. Licensed Surveyor Hallen will be good enough to mark the roads on the ground, and report which of them may be sold under the decision of the Honorable the Secretary for Lands.

P.F.A.,
 27 Nov., /67.

No. 14.

MR. LICENSED SURVEYOR HALLEN to THE SURVEYOR GENERAL.

108, Pitt-street, Sydney,
 17 February, 1868.

SIR,

In conformity with a minute of instructions of the Deputy Surveyor General, 27th November, 1867, I do myself the honor to report that I have made a careful survey of the various roads and driftways shown on a plan* sent herewith, have marked the same with stakes with an R thereon, well lock-spitted the ground, and notched and painted in large letters all fences where these lines cross them, so as clearly to define their boundaries. * Appendix E.

I would strongly recommend that regular morticed corner-posts be fixed at all the corners of roads, driftways, and Government land, as I find already that some of the stakes have been removed.

As the local attraction in many places was very great, I found it impossible to conduct the survey by the needle, and therefore worked by angles after I had satisfied myself with a meridian and true starting point.

All the roads, driftways, and unalienated lands are tinted pale green; and as the two portions marked A and F are in the possession of Mr. Cox, I have coloured them a deeper green, and copied the description of the grant of 110 acres to Charles Bishop (under whose grant Mr. Cox claims them), which describes his grant as bounded on the north by a road and divided by the main cross roads.

Now as Rowe's 60 acres grant bounds A and F on the north, and no road is shown between them and Rowe, the description does not include them in Bishop's grant, and I have therefore considered them as unalienated to Bishop and the property of the Crown.

This grant was made in 1803, August 15th, and said to be 110 acres, and is a consolidated grant, formerly Kilby's. This grant is the only one in this locality which mentions roads, other grants simply written "so many acres, situate at the foot of Prospect Hill," a description so vague that it is impossible to fix them without reference to plans in the Survey Office.

The description of many old grants state the contiguous grants as boundaries without naming the roads leading to or dividing them, while others (as in the cases before alluded to) do not even give the adjacent farms.

Such grants require revising to prevent the confusion and litigation arising, through their descriptions being so vague. Much valuable blue-metal is contained in the 2½-chain road which lies between Kilby's and Parish's grants, bearing west from the 5-chain road, and rises abruptly to where it crosses the 2-chain road from which it descends so abruptly towards Graves' grants, in which there is a conical hill entirely composed of blue-metal.

That part of the 2½-chain road between Graves' grant (now Mr. Lawson's) leads to nothing and contains no metal.

From the intersection of the 2½-chain road with the 5-chain road, an excellent tramway, 100 feet wide, may be made to the Western Railway, which runs through Peck's 50 acres grant, with a descent thereto, and if it be made on the eastern side of this 5-chain road it will be in the best position for draining to the creek west of it, and the extra width of 3½ chains not required for the tramway may be sold to the adjoining farms, care being taken that a sufficient quantity of it is reserved for depositing the rubbish from the quarries so as to keep the latter always clear; and for the establishment of a stockade, should the Government deem it advisable to employ convicts for quarrying; or for the residence of persons employed as contractors, &c. From this intersection it would be advisable to sell 1½ chains of the 2½-chain road as far as the road which now runs along the east boundary of Kilby's and Parish's grants, leaving 1 chain wide for a road to connect that road with the eastern side of the 5-chain road.

If the eastern side of the 5-chain road be made 100 feet wide from the above intersection as far as the 2½-chain road leading to Morley's grant of 50 acres, there will be a good opportunity of forming a tramway along it, to bring the stone from the quarry between Fenton's and Morley's grants to the Western Railway, as there are only two moderate undulations to fill up between the southern portions of Pugh's and Herbert's grants.

The remaining portion of the 5-chain road (not required for Government purposes) may be sold to the proprietors of adjacent grants, or others.

I also recommend that the eastern side of the 5-chain road be continued 100 feet wide southerly along Gardiner's west boundary, till it joins a road which runs on the north side of Hassall's 100 acres grant, which road divides that grant from Gardiner's, Brown's, and a portion of Williams' grant, and communicates with Smithfield township. The western side of the 5-chain road remaining to be sold to Castle and Brown's representatives.

This

This would require a bridge or ford over the Prospect Creek, running through Gardiner's and Brown's grants.

This line along the eastern side of the 5-chain road would form almost a direct line between Hassall's 100 acres and Deveney's 100 acres on the Toongabei Creek, crossing the Western Road till it joins the Western Railway and the road lately applied for by Bates and others, leading to the Seven Hills Railway Station.

That portion of the 2-chain road which forms the eastern boundary of Cummings' grant, and runs through Kilby's and as far as the east side of Miles' grant, abounds with blue-metal (except a portion which runs through the orchard enclosed by Mr. Cox), the whole of which could be delivered to the tramway for conveyance to the Western Railway.

The unalienated land, situate between the grants of Fenton, Stanbury, Slaughter, Harris, and Smith, on its northern side, and Morley, Trace, and Boughan's grants, on its southern side, is the highest and most rocky part of the Prospect Ranges, abounding in blue-metal and granite.

As the 2-chain road, which runs between Fenton and Griffiths' grants, does not run further than Morley's grant, I beg to suggest that it be continued through the 2½-chain road, which divides that grant; and that that portion which is enclosed as a vineyard, beyond its northern boundary, and encroaches on Government land, be given as an equivalent. This would enable the Government to commence another quarry between Fenton and Morley's grants, so as to deliver the stone from its eastern side.

Should this suggestion be entertained 1½ chains of the 2½-chain road across Morley's grant could be sold, and all that portion of unlocated land between Trace's and Morley's grant, north of the 2½-chain road, could be sold equally between the proprietors of Morley and Trace's grants, as far as their northern boundaries.

Should the Government prefer delivering the stone from this quarry to the Southern Railway, a good tramway may be laid along Herbert's southern boundary, Taylor's and Rowe's northern boundaries, through reserved roads of the Sherwood Estate (now fenced in on both sides), and the Church and School Lands, without crossing the Prospect Creek, as the country is well adapted for it.

If tramways be laid down a saving of at least 8s. per ton will be effected, besides establishing a permanent traffic on the line, which would amply pay for the outlay, and employ such of Barlow's rails as are not now required for the Railway.

As there is a permanent spring (which has never been known to fail) supplying the swamp on the unlocated land between Trace and Morley's land, I beg to recommend that a reserve for water be made there, and that a road 1 chain wide should run from the southern side of the 2½-chain road (shewn by dotted lines on the plan), and continue thence through the driftway between Williams' and Limeburner's grants to its southern boundary, so as to communicate with the lands belonging to Chisholm and others.

As the Minister for Works has expressed a wish to inspect the roads, driftways, and unalienated lands when staked out, to judge what will be required for public service, as soon as his engagements with the Duke of Edinburgh will permit him, I am unable to further report than to say that should the Government decide upon forming a stockade for the purpose of employing convicts, there are ample materials to employ them for centuries to come at these quarries and the roads which contain metals, as they are invaluable to the Government for such a purpose.

Such parts of my former reports as do not correspond with this, I trust that you will attribute to the want of information which I now possess.

I have, &c.,
EDWARD HALLEN.

No. 15.

THE TOWN CLERK, SYDNEY, to THE UNDER SECRETARY FOR LANDS.

Town Clerk's Office,
Sydney, 17th October, 1868.

SIR,

Referring to the recent inspection by certain Government and Municipal Officials of the blue-metal quarries at Prospect, I have the honor, by direction of the Right Worshipful the Mayor, respectfully to request that the Honorable the Minister for Lands may be solicited to grant to the City Council the necessary authority to enable them to enter upon the lands belonging to the Government, at Prospect, for the purpose of procuring a supply of metal for the streets of the City.

I have, &c.,
CHAS. H. WOOLCOTT,
Town Clerk.

No. 16.

THE UNDER SECRETARY FOR LANDS to THE TOWN CLERK, SYDNEY.

Department of Lands,
Sydney, 20th October, 1868.

SIR,

Referring to your letter of the 17th ultimo, I am directed by the Honorable the Minister for Lands to convey authority to the Sydney Corporation to enter on Crown Lands at Prospect, for the purpose of obtaining blue-metal for Sydney streets.

I have, &c.,
M. FITZPATRICK.

No. 17.

9

No. 17.

MR. P. DOYLE to THE COMMISSIONER FOR ROADS.

Parramatta, 14 November, 1868.

SIR,

In accordance with your instructions of the 13th instant, I have the honor to inform you that I have examined the Prospect stone quarry and the works that is being carried out with the Sydney Corporation at the said quarry, and I find they have erected two weatherboard huts for the men (skilling fashion) at the quarry, and there are ten men, three horses, and three carts employed moving the dirt and putting a face on the quarry, and in about another week's time there will be a very good quarry opened and a very good supply of stone to be had.

The man in charge seems quite satisfied with the quarry; he has got a tolerable good face on the work, and the men will commence to haul stone to the railway shortly.

There is about 90 cubic yards of rubble now ready to send away, and a very good face of stone to work at, though the men at present are chiefly employed stripping and moving away the dirt, and in so doing they come across a good deal of stone.

I have, &c.,

PETER DOYLE.

Mr. Doyle was verbally instructed to report what steps the Corporation had taken. W.C.B.—
22/4/69.

No. 18.

THE TOWN CLERK to THE UNDER SECRETARY FOR LANDS.

Town Clerk's Office,
Sydney, 5 December, 1868.

SIR,

I have the honor, by direction of the Right Worshipful the Mayor, respectfully to request that instructions may be given to the proper officer for the attendance of a surveyor at the blue-metal quarry at Prospect on an early day, to point out to one of the officers of the Municipal Council the boundaries of the quarry, and the line of road from that place to the Railway Station at Seven Hills.

I have, &c.,

CHAS. H. WOOLCOTT,
Town Clerk.

B.C., Surveyor General—7 Dec., M.F.
Mr. L. S. Hallen to attend—P.F.A., 11 Dec.

No. 19.

THE TOWN CLERK to THE UNDER SECRETARY FOR LANDS.

Town Clerk's Office,
Sydney, 21 December, 1868.

SIR,

I have the honor, by direction of the Right Worshipful the Mayor, respectfully to request that the Honorable the Minister for Lands will be pleased to give the necessary instructions for placing the Municipal Council of Sydney in possession of the driftway (2 chains in width) at Prospect Hill, from the Western Road to Link's southern boundary, upon the understanding that the fences be removed and re-erected along the proper boundaries at the cost of the Corporation.

I have, &c.,

CHAS. H. WOOLCOTT,
Town Clerk.

Mr. Licensed Surveyor Hallen to mark the true position of the fences in order that they may be removed to their proper position by the Corporation.—P. F. ADAMS.
B.C., 21 December, 1868.

No. 20.

MINUTE OF THE COMMISSIONER FOR ROADS.

WHEN the transfer of the Prospect Quarries is being made to the Municipality of Sydney, it would be advisable to reserve the right to enter thereon and take stone for the Cumberland roads. I believe possession has been taken, and I will require permission for the road contractors to enter immediately on the passing of the Estimates.

W. C. BENNETT,
22/12/68.

The Honorable the Minister for Lands will probably cause the necessary steps to be taken.—J.S.
Under Secretary for Lands. B.C., 24 December, 1868.—J.R.

No. 21.

MR. LICENSED SURVEYOR HALLEN to THE SURVEYOR GENERAL.

108, Pitt-street, Sydney,
26 December, 1868.

SIR,

For B.C. see No.
19.

In conformity with your minute of instructions, B.C., dated 21 December, 1868, to mark the true position of the fences of a two-chain road at Prospect Hill, from the Western Road, as far as Lisk's south boundary,—I do myself the honor to report that I have pointed out to Mr. Bell, the Engineer for the City of Sydney, the true position of the above road, as indicated by substantial stakes and lockspits, and where the said road crosses fences by legible marks and large letters painted thereon.

I have, &c.,

EDWARD HALLEN.

No. 22.

MINUTE OF THE SECRETARY FOR LANDS.

QUARRY at Prospect.—The Mayor and Corporation ask no more than to be granted permission, as they phrase it,—“the necessary authority to enable them to enter upon the land belonging to the Government at Prospect, for the purpose of procuring a supply of metal for the streets of the City.” Of course there can be no objection to grant such authority, which however involves no exclusive possession or use of the quarry by the Municipal authorities, nor is there anything to shew that they desire such exclusive possession or use. I take it for granted, therefore, that the Mayor and Corporation will have no right to exclude from entry upon, and use of the quarry, any person who may be at any time authorized by the Government to enter and take stone, whether for the Cumberland roads or for any other purpose whatsoever. It may be as well, however, as the question has been raised, that the Mayor and Corporation should fully understand this.

W. F.,

31 December, 1868.

No. 23.

MINUTE OF THE COMMISSIONER FOR ROADS.

No. 20. IN reference to my Minute of the 22nd December, requesting that power be reserved to the Government to take metal from the Prospect Quarries for the Western and Southern Roads, I have to state that representations have been made by intending contractors that the quarries have been taken possession of by the Mayor for the Corporation of Sydney, one man, Harpur, last year's contractor, stating that he had received notice from the Mayor to remove some stone and to leave the quarry.

As contractors are unable to tender it would be well to come to some understanding with the Corporation as soon as possible on this matter.

W. C. B.,

13 January, 1869.

No. 24.

THE UNDER SECRETARY FOR LANDS to THE TOWN CLERK, SYDNEY.

Department of Lands,
Sydney, 19 January, 1869.

SIR,

No. 2.

Adverting to my letter to you, dated 20th October, conveying permission to the Sydney Corporation to enter on the Crown Lands at Prospect, for the purpose of obtaining blue-metal for the Sydney streets,—I am directed by Mr. Secretary Forster to point out that this permission must be understood as involving no exclusive use at the quarry, and that under it the Corporation will have no right to exclude from entry upon or use of the quarry, any person who may be at any time authorized by the Government to enter and take stone for any purpose whatsoever.

I have, &c.,

M. FITZPATRICK.

No. 25.

THE UNDER SECRETARY FOR LANDS to THE UNDER SECRETARY FOR PUBLIC WORKS.

Department of Lands,
Sydney, 19 January, 1869.

SIR,

No. 20.

Referring to your blank cover of the 24th ultimo, respecting the Prospect Quarries, I am directed to inform you that permission has been granted to the Sydney Corporation to enter on the Crown Land at Prospect, for the purpose of obtaining blue-metal for the Sydney streets, but that such permission does not involve the exclusive possession or use of the quarry by the Municipal authorities.

I have, &c.,

M. FITZPATRICK.

No. 26.

11

No. 26.

MEMORANDUM OF SURVEYOR GENERAL.

IN January, 1867, Mr. Cox applied to purchase roads intersecting his property at Prospect. A survey was made from the original plans and field books, which showed a considerable amount of valuable land under roads and driftways now unnecessary as such. The question was then referred to the Minister for Works as to any portion of said driftways that might be required by the Government for quarries. The reply was that no alienation should take place, as it was impossible to say how much might be ultimately required. In this state the matter has since remained. Before closing the case attention is called to the fact that the road and driftways referred to, having been in the occupation of various individuals on an average sixty years, and that it appears to me that further delays, after knowledge of these facts, may prejudice any claim that the Crown may have. The case is therefore submitted.

B.C., 21 May, /69.

P. F. ADAMS.

THE state of the question raised with reference to these roads or driftways renders it obviously desirable that a distinct report should be obtained, pointing out what portions it may be necessary to reserve and what may be alienated without public injury. I recommend that steps should be taken for this purpose, and that the concurrence of the Works Department be invited. W.F., 15 June, 1869.

Surveyor General, B.C., 16 June, /69.—M.F.

No. 27.

MEMORANDUM OF SURVEYOR GENERAL.

PERHAPS the Surveyor General will be good enough to furnish the information, tracings, &c., required by the 3rd and 4th paragraphs of this Order.

No steps have been taken to resume any land at Prospect.

Tracings of all plans.

Cost of surveys by Mr. Hallen since 1st January, 1867—£203 14s.

There is no Book of Reference, but the plan by Mr. Hallen, and the original one by Mr. Mehan, embrace all the information preserved by this office.

P. F. ADAMS,

5 Oct., 1869.

RETURN

RETURN of the Correspondence which has taken place with respect to the construction of a Siding at Seven Hills, and a Platform at the Darling Harbour Branch Railway, for the conveyance of metal for the streets of Sydney, from the Quarries at Prospect.

(Return of the Expenditure incurred upon these Works.)

SCHEDULE.

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1. Town Clerk to Under Secretary for Works, inquiring when survey of proposed line of railway to the Blue-Metal Quarry at Prospect will be completed. 29 July, 1868	12
2. Under Secretary to Town Clerk, in reply. 3 August, 1868	12
3. Town Clerk to Under Secretary, inquiring what progress has been made in survey. 8 September, 1868	13
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5. Do. do., appointing day for inspection of quarries. 8 October, 1868	13
6. Town Clerk to Under Secretary, for the construction of a siding at Seven Hills. 23 October, 1868	13
7. Do. do., reminding him of subject. 28 October, 1868	13
8. Under Secretary to Town Clerk, informing him that instructions had been given for siding to be put in. 28 October, 1868	14
9. Town Clerk to Under Secretary, that a platform may be erected at Darling Harbour Branch for storage, &c., of metal. 30 October, 1868	14
10. Engineer for Existing Railway Lines, reporting favourably on proposed platform. 4 November, 1868	14
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13. Under Secretary to Town Clerk, informing him that his letter of 23 December is under reference to railways. 20 January, 1869	15
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15 & 16. Returns showing expenditure	15

No. 1.

THE TOWN CLERK to THE UNDER SECRETARY FOR PUBLIC WORKS.

Town Clerk's Office,
Sydney, 29 July, 1868.

SIR,

I have the honor, by direction of the Right Worshipful the Mayor, to inquire when the plan of the proposed line of railway to the blue-metal quarry at Prospect, which it is understood is in course of preparation by the Government, will be completed, as his Worship is desirous of bringing under the consideration of the Municipal Council the question of the advisability of the supply of metal for the City being procured from that locality.

I have, &c.,
CHAS. H. WOOLCOTT,
Town Clerk.

Inform that before any plan can be undertaken the locality must be carefully inspected; that such inspection will take place as soon as the Minister is sufficiently recovered; and that notice will be sent to the Mayor as soon as the day is fixed.—31/7/68.

No. 2.

THE UNDER SECRETARY FOR PUBLIC WORKS to THE TOWN CLERK.

Department of Public Works,
Sydney, 3 August, 1868.

SIR,

In reference to your letter of the 29th ultimo, inquiring with respect to the completion of the plan of the proposed line of railway to the blue-metal quarry at Prospect, from which place it is proposed that the city should be supplied with metal, I am directed to state that before any plan can be undertaken the locality must be carefully inspected, and that such inspection will take place as soon as the Minister is sufficiently recovered. I am to add that, as soon as the day is fixed for this undertaking, notice thereof will be sent to his Worship the Mayor.

I have, &c.,
JOHN RAE.

No. 3.

13

No. 3.

THE TOWN CLERK to THE UNDER SECRETARY FOR PUBLIC WORKS.

Town Clerk's Office,
Sydney, 8 September, 1868.

SIR,

I have the honor, by direction of the Right Worshipful the Mayor, to inquire what progress has been made with the surveys in connection with the metal quarry at Prospect, his Worship being very desirous that the intended inspection of that locality by the Members of the Government and the Municipal Council should take place previous to the meeting of Parliament.

I have, &c.,
CHAS. H. WOOLCOTT,
Town Clerk.

Inform. Survey made, and an early day will be fixed.—J.B., 14/9/68.

No. 4.

THE UNDER SECRETARY FOR PUBLIC WORKS to THE TOWN CLERK.

Department of Public Works,
Sydney, 15 September, 1868.

SIR,

In acknowledging the receipt of your letter of the 8th instant, with reference to the metal quarry at Prospect, I am directed by the Honorable the Secretary for Public Works to state, for the information of his Worship the Mayor, that the survey in connection with the quarry has been made, and that an early day will be fixed for an inspection of the locality, as proposed in my letter of the 3rd ultimo.

I have, &c.,
GERALD HALLIGAN,
(For the Under Secretary.)

No. 5.

THE UNDER SECRETARY FOR PUBLIC WORKS to THE TOWN CLERK.

Department of Public Works,
Sydney, 8 October, 1868.

SIR,

In reference to my letter of the 3rd August last, I am now directed to inform you that Saturday next, the 10th instant, has been appointed the day for the inspection, by the Government and the Municipal authorities, of the locality of the blue-metal quarry at Prospect.

2. I am to request that you will apprise his Worship the Mayor accordingly, and state that the train to convey the party will leave Sydney at half-past 9 a.m.

I have, &c.,
JOHN RAE.

No. 6.

THE TOWN CLERK to THE UNDER SECRETARY FOR PUBLIC WORKS.

Town Clerk's Office,
Sydney, 23 October, 1868.

SIR,

Permission having been given to the Municipal Council to enter on Crown Lands at Prospect, for the purpose of obtaining a supply of blue-metal for Sydney streets, I have the honor, by the direction of the Right Worshipful the Mayor, to inquire whether the Honorable the Minister for Works will give instructions for the construction of a siding at the Seven Hills Station, sufficient to accommodate ten trucks to receive the metal from the quarry.

I have, &c.,
CHAS. H. WOOLCOTT,
Town Clerk.

Engineer for Existing Lines to make immediate arrangements for carrying out this project, which will largely increase the revenue of the railway traffic. J.B.—23/10/68.

Seen. J.H.T.—23/10/68.

No. 7.

THE TOWN CLERK to THE UNDER SECRETARY FOR PUBLIC WORKS.

Tuesday.

DEAR RAE,

Can you reply to my letter as to constructing a siding at Seven Hills for metal trucks, by Thursday, upon which day our Council will meet?

Yours, &c.,
CHAS. H. WOOLCOTT.

Inform what has been done.—J.R., 28/10/68.

No. 8.

14

No. 8.

THE UNDER SECRETARY FOR PUBLIC WORKS to THE TOWN CLERK.

Department of Public Works,
Sydney, 28th October, 1868.

SIR,

In reference to your letter of the 23rd instant, requesting that instructions may be given for the construction of a siding at the Seven Hills Railway Station, for trucks conveying metal from Prospect, for the Corporation of Sydney,—I am directed to inform you that the Honorable the Secretary for Public Works has approved of the request of the City Council for this convenience being complied with, and instructions have been given to the Engineer for Existing Lines to lose no time in carrying out the work.

I have, &c.,
JOHN RAE.

No. 9.

THE TOWN CLERK to THE UNDER SECRETARY FOR PUBLIC WORKS.

Town Clerk's Office,
Sydney, 30th October, 1868.

SIR,

I have the honor, by direction of the Right Worshipful the Mayor, to state that under the sanction and assistance already obtained from the Government, arrangements are now being made for procuring a supply of blue-metal from the quarries at Prospect, to be brought by rail from the Station at Seven Hills to Sydney, but that it seems to his Worship desirable that some additional accommodation should be provided for the discharge and storage of the metal upon its arrival in Sydney.

Upon an inspection of the branch line from Redfern to Darling Harbour, it appears that the required convenience can be obtained by the construction of a platform on the eastern side of the Railway at the proposed extension of the line of Macarthur-street, as shewn upon the tracing submitted herewith, and his Worship would respectfully request that the Honorable the Minister for Works will be pleased to take into his consideration the advisability for instructions being given for carrying out such works in the locality indicated, as he may think sufficient for the purpose mentioned.

I have, &c.,
CHAS. H. WOOLCOTT,
Town Clerk.

Railways, for report of Engineer for Existing Lines, B.C., 3/11/68.—J.R.

No. 10.

THE site suggested for a platform from which the Corporation carts could load the blue-metal brought down by rail is a very good one, as it does not interfere with anything, and is out of the way of the ordinary traffic.

I would therefore recommend that it be erected there.

J.H.T.,
4/11/68.Submitted. 7/11/68.
Approved. J.S., 11/11/68.

No. 11.

THE TOWN CLERK to THE UNDER SECRETARY FOR PUBLIC WORKS.

Town Clerk's Office,
Sydney, 28th December, 1868.

SIR,

I have the honor, by direction of the Right Worshipful the Mayor, to request that you will be pleased to bring under the consideration of the Honorable the Minister for Works, the question of the advisability of some provision being made upon the Estimates for his Department for the construction of a branch railway line from the Seven Hills Station to the blue-metal quarries at Prospect, as in the opinion of the Municipal Council the revenue which will be derived from the carriage of the metal (say 24,000 tons yearly), will justify the Government in incurring the expenditure necessary for such a work.

I have, &c.,
CHAS. H. WOOLCOTT,
Town Clerk.Railways—B.C. 29/12/68—J.R.
Mr. Whitton—30/12/68.

No. 12.

THERE are no surveys of the line upon which an estimate can be made so as to ascertain the cost.—J.W., 16/1/69.
To the Commissioner.

Inform that the matter has been referred for the report of the Engineer for Railways.—J.R., 20/11/69.

THE

No. 13.

THE UNDER SECRETARY FOR PUBLIC WORKS to THE TOWN CLERK.

Department of Public Works,
Sydney, 20th January, 1869.

SIR,

In reference to your letter of the 28th ultimo, with respect to provision being made for the construction of a branch line of railway to connect the Seven Hills Station with the blue-metal quarries at Prospect,—I am directed by the Honorable the Secretary for Public Works to inform you that this matter has been referred to the Engineer-in-Chief for Railways for report.

2. When the required information has been obtained, a further communication on the subject will be made to you.

I have, &c.,
JOHN RAE.

Nos. 14, 15, and 16.

5th February, 1869.

LET me have a statement, for the information of the Minister, of all expenditure at Seven Hills and Darling Harbor Branch, for the facility of carrying road-metal from the Quarries at Prospect.—J.R.

Railways—B.C. Urgent.

Total amount spent on blue-metal stage, Darling Harbour Branch, to 31st January, 1869, £167 2s. 11d.

There has been no expenditure at Seven Hills, charged to capital or revenue that we have advice of.—A.A., Accountant, 9/2/69.

SUBMITTED—Might be informed that no surveys are to be made till fresh arrangement for haulage of metal, the present rates being unremunerative. Up to 31st Jan., 1869, there has been an expenditure of £167 2s. 11d., at Darling Harbour Branch. No account has been received of the expenditure at Seven Hills.—J.R., 9/2/69.

Approved. Ascertain the amount spent at Seven Hills.—J.S.

Mr. Thomas, Railways, B.C., 11/2/69.

Total cost, £126 11s. 9d., Old Barlow rails and sleepers were used, the cost of which are not included in this amount.—J.H.T., 18/2/69.

What was the estimated cost of the Barlow rails and sleepers?—The Minister wishes to know the total outlay, to enable him to arrive at the proper tariff.

Mr. Thomas, Railways, B.C., 24/2/69.—J.R.

	£	s.	d.
Cost of labour, as previously stated	126	11	9
Estimated cost of rails, sleepers, points, &c.	101	14	0

Total	228	5	9
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J.H.T., 2/3/69.

Submitted.

Expended at Darling Harbor Branch to 31st January last	167	2	11
Expended at Seven Hills, as above	228	5	9

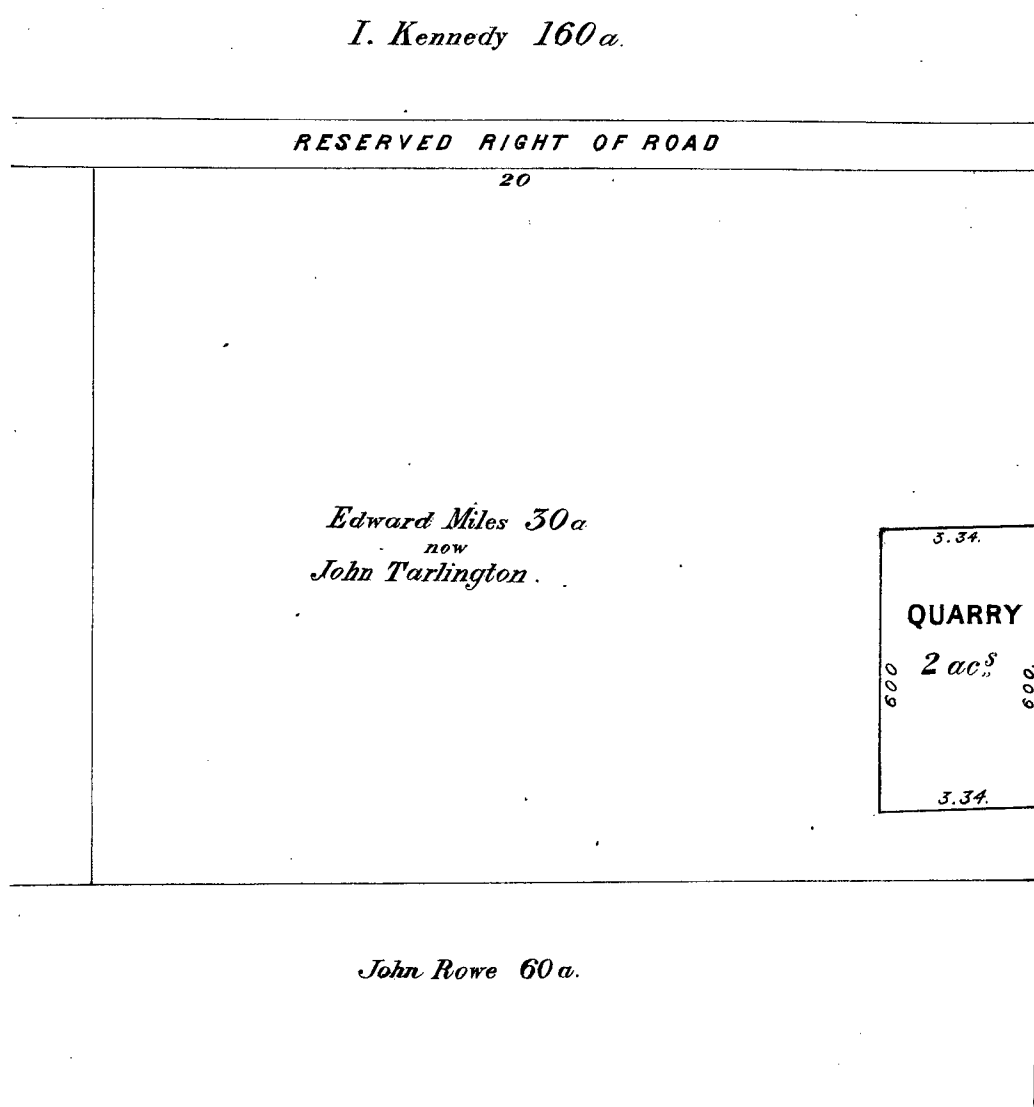
Total expenditure	395	8	8
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J.S., 6/3/69.

Prepare copy to be laid before Parliament—J.S., 6/3/69.

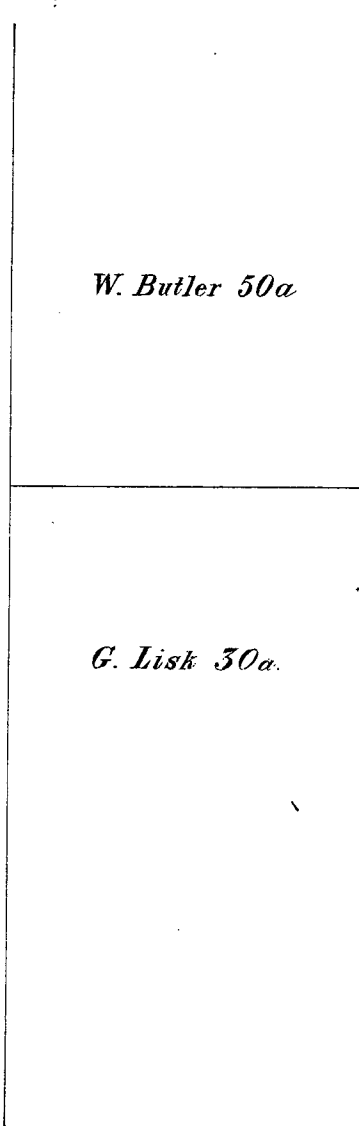
[Six plans.]

APPENDIX A.



(Sig 110)

RESERVED RIGHT OF ROAD TO THE WESTERN ROAD & PARRAMATTA



TRACING

FROM
SKETCH SHEWING THE POSITION OF
2 ACRES OF GROUND PURCHASED BY THE GOVERNMENT
FROM JOHN TARLINGTON
AT
PROSPECT

S. B. Vol I fol 39

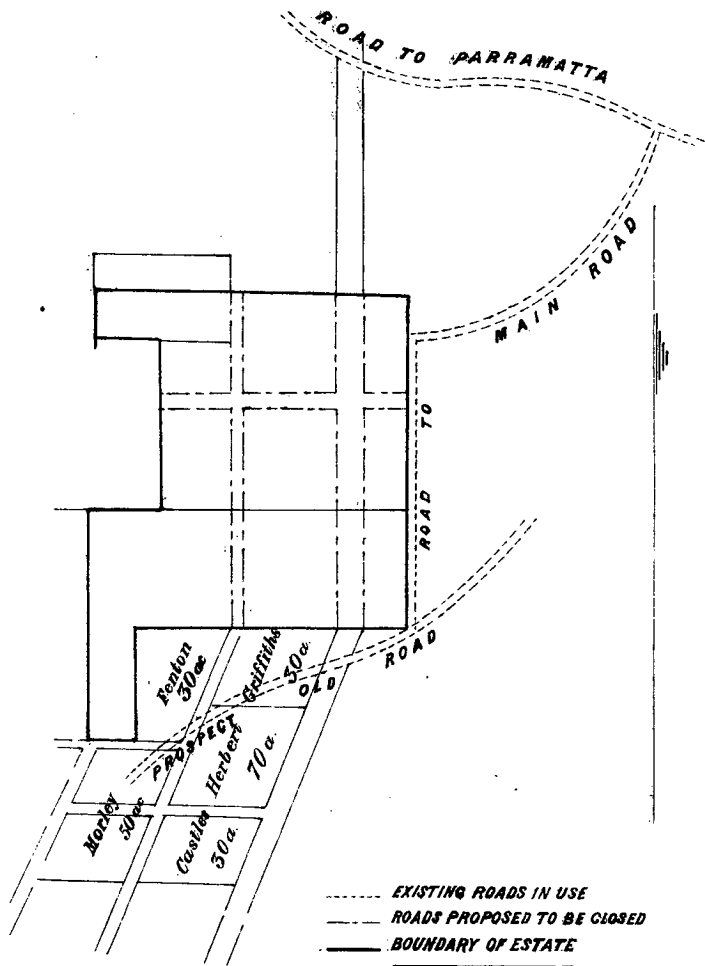


SCALE 4 CHAINS TO 1 INCH

N^o 300

APPENDIX B.

TRACING OF GREYSTANES ESTATE



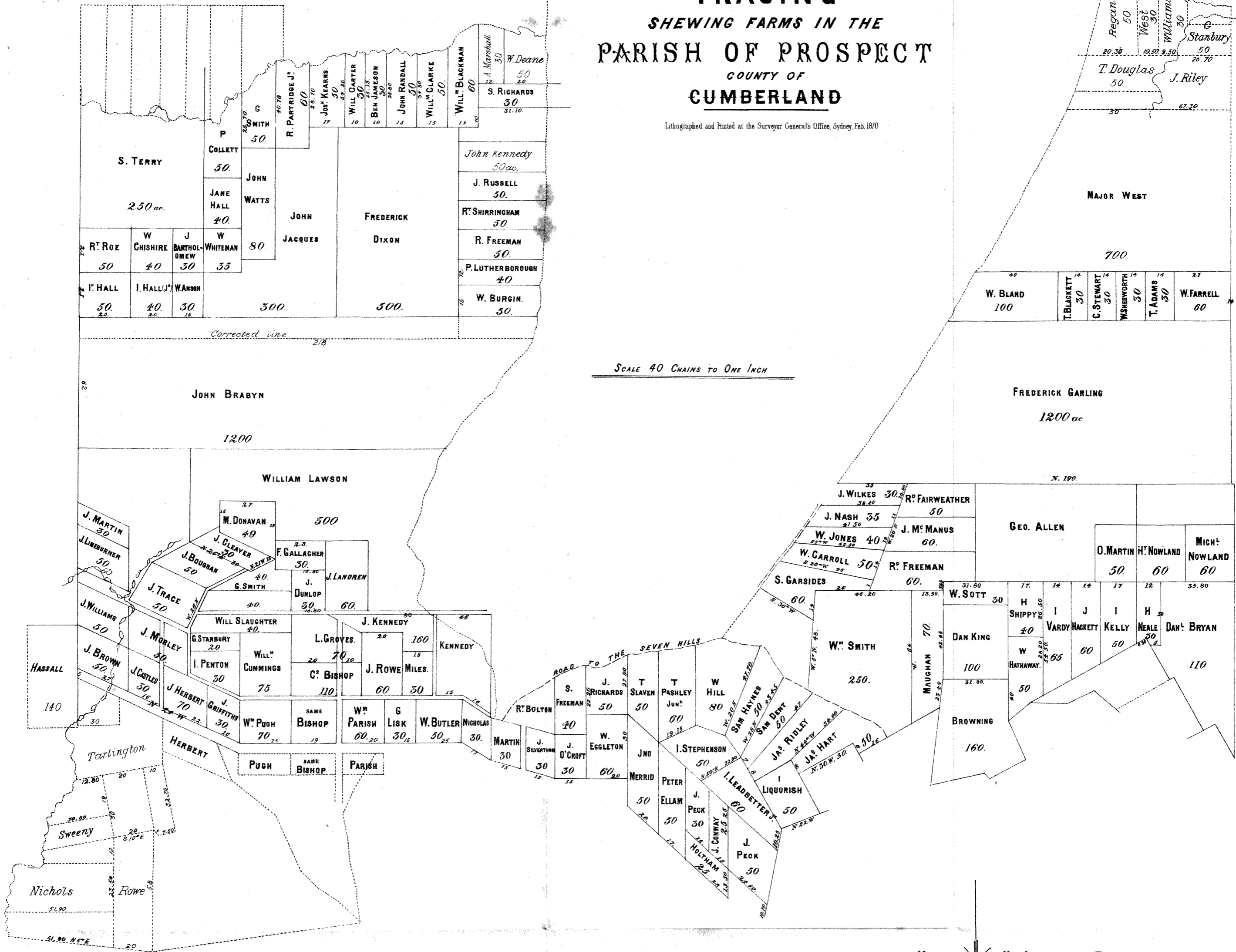
(Sig 110)

APPENDIX C!

(COPY OF)

TRACING SHEWING FARMS IN THE PARISH OF PROSPECT COUNTY OF CUMBERLAND

Lithographed and Printed at the Surveyor General's Office, Sydney, Feb. 1870



SCALE 40 CHAINS TO ONE INCH

Mag North

(Sig 110)

Note.

LINES & NAMES SHEWN THUS _____ RILEY ARE SHEWN IN PENCIL ON THE ORIGINAL PLAN CAT N^o P. 153.

APPENDIX E

COPY OF

TRACING

showing the ROADS, DRIFTWAYS & UNALIENATED LAND between

PROSPECT & TOONGABEE CREEK'S
PARISH OF PROSPECT
COUNTY OF
CUMBERLAND

LAND IN THE OCCUPATION OF M^r COX (---) LAMB, ALSO M^r JAMES GALLAWAY, SHOWN THUS -----

---	M ^r HYLAND
---	M ^r WILTON
---	WHALAN'S TRUSTEES
---	M ^r HERBERT
---	G. SMITH
---	M ^r LAWSON ALSO M ^r FITZPATRICK
---	M ^r TARTINGTON

UNALIENATED ROADS, DRIFTWAYS &c. -----

LAND WHICH DOES NOT APPEAR TO HAVE BEEN CONVEYED TO OR BY BISHOP -----

ROADS, DRIFTWAYS & UNALIENATED LAND, SHOWN THUS [Hatched Pattern]

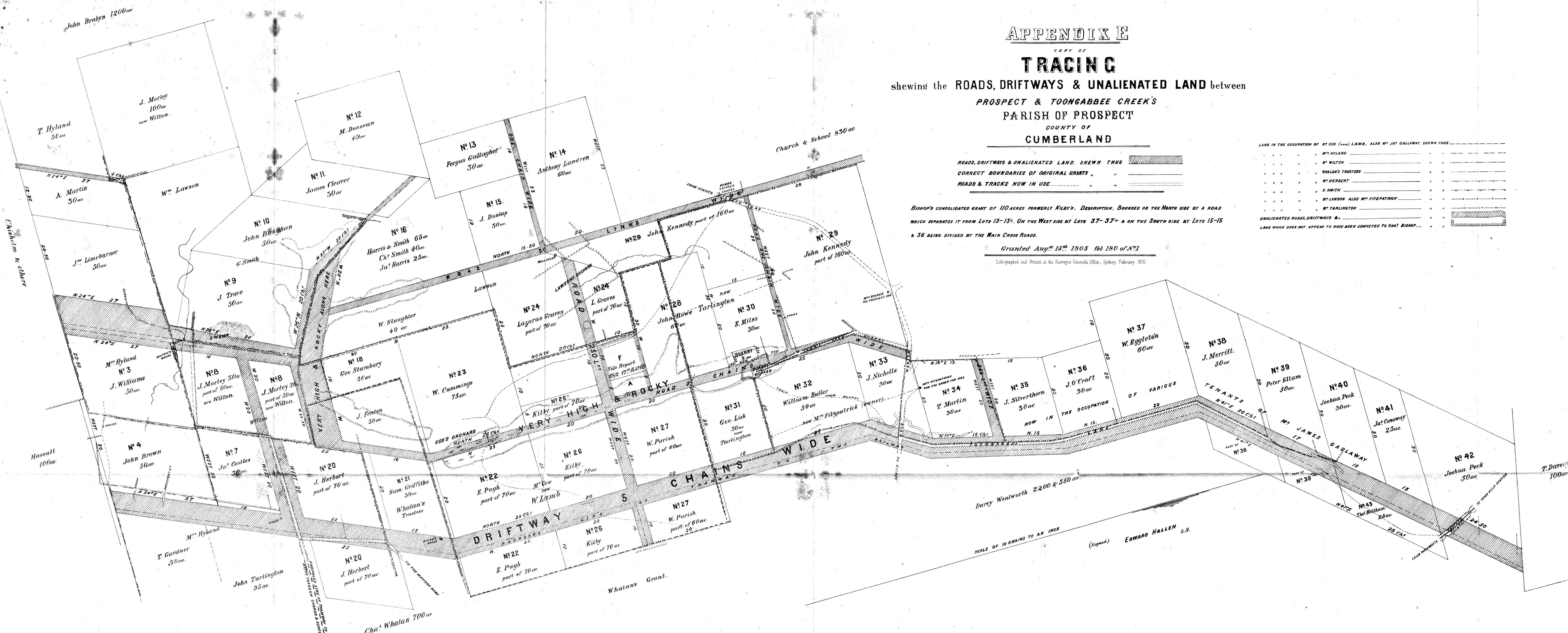
CORRECT BOUNDARIES OF ORIGINAL GRANTS [Dotted Pattern]

ROADS & TRACKS NOW IN USE [Dashed Pattern]

BISHOP'S CONSOLIDATED GRANT OF 110 ACRES FORMERLY KILBY'S. DESCRIPTION, BOUNDED ON THE NORTH SIDE BY A ROAD WHICH SEPARATES IT FROM LOTS 13-15. ON THE WEST SIDE BY LOTS 37-37+ & ON THE SOUTH SIDE BY LOTS 15-15 & 36 BEING DIVIDED BY THE MAIN CROSS ROADS.

Granted Aug^r 15th 1803 for 180 of N^o 1

Lithographed and Printed at the Surveyors General's Office, Sydney, February 1870.



SCALE OF 10 CHAINS TO AN INCH

(Signed) EDWARD HALLEN I.S.

(Sig 110)

1869.

LEGISLATIVE ASSEMBLY.
NEW SOUTH WALES.

ROADS.

(CORRESPONDENCE RESPECTING ALTERATION IN COMPOSITION OF TRUSTEES OF ROAD FROM
TERRARA TO SOUTH COAST ROAD, SHOALHAVEN.)

Ordered by the Legislative Assembly to be Printed, 5 November, 1869.

RETURN to an *Order* made by the Honorable the Legislative Assembly of New South Wales, dated 6th October, 1869, That there be laid upon the Table of this House,—

“ A Return of all Correspondence between the Government and others,
“ relative to the alteration in the composition of the Trustees for the
“ expenditure of the Money granted for the improvement of the Road from
“ Terrara to the South Coast Road, Shoalhaven.”

(*Mr. Garrett.*)

SCHEDULE.

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2. Surveyor Arnheim to Surveyor General—report on above. 25 January, 1865 ...	2
3. Under Secretary for Lands to Thos. Garrett, M.P., to recommend Trustees. 6 March, 1865 ...	2
4. T. Garrett to Secretary for Lands, submitting names of parties eligible to act as Trustees. 22 March, 1865 ...	3
5. Under Secretary for Lands to Under Secretary for Finance and Trade, to place amount to the credit of Trustees. 24 March, 1865 ...	3
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7. T. Garrett to Secretary for Lands, for continuance of grant. 19 July, 1866 ...	3
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14. Under Secretary for Lands to Treasury, to place amount of grant to the credit of Trustees. 29 July, 1867 ...	5
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16. W. Lovegrove, B. Brown, and W. H. Wilford, to Secretary for Lands, that they may be appointed as Trustees. 15 September, 1868 ...	5
17. Under Secretary for Lands to Treasury, to place to credit of Trustees amount granted for repairs to road. 8 April, 1869 ...	5
18. W. Lovegrove, B. Brown, W. H. Wilford—Money placed to credit. 8 April, 1869 ...	6

ROADS.

No. 1.

THE REV. R. W. YOUNG AND OTHERS to THE SECRETARY FOR LANDS.

Shoalhaven, 8 September, 1864.

SIR,

We, the undersigned, interested in the Road from Terrara to the South Coast Road, have the honor to call your attention to the fact that no appropriation has been made for the repairs of the said road, although it is the oldest and most useful road in the district, having carried the traffic of the South Coast Road for upwards of twenty years, and being the only highway of convenient approach to the river, and to the English, Scotch, and Wesleyan Churches.

The total length of road not covered by grant is 4 miles, and it seems to us that the grant of £7 per mile is equally due to it as to other lines proclaimed under the 4th Wm. IV. No. 11.

Moreover we may observe that the road has been proclaimed for some years, and that therefore we are entitled to arrears; but as we waived our right of application because of the ill-feeling and jealousy then existing in the district, and would not now have applied but that the road has become absolutely impassable, we shall be satisfied to get the sum of £28 wherewith to repair it. Trusting that a speedy reply may enable us to remove the obstructions,—

We have, &c.,

Richd. W. Young, Clerk, Holy Orders.
W. Lovegrove, C.P.S.
Thos. Holme, storekeeper.
Jas. Armstrong, saddler.
John Howard, hotelkeeper.

Wm. Connolly, farmer.
J. M'Arthur, storekeeper.
Thos. Joyers, junr., storekeeper.
W. Mornson, hotelkeeper, &c.
David Hyam, hotelkeeper.

Surveyor General, B.C., 16 Sept.—M.F.

Mr. Surveyor Arnheim will be good enough to report. B.C., 5 Nov., 1864.—P.F.A.

No. 2.

MR. SURVEYOR ARNHEIM to THE SURVEYOR GENERAL.

Camp, Meroo,

25 January, 1865.

SIR,

As directed by your B.C. instructions of the 5th November, requesting my report on the Road from Terrara to the South Coast Road, for the repair of which £7 per mile has been petitioned for,—I have the honor to inform you that on inquiry at the Police Office, Nowra, I ascertained that a sum of £130 had been granted in 1860 for clearing and opening this road, which is fenced on both sides, and has ever since been kept in repair by private subscriptions.

2. It is at present in want of repair, and I would recommend that the amount petitioned for be granted, on the ground that this road is and will be the South Coast Road until the road from Kiama, *via* Broughton Creek, to Bomaderry (where a Government Ferry is in course of erection) is made practicable, which is at present impassable, and the traffic is necessarily carried along the Nine-mile Beach, *via* Cooloomgatta, crossing the river at the private ferry at Numba; thence, *via* Terrara, to the South Coast Road.

I have, &c.,

E. H. ARNHEIM,

Surveyor.

Under the report of Mr. Surveyor Arnheim, it is recommended that the sum of £28 be granted for the repair of the road.

(For the Surveyor General),

Under Secretary for Lands, B.C., 16 February, 1865.

P. F. ADAMS.

To whom is it proposed to entrust the money—Shall the C.P.S., Shoalhaven, be invited to propose names of Trustees?

Ask the Member for the District as usual. M.F.

No. 3.

THE UNDER SECRETARY FOR LANDS to THOMAS GARRETT, ESQ., M.L.A.

Department of Lands,

Sydney, 6 March, 1865.

SIR,

The sum of £28 having been authorized by the Secretary for Lands for the purpose of repairing the Road from Terrara to the South Coast Road,—I am directed to request that you will be good enough to recommend Trustees for the expenditure of the money.

I have, &c.,

MICHL. FITZPATRICK.

No. 4.

3

No. 4.

THOMAS GARRETT, Esq., M.L.A., to THE SECRETARY FOR LANDS.

Sydney, 22 March, 1865.

SIR,

Referring to your favour addressed to me, intimating that a sum of money had been set apart for the repair of the Road from Terrara to the South Coast Road, and asking me to name suitable persons to act as Trustees to expend the said money,—I beg to submit the following names as those of gentlemen capable to act as Trustees, viz. :—

A. M'Kay, Esq., J.P.,
A. De Mestre, Esq., J.P., and
Mr. Bernard Brown,

who are all proprietors of land through which said road passes.

I have, &c.,
THOMAS GARRETT.

No. 5.

THE UNDER SECRETARY FOR LANDS to THE UNDER SECRETARY FOR FINANCE AND TRADE.

Department of Lands,
Sydney, 24 March, 1865.

SIR,

I am directed by the Secretary for Lands to request that you will be good enough to cause the sum of £28 to be placed to the credit of Messrs. A. Mackay, J.P., A. De Mestre, J.P., and Bernard Brown, in the Bank of New South Wales, for the repair of the Road from Terrara to the South Coast Road.

2. This expense will be charged against the Vote for Minor Roads not classified, 1864.

I have, &c.,
MICHL. FITZPATRICK.

No. 6.

THE UNDER SECRETARY FOR LANDS to THE TRUSTEES.

Department of Lands,
Sydney, 24 March, 1865.

GENTLEMEN,

I am directed by the Secretary for Lands to apprise you that the Under Secretary for Finance and Trade has been requested to cause the sum of £28 to be placed at your credit in the Bank of New South Wales, for the repair of the Road from Terrara to the South Coast Road.

I have, &c.,
MICHL. FITZPATRICK.

No. 7.

T. GARRETT, Esq., M.L.A., to THE SECRETARY FOR LANDS.

Sydney, 19 July, 1866.

SIR,

Last year a grant was made for the repair and improvement of the Road from Terrara Wharf, Shoalhaven River, to the South Coast Road. This year however no such grant has been issued.

I have now, however, at the request of the parties interested, the honor to indorse any application that has already been made by Mr. De Mestre and others for a continuance of the grant for the repair of this very important road.

The Trustees I recommend are Messrs A. De Mestre, A. M'Kay, and B. Brown, who expended the former grant.

I have, &c.,
THOMAS GARRETT.

Surveyor General, 20 July, 1866.—M.F.

£28 recommended to be granted. (For the Surveyor General), P. F. ADAMS.—30 July.

Under Secretary for Lands.

Approved. J.B.W.—4 August.

No. 8.

THE UNDER SECRETARY FOR LANDS to THE UNDER SECRETARY FOR FINANCE AND TRADE.

Department of Lands,
Sydney, 15 August, 1866.

SIR,

I am directed by the Secretary for Lands to request that you will be good enough to cause the sum of £28 to be placed to the credit of Messrs. A. De Mestre, A. Mackay, and Bernard Brown, in the Bank of New South Wales, for repairs of the Road from the Terrara Wharf to the South Coast Road.

2. This expense will be charged against the Vote for Minor Roads not classified, 1866.

I have, &c.,
MICHL. FITZPATRICK.

No. 9.

No. 9.

THE UNDER SECRETARY FOR LANDS to THE TRUSTEES.

Department of Lands,
Sydney, 15 August, 1866.

GENTLEMEN,

I am directed by the Secretary for Lands to apprise you that the Under Secretary for Finance and Trade has been requested to cause the sum of £28 to be placed at your credit in the Bank of New South Wales, for the repair of the Road from the Terrara Wharf to the South Coast Road.

I have, &c.,
MICHL. FITZPATRICK.

No. 10.

THE UNDER SECRETARY FOR LANDS to T. GARRETT, Esq., M.L.A.

Department of Lands,
Sydney, 15 August, 1866.

SIR,

I am directed to inform you that, in accordance with the recommendation contained in your letter of the 19th ultimo, the Under Secretary for Finance and Trade has been requested to cause the sum of £28 to be placed to the credit of the parties named in the margin, for the repair of the Road from Terrara Wharf to the South Coast Road.

Messrs. A. De
Mestre,
A. Mackay, and
Bernard Brown.

I have, &c.,
MICHL. FITZPATRICK.

No. 11.

BERNARD BROWN, Esq., to THE UNDER SECRETARY FOR LANDS.

Shoalhaven, 20 August, 1866.

SIR,

I beg to acknowledge the receipt of yours of the 15th instant, informing the Road Committee for the portion of Road from Terrara Wharf to the South Coast Road of the grant of £28 being placed in the Bank of New South Wales to their credit for repairs of said road.

I have, &c.,
BERNARD BROWN.

No. 12.

W. LOVEGROVE, Esq., to THE UNDER SECRETARY FOR LANDS.

Sydney, 6 May, 1867.

SIR,

I have been requested to bring under your notice that the amount annually granted for the repair of the Road from Terrara to the South Coast has not as yet reached the hands of the Trustees, Messrs. A. De Mestre, J.P., A. K. Mackay, J.P., and B. Brown; and I am desired further to observe that as it is practically the Main Road of the District, having a weekly traffic of more than 100 tons, they trust that it may no longer be left to them to apply yearly for an amount so inadequate to its importance, but that, after inquiry, it may be placed on the Schedule as a 2nd class road.

I have, &c.,
W. LOVEGROVE,
C.P.S.

No. 13.

THE TRUSTEES to THE SECRETARY FOR LANDS.

Shoalhaven, 18 June, 1867.

SIR,

We have the honor to apply for the sum of £28 which has been yearly granted for the Main Southern Road from Shoalhaven, usually known as the Terrara and South Coast Road.

We have been placed in an invidious position in this matter, as the road has gone to pieces under the heavy rains, and the inhabitants have been forced to resort to a private subscription, whilst other roads of not one-tenth the importance are supplied with funds for repairs.

Mr. Lovegrove, the Clerk of Petty Sessions, was requested to apply personally for the money, and he informs us that he did so, and reduced it to writing; and we request that the Government Surveyor may be instructed to report whether the said road is not entitled to a higher class of subsidy than we have hitherto had.

We have, &c.,
A. K. MACKAY, J.P.
A. DE MESTRE, J.P.
BERNARD BROWN.

Surveyor General. B.C., 28 June, 1867.—M.F.

Mr. Arnheim, for report, 4 July, 1867.

In addition to my former report on this road, on the 25th January, I think the reasons given therein for its support hold equally good now, and more so on account of the recent floods.—B. H. ARNHEIM.—5 July, 1867.

Recommended. (For the Surveyor General), P. F. ADAMS.—6 July.

Under Secretary for Lands.

Approved. J.B.W.—10 July.

EXTRACT from Schedule referred to.

Subject.	Amount.	Vote against which charged.	Trustees, or to whom payable.
Road from Terrara to the South Coast Road...	£ 28	Vote for Minor Roads not classified, 1869.	W. Lovegrove, B. Brown, and W. H. Wilford, Trustees.

No. 18.

THE UNDER SECRETARY FOR LANDS to MESSRS. W. LOVEGROVE, B. BROWN, AND W. H. WILFORD.

Department of Lands,
Sydney, 8 April, 1869.

GENTLEMEN,

I am directed by the Secretary for Lands to apprise you that the Under Secretary for Finance and Trade has been requested to cause the sum of £28 to be placed at your credit in the Bank of New South Wales, for the repair of the Road from Nowra to South Coast Road.

I have, &c.,

MICHL. FITZPATRICK.

1869.

LEGISLATIVE ASSEMBLY.
NEW SOUTH WALES.

ROADS.

(CORRESPONDENCE AND PAPERS IN REFERENCE TO ROAD FROM ALNWICK TO THE RAYMOND TERRACE AND MAITLAND ROAD.)

Ordered by the Legislative Assembly to be Printed, 5 November, 1869.

RETURN to an *Order* made by the Honorable the Legislative Assembly of New South Wales, dated 30th September, 1869, That there be laid upon the Table of this House,—

“ Copies of all Correspondence and Papers in the possession of the Govern-
“ ment relative to a surveyed but unproclaimed Road from the Township of
“ Alnwick to the Raymond Terrace and Maitland Road.”

(Mr. Wisdom.)

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ROADS.

No. 1.

MR. R. MAYO AND OTHERS *to* THE SURVEYOR GENERAL.

Miller's Forest,
Alnwick, 24 May, 1859.

SIR,

We, the undersigned purchasers of certain lands and allotments situate in the town of Alnwick, having no right of road to the Government township of East Maitland, Mr. Hickey having caused all communication and traffic to be stopped by fencing and otherwise causing annoyance to us, being on the Raymond Terrace side of Mr. Hickey's land from Maitland,—we now beg of you, as Surveyor General, to cause a Government road to be surveyed through the respective grounds; and further beg if we have applied through a wrong channel that you will be pleased to direct us what course to pursue in the matter. Waiting your early answer,

We have, &c.

RICHARD MAYO,
JOHN SIMONS,
ALEXANDER PHILLIPS,
PATRICK WELSH,—
And several others.

No. 2.

THE SURVEYOR GENERAL *to* MR. R. MAYO AND OTHERS.

Surveyor General's Office,
Sydney, 24 June, 1859.

GENTLEMEN,

With reference to your communication of the 24th ultimo, I have to request that you will be good enough to state the precise position of your lands, and if not of the reserve in the parish of Alnwick, of what grant or purchase from the Crown they form parts.

2. It would appear that your access to Maitland should be either by the Maitland and Newcastle or Maitland and Raymond Terrace Road, and what you require is a way of access to one of these roads; on this point also I have to request that you will favor me with information.

I have, &c.,

GEO. BARNEY,
S.G.

No. 3.

MR. R. MAYO AND OTHERS *to* THE SURVEYOR GENERAL.

Miller's Forest,
Alnwick, 25 August, 1859.

SIR,

I have received information of your having received my application of the 24th May last, and since that I have neither heard nor seen any notice being taken in the matter.

For your information I beg to inform you that lately there has been several police cases for trespass, which cannot be avoided. There have been two or three cases of threatening life for trespass. You must be aware that Alnwick is a Government township, and when we seventy or eighty individuals purchased and paid our money to Government, we were expecting to see everything surveyed out truly; but owing to some neglect or oversight in your department there has been no right of road surveyed or laid out from that township to Raymond Terrace or Maitland.

May I beg that you will be pleased to cause such right of road to be surveyed out immediately; if not done immediately myself and others, through our attorney, must lay our case before the whole House on the opening of Parliament.

Trusting that you may immediately answer; and by so doing you will oblige your humble servant,—

RICHARD MAYO,
And others in the township of Alnwick.

No. 4.

THE ACTING SURVEYOR GENERAL *to* MR. LICENSED SURVEYOR MAITLAND.

Surveyor General's Office,
Sydney, 14 September, 1859.

SIR,

I have to request that you will survey for Proclamation as a parish road, a road from the village of Alnwick to the road from Maitland to Raymond Terrace, and furnish me with a plan and book of reference as usual.

I have, &c.,

A. G. MACLEAN,
A.S.G.

No. 5.

3

No. 5.

THE ACTING SURVEYOR GENERAL to MR. R. MAYO.

Surveyor General's Office,
Sydney, 14 September, 1859.

SIR,

In acknowledging the receipt of your letter of the 25th ultimo, I beg to inform you that I have issued instructions to Mr. Licensed Surveyor Maitland for the survey for Proclamation of a road from the village of Alnwick to the road from Maitland to Raymond Terrace, having learned from a conversation with that gentleman that this is what is required.

2. I at the same time enclose the copy of a letter which I addressed to you in reference to your previous letter, but which, from the tenor of your communication under reply, it would appear you had not received.

24 June
(See No. 2.)I have, &c.,
A. G. MACLEAN,
Actg. Sur. Genl.

No. 6.

MR. LICENSED SURVEYOR MAITLAND to THE SURVEYOR GENERAL.

Maitland, 30 September, 1859.

SIR,

Referring to instructions conveyed to me in your favor of the 14th of this month, I do myself the honor to report that I have examined the access to the village reserve of Alnwick, and taking all local circumstances into due consideration I have no hesitation in recommending as by far the best route for a road, the one of which I enclose a plan* and book of reference. (See No. 4.)

2. I am truly sorry for the loss (unless compensated) sustained by the poor fellow Nally, but I trust the law has provided for him a remedy against the parish at large; if not it cannot be helped, as the route indicated, though surrounded by swampy soft (though occasionally cultivated) soil is at all times dry and easily made practicable. *Appendix A.

I have, &c.,
D. M. MAITLAND,
Licensed Surveyor.

FORWARDED for Proclamation under the Act 4th William IV, No. 11. Copies of the plan and book of reference have been sent to the Police Office, Raymond Terrace. A. G. MACLEAN, A.S.G., B.C., 19 December, 1859.

Under Secretary for Lands.

For the Governor General and Executive Council. J.B.—31 Decr.
Clerk of the Council, B.C., 3 Jan., 1860.—M.F.

[Enclosure.]

BOOK OF REFERENCE OF ROAD FROM ALNWICK TO MAITLAND AND RAYMOND TERRACE, TO BE OPENED AS A PARISH ROAD, UNDER THE ACT OF COUNCIL, 4 WILLIAM IV, NO. 11 :—

No.	Portion of Road.	Reputed Owner.	Occupier.	Character of land.	Bearings.	Length in chains.	Enclosures.	Character and state of preservation of Fencing.	Cultivation.	Breadth of Road.	Area.	Remarks.
1	Commencing on the north boundary of the village reserve of Alnwick at its intersection by the northerly prolongation of Frudhoe-street; thence to the north boundary of Roderick and Alexander Macaulay's land.	R. & A. Macaulay..	The same	Good, but swampy.	Northerly..	32.40	2 fences	.....	a. r. p. 16 0 0	50 links	a. r. p. 1 2 19	Messrs. Macaulay do not object.
2	From the north boundary of Messrs. Macaulay's land to the north boundary of John Eales' land.	John Eales, Esq. ...	Wm. Woods and others.	Good cultivation land on lin of road.	do. ...	19.50	1 fence	.....	19 50 0	do.	0 3 36	
3	From the north boundary of John Eales' land to the north boundary of John Nalley's land, being the main road from Maitland to Raymond Terrace.	John Nalley	The same	do. ...	do. ...	28.50	do.	.....	28 0 0	do.	1 1 28	John Nalley strongly objects.

D. MAITLAND,
Licensed Surveyor.

- NOTE 1.—Each number will represent one block of property through which the road may pass, whether of the Crown, of an individual, or devoted to the public as a reserve or road.
 2.—Each portion of road will be within the property to which the No. applies, and should be described as "from the south boundary of John Smith's 600 acres to the boundary-line between that land and Thomas Jones' 50 acres." "From the last-mentioned boundary to &c., &c., &c."
 3.—The name of the reputed owner may be filled in from information obtained on the spot, or failing such information with the name of the grantee from the Crown.
 4.—The name of the occupier, should there be one, can of course be ascertained on the spot.
 5.—The bearings should be stated from the nearest cardinal point, as "E. 10 degrees N.," but where they are numerous, and shown in a table on the plan, the general bearing need only be stated as "north-easterly."
 6.—In the column of remarks may be introduced any information which cannot conveniently be inserted in any of the other columns; such as the dedication of the portion of the road to the public, in the subdivision of surrounding land; the reputed free use of road by the public for any specific period, &c.

A copy to be sent by the Department of Lands
to the Police Office at

No. 7.

No. 7.

THE ACTING SURVEYOR GENERAL to THE BENCH, RAYMOND TERRACE.

Surveyor General's Office,
Sydney, 19 December, 1859.

GENTLEMEN,

Similar to
enclosure No. 6.

I have the honor to forward, for deposit in the Police Office, Raymond Terrace, for public inspection, copies of a plan and book of reference of a road which, with a view to its proclamation, has been marked out from the village of Alnwick to the road leading from Maitland to Raymond Terrace, the receipt of which documents you will have the goodness to acknowledge.

I have, &c.,
A. G. MACLEAN,
Acting Surveyor General.

No. 8.

THE BENCH, RAYMOND TERRACE, to THE ACTING SURVEYOR GENERAL.

Police Office, Raymond Terrace,
24 December, 1859.

SIR,

We have the honor to acknowledge the receipt of copies of a plan and book of reference of a road from Alnwick to the road hence to Maitland, forwarded with your letter of the 19th instant.

We have, &c.,
A. H. JACOB, J.P.,
(For the Bench.)

No. 9.

MINUTE of Executive Council endorsed on Mr. Licensed Surveyor Maitland's letter of 30th September, 1859. THE Executive Council advise that the intended formation of the within described line of a road as a parish road be notified in the *Government Gazette*, as prescribed by the Act of Council 4th William IV, No. 11.

EDWARD MEREWETHER,
Clerk of the Council.

Minute 60/2—9 January, 1860.
Confirmed, 16 January, 1860.
Approved. W.D., 18 Jan., 1860.

No. 10.

NOTICE IN "GOVERNMENT GAZETTE,"—FRIDAY, 27 JANUARY, 1860.

"Department of Lands,
"Sydney, 24 January, 1860.

"ROAD.

"His Excellency the Governor General, with the advice of the Executive Council, having deemed it expedient to open and make a parish road (to be maintained at the expense of the parishes through which it passes) from Alnwick to the road from Maitland to Raymond Terrace, running through the lands granted to or now occupied by Messrs. R. and A. Macaulay, John Bales, and John Naley (*sic*): Notice is hereby given, that in conformity with the provisions of the Act of the Governor and Council 4th William IV, No. 11, a plan and book of reference showing the intended line of the road above-mentioned, are now deposited at the office of the Surveyor General in Sydney, and at the Police Office, Raymond Terrace; and all persons interested therein are requested to transmit, in writing, to the Clerk of the Executive Council, within one month from this date, any well-grounded objections which may exist to the formation of the road in question.

"By His Excellency's Command,
"J. BLACK."

No. 11.

THE UNDER SECRETARY FOR LANDS to THE CLERK OF THE EXECUTIVE COUNCIL.

Department of Lands,
Sydney, 9 February, 1860.

SIR,

In drawing your attention to the notice in the *Government Gazette* of the 27th ult., respecting the intended formation of a parish road from Alnwick to the Maitland and Raymond Terrace Road, I am directed to request that you will have the goodness, at the end of one month from the date thereof, to inform me whether any objections have been received by you in respect of the said road, in pursuance of the notice alluded to.

I have, &c.,
MICHL. FITZPATRICK.

No. 12.

No. 12.

THE CLERK OF THE EXECUTIVE COUNCIL to THE UNDER SECRETARY FOR LANDS.

Executive Council Office,
Sydney, 29th February, 1860.

SIR,

In compliance with the request contained in your letter of the 9th instant, I do myself the honor to forward to you a communication from Mr. W. H. Mullen, solicitor, of Maitland, transmitting objections therein enumerated to the formation, as a Parish Road, of the proposed line from Alnwick to the Maitland and Raymond Terrace Roads; and which objections are the only ones lodged with me against the formation of this road.

I have, &c.,

EDWARD C. MEREWETHER,
Clerk of the Council.

[Enclosures to No. 12.]

Mr. W. H. Mullen, solicitor, to The Clerk of the Executive Council.

Maitland, 17th February, 1860.

Sir,

In compliance with the notice published in the public papers, relative to the opening of the proposed Parish Road from Alnwick to the road from Maitland to Raymond Terrace, I have the honor to transmit herewith—

- 1st. The objection of John Nally as to the formation of the road in question.
- 2nd. The Petition of the inhabitants of Alnwick and surrounding district, including those persons who applied in the first instance for a Parish Road may be formed and stated in the Petition. And
- 3rd. The plan* referred to in both documents.

These papers I beg the favour of your laying before His Excellency Sir William Denison and the Executive Council, with every convenient despatch. And you will also oblige me with an acknowledgment of their receipt.

I have, &c.,

W. H. MULLEN,
Solicitor, Maitland.

*Appendix B.

To His Excellency Sir WILLIAM THOMAS DENISON, Knight, Governor-in-Chief of the Colony of New South Wales and its dependencies, &c., &c., and the Honorable the Executive Council.

The humble Petition of the undersigned inhabitants of the Town of Alnwick, situate on the River Hunter, in the Colony aforesaid, and surrounding District,—

HUMBLY SHOWETH:—

That it is in contemplation by your Excellency, with the advice of the Executive Council, to open and make a Parish Road (to be maintained at the expense of the parishes through which it passes) from Alnwick to the road from Maitland to Raymond Terrace, running through the lands granted to or now occupied by Messrs. R. and A. Macaulay, John Eales, and John Naley, and that, in conformity with the provisions of the Act 4th William IV, No. 11, a plan and book of reference, showing the intended line of the road above-mentioned, are now deposited at the Office of the Surveyor General in Sydney, and at the Police Office, Raymond Terrace.

That your Petitioners are desirous that the Parish Road to the road from Maitland to Raymond Terrace as aforesaid, should be made through the lands and according to the direction as pointed out and shown by the dotted line on the plan hereunto annexed.

That such line would be a better and nearer route for your Petitioners than the one now proposed by your Excellency and Executive Council.

That such road would be more acceptable and be of greater benefit to your Petitioners than now proposed.

Your Petitioners therefore humbly pray that your Excellency, with the advice of the Honorable the Executive Council, will, under the powers vested in you by the Act for that purpose, order the road to be altered and made through the lands and according to the line as dotted and shown on the plan hereto annexed.

And your Petitioners will ever pray.

Name.	Residence.	Name.	Residence.
R. Mayo	} Alnwick.	Peter Moy	} Miller's Forest.
Patrick Welsh		James Moy	
John Grady, farmer		Michl. Martin	
James Saunders		Bridget Noonan	
John Hill		Simon Carney	
Alexander Phillips, fisherman		John Goswell	
Patk. O'Herne, farmer		James Somerville	
Isaac Pillidge, fisherman		George Somerville	
Joseph Healey, do.		Chas. M'Donough	
Denis Gready, settler		James Elkin	
Matthew Smith, do.		Thomas O'Brien	
John O'Connor, do.		Thomas M'Dermott	
Martin O'Connor, do.		Patrick Doherty	
John M'Rae, do.		James Gollan	
Michael Cunningham	John Jackson		
William Grady, shoemaker	William Manning	} Miller's Forest.	
John Flanagan, settler	Thomas Manning		
Alexander Philp, farmer	James M'Gregor		
George Philp, do.	William Rich		
Michl. Sheahan, settler	Patrick Flanery		
James M'Bryan, farmer	Pat. M'Loughlin		
William Murray, do.	William Corbet		
John Bolster	Patrick Flanagan		
Joseph Neville, do.	Patrick Smith		
George Rankin, do.	Duncan M'Donald		
Edward Doherty, resident, Raymond Terrace, and land-owner at Miller's Forest.	Archd. M'Sharron		
Natty Corrigan	Kenneth M'Crimmon		
George M'Ewen	James Austin		
Thomas Black	John Heuslip		
Henry M'Namara	Francis O'Donell		
David Menera	James Nally		
Robert Hayes	John M'Pherson		
Hugh M'Glenn	Alexander M'Pherson		
	Frank Fraser		

To

To His Excellency Sir WILLIAM THOMAS DENISON, Knight, Governor-in-Chief of the Colony of New South Wales and its Dependencies, &c., &c., and the Honorable the Executive Council.

The objections of John Nally, of Miller's Forest, Hunter River, in the Colony of New South Wales, farmer,—

That the said John Nally has seen a notice in the *Gazette* that it is in contemplation by your Excellency, with the advice of the Executive Council, to open and make a parish road, to be maintained at the expense of the parishes through which it passes, from Alnwick to the road from Maitland to Raymond Terrace, running through the lands granted to or now occupied by Messrs. R. and A. Macauley, John Eales, and John Nally, and that in conformity with the provisions of the Act 4th William IV, No. 11, a plan and book of reference, showing the intended line of the road above-mentioned, are now deposited at the office of the Surveyor General, in Sydney, or at the Police Office, Raymond Terrace; and all persons interested therein are requested to transmit, in writing, to the Clerk of the Executive Council, within one month from 24th January, any well-grounded objections which may exist to the formation of the road in question.

That the said John Nally objects to said parish road being formed and made through his land, on the following grounds:—

First.—That a much nearer and better road for the purpose aforesaid may be made through the lands, and according to the direction as pointed out and shown by the dotted line on the plan hereto annexed.

Second.—That such road would be at least half a mile shorter than the one at present contemplated.

Third.—That such road would be acceptable, and of greater benefit to the inhabitants of the town of Alnwick and surrounding district.

Fourth.—That the inhabitants of the said township have sent a petition herewith to your Excellency and the Honorable Executive Council, to have the road altered according to the plan hereto.

Fifth.—That the said John Nally is a small farmer, having a wife and nine children to support by his own manual labour on the said land, and is too poor to fence in that portion of the contemplated road running through his farm; and that the said road deprives him of the best portion of his land.

And therefore the said John Nally objects to the road as at present proposed by your Excellency and the Honorable the Executive Council, and begs that your Excellency and the Honorable the Executive Council will take his objections into your serious consideration.

I have, &c., his
JOHN × NALLY.
mark.

R. PIGON, witness,—the same having been previously read over and explained to him.

See previous
paper.

No. 13.

THE ACTING SURVEYOR GENERAL to MR. DISTRICT SURVEYOR HENDERSON.

“JOHN NALLY.”—Petition against opening of Parish Road from Alnwick to the road from Maitland to Raymond Terrace.

The injury which Nally would suffer by the opening of the proposed road is unquestioned.

The possibility of selecting a line equally good from the village to the Raymond Terrace road is however very doubtful.

Mr. District Surveyor Henderson is requested to examine the locality, and to report on the line suggested by Nally, and on any other which might be substituted for that proposed to be opened; the relative cost of the proposed line, or any other, to the public, should occupy Mr. Henderson's special consideration, and the injury to any other property from an alteration in the line should also be borne in mind, and reported on.

30 April, 1860.

A. G. MACLEAN,
A.S.G.

No. 14.

MR. DISTRICT SURVEYOR HENDERSON to THE SURVEYOR GENERAL.

Maitland, 25 July, 1860.

SIR,

In obedience to instructions conveyed to me under blank cover of the 30th April, 1860, I examined the site of the proposed road from the village of Alnwick to the road from Raymond Terrace to Maitland, protested against by Mr. Nally, also the line he proposes to substitute for that surveyed by Mr. Maitland, and have the honor to report that the line proposed by Mr. Nally is no ways suitable, being through a swamp, over lower ground—a very great objection in a country so liable to be overflowed as this is, and being in the direction opposite to that required, as most of the traffic is toward Maitland; and that the only variation I should be disposed to recommend from Mr. Maitland's surveyed line would be to leave it at Station No. 9, and come out on the Maitland Road, at the north-west corner of Nally's land, which would be more distasteful to Nally than Mr. Maitland's proposal.

As for the Petition in his favour, I have good reason to believe it has been signed more as an expression of sympathy to Nally than as a matter of belief.

I have, &c.,
P. H. HENDERSON,
District Surveyor.

Under this report, which concurs so entirely with Mr. Maitland's, the line of road should be confirmed so soon as the parties interested make arrangements for its fencing in its entire length, which is through enclosed lands.

The extent of fencing will be upwards of 550 rods.

Under Secretary for Lands.

A. G. MACLEAN.
B.C., 24 Aug., 1860.

No. 15.

THE UNDER SECRETARY FOR LANDS to R. MAYO AND OTHERS.

Department of Lands,
Sydney, 14 September, 1860.

GENTLEMEN,

Adverting to your application of the 24th May, 1859, for the formation of a road from Alnwick to East Maitland, I am directed to inform you, that so soon as you shall have made arrangements for fencing in the line of road, as marked out by Mr. Surveyor Maitland, on your application, which runs entirely through enclosed lands, the road will be confirmed and formally opened by the Government.

2. The Acting Surveyor General estimates the extent of fencing to be about 550 rods.

I have, &c.,

MICHL. FITZPATRICK.

No. 16.

B. WHITE AND OTHERS to THE SURVEYOR GENERAL.

Alnwick, 22 May, 1868.

SIR,

Eight or nine years ago there was a road marked out by Mr. Maitland, from the township of Alnwick to the Raymond Terrace Road, which road has been opened and used by us up to the present time, but is now stopped by John Nally, through whose land it passes for a little distance. We the undersigned, purchasers of land in the township of Alnwick, humbly pray you will open the road for us as soon as it can be done, as it is a very serious inconvenience to us in going to Raymond Terrace, and prevents our children from going to their school, which is only $1\frac{1}{2}$ mile distant by this road, but is nearly 3 miles by any other way. The number of scholars that want to go to school by this road every day is from fifteen to twenty.

We have, &c.,

Benjamin White,
John Simons,
R. Mayo,
John Burgess,
John Hill,Martin Hill,
Denis Grady,
John Flanagan,
James Saunders,
Charles Phelps.

No. 17.

H. J. BOLDING, P.M., to THE SECRETARY FOR LANDS.

Raymond Terrace, 30 May, 1868.

SIR,

I have the honor to inform you that several purchasers of allotments in the township of Alnwick, county of Northumberland, and in this district, have asked me to support their application to the Surveyor General to open a road which was proposed as a Parish Road in 1859, and has not been opened and *Gazetted*. It passes partly through land belonging to one John Nally, who has recently closed it, although used since the survey in 1859.

Being aware that the road is very necessary for the public convenience, I beg to request that it may be finally opened as soon as practicable.

I have, &c.,

H. J. BOLDING, J.P., P.M.

No. 18.

THE UNDER SECRETARY FOR LANDS to B. WHITE AND OTHERS.

Department of Lands,
Sydney, 1 July, 1868.

GENTLEMEN,

Referring to your communication of the 22nd May last, in which you renewed the application made some years since for the formal opening of a road (preliminarily notified in the *Government Gazette* in January, 1859) from Alnwick to the Maitland and Raymond Terrace Road, I am directed by the Secretary for Lands to inform you, that for the reasons already given the opening of the road in question cannot be proceeded with, unless the persons interested are prepared to pay the cost of fencing the line in its entire length through the enclosed lands it would intersect. See letter of 14 September, 1860.

I have, &c.,

MICHL. FITZPATRICK.

No. 19.

THE UNDER SECRETARY FOR LANDS *to* B. WHITE AND OTHERS.

Department of Lands,
Sydney, 10th March, 1869.

GENTLEMEN,

Referring to my letter of the 1st July last, in which you were informed that steps might be taken for the opening of the road from Alwick to the Raymond Terrace Road, so soon as the parties interested in the line had made provision for its fencing through enclosures, I am directed by the Secretary for Lands to enquire whether any steps had been taken for the fencing of the line hitherto?

I have, &c.,

MICHL. FITZPATRICK.

Mr. Wisdom, M.P., states, in reply to this letter, that no steps have been taken for fencing the line.—M.F., 10 June, 1869.

No. 20.

THE UNDER SECRETARY FOR LANDS *to* R. WISDOM, Esq., M.L.A.

Department of Lands,
Sydney, 29 June, 1869.

SIR,

Referring to your personal representations on the 10th instant, on the subject of opening the road from Alwick to the Raymond Terrace Road, I am directed by the Secretary for Lands to inform you that the opening of the road in question must be deferred until provision shall have been made by parties interested for fencing the line where it passes through enclosures.

I have, &c.,

MICHL. FITZPATRICK.

[Two Plans.]

Sydney : Thomas Richards, Government Printer.—1869.

[18.]

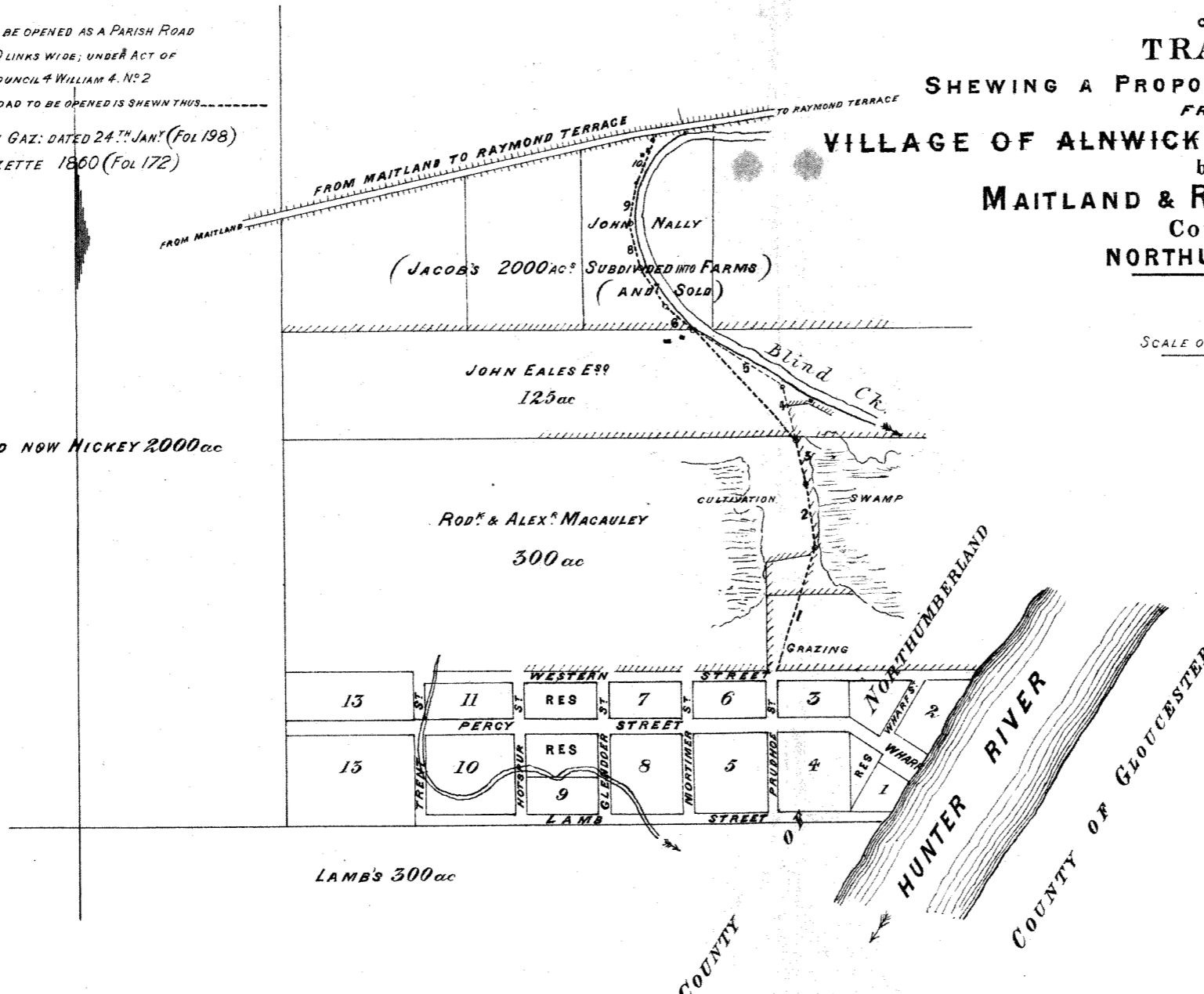
APPENDIX A.

N^o 9305
1859

NOTE TO BE OPENED AS A PARISH ROAD
50 LINKS WIDE, UNDER ACT OF
COUNCIL 4 WILLIAM 4. N^o 2
ROAD TO BE OPENED IS SHOWN THUS-----

NOTIFIED IN GAZ: DATED 24TH JANY (FOL 198)
GAZETTE 1860 (FOL 172)

LORD NOW NICKEY 2000 ac



COPY OF
TRACING
SHEWING A PROPOSED PARISH ROAD,
FROM THE
VILLAGE OF ALNWICK TO THE GOVERNMENT ROAD
between
MAITLAND & RAYMOND TERRACE
COUNTY OF
NORTHUMBERLAND

SCALE OF 20 CHAINS TO AN INCH

TRAVERSE		
1	N 18° E	16.40
2	" 3° W	9.00
3	" 18° "	7.00
4	" 12° "	7.00
5	" 60° "	14.00
6	" 45° "	5.00
7	" 35° "	6.00
8	" 18° "	5.00
9	" 7° E	6.50
10	" 23° "	6.50
		81.90

59. 5130

TRANSMITTED TO THE SURVEYOR GENERAL WITH MY LETTER OF SEP^R 30TH 1859 (59. 54)

(SIGNED) D. M. MAITLAND L.S.

(Sig 174)

APPENDIX, B.

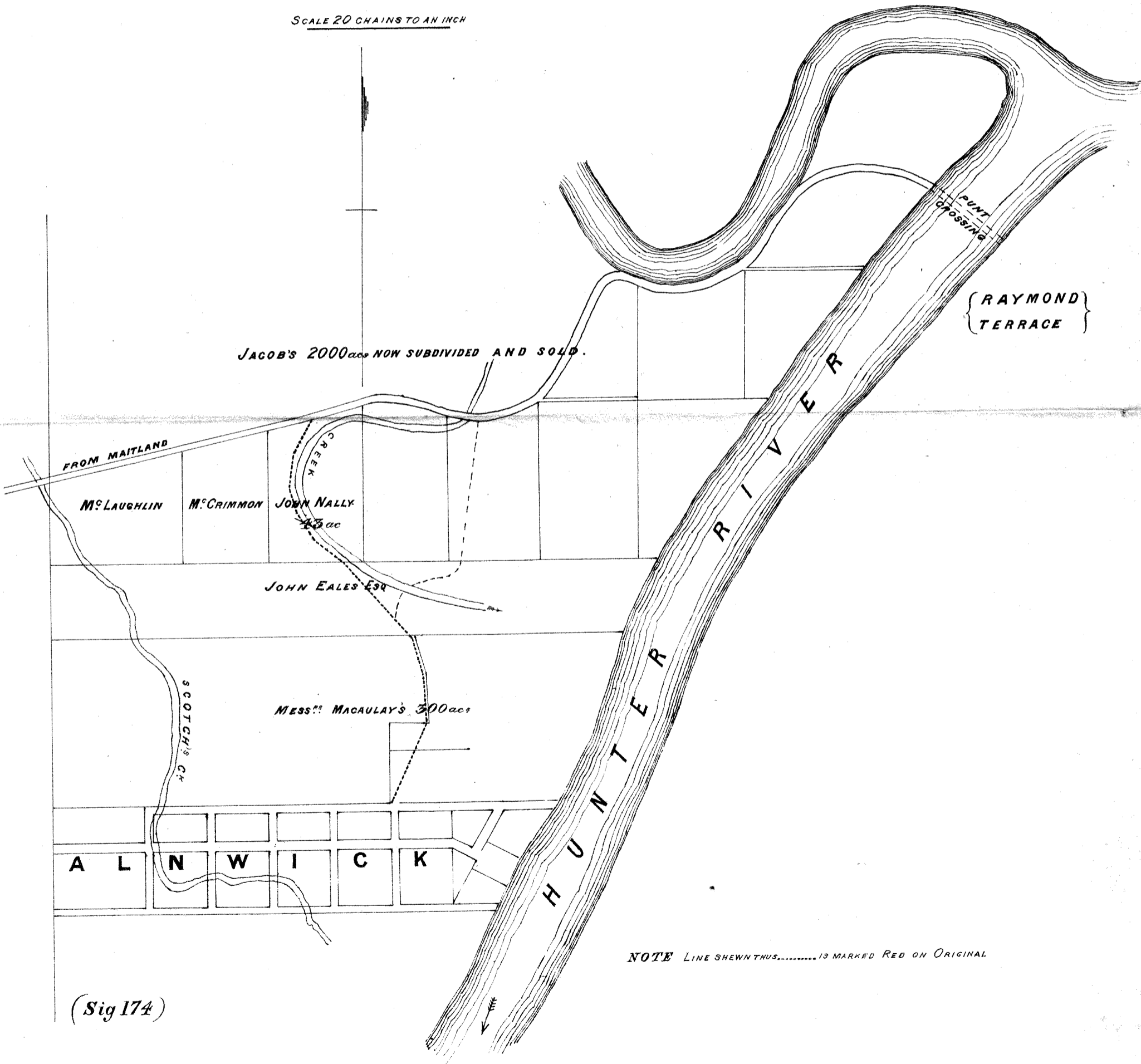
(N^o 1791)

COPY OF TRACING

FROM SKETCH

SHEWING THE LINE OF
PROPOSED PARISH ROAD
FROM THE VILLAGE RESERVE OF ALNWICK
IN THE COUNTY OF
NORTHUMBERLAND
TO THE GOVERNMENT ROAD
FROM MAITLAND TO RAYMOND TERRACE

SCALE 20 CHAINS TO AN INCH



1869.

LEGISLATIVE ASSEMBLY.
NEW SOUTH WALES.

PROGRESS REPORT FROM THE SELECT COMMITTEE

ON

RAILWAY EXTENSION ;

TOGETHER WITH THE

PROCEEDINGS OF THE COMMITTEE,

MINUTES OF EVIDENCE,

AND

APPENDIX.

ORDERED BY THE LEGISLATIVE ASSEMBLY TO BE PRINTED,
11 *November*, 1869.

SYDNEY : THOMAS RICHARDS, GOVERNMENT PRINTER.

1869

1869.

EXTRACTS FROM THE VOTES AND PROCEEDINGS OF THE
LEGISLATIVE ASSEMBLY.

VOTES No. 19. THURSDAY, 28 OCTOBER, 1869.

4. Railway Extension ("*Formal*" Motion) :—Mr. Macleay moved, pursuant to Notice No. 1,—
- (1.) That a Select Committee be appointed, with power to send for persons and papers, to inquire into and report upon the best mode of facilitating inland traffic, and upon the subject of Railway Extension generally.
- (2.) That such Committee consist of Mr. Sutherland, Mr. Lucas, Mr. Lackey, Mr. Stimpson, Mr. W. Suttor, Mr. Morrice, Mr. Alexander, Mr. Lee, Mr. Hoskins, and the Mover.
- Question put and passed.
-

VOTES No. 26. THURSDAY, 11 NOVEMBER, 1869.

3. Railway Extension :—Mr. Macleay, as Chairman, brought up a Progress Report from, and laid upon the Table the Minutes of Proceedings of, and of Evidence taken before, the Select Committee for whose consideration and report this matter was referred, on 28th October, 1869, together with Appendix.
- Ordered to be printed.
-

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1869.

RAILWAY EXTENSION.

PROGRESS REPORT.

THE SELECT COMMITTEE of the Legislative Assembly, appointed on 28th October, 1869, "*with power to send for persons and papers,*"—"to inquire into and report upon the best mode of facilitating inland traffic, and upon the subject of *Railway Extension generally,*"—have agreed to the following Progress Report:—

Your Committee find that they have not time to complete the inquiry entrusted to them by your Honorable House; but the Evidence taken by them, which is appended hereto, contains much information which may prove of value in any future inquiry.

WILLIAM MACLEAY,

Chairman.

No. 2 Committee Room,

Sydney, 11th November, 1869.

PROCEEDINGS OF THE COMMITTEE.

FRIDAY, 29 OCTOBER, 1869.

MEMBERS PRESENT :—

Mr. Macleay, Mr. Lackey,	|	Mr. Morrice, Mr. Hoskins,
Mr. Stimpson.		

Mr. Macleay called to the Chair.

Entry in Votes and Proceedings appointing the Committee, *read*.

Committee deliberated.

Ordered,—That John Whitton, Esq., be summoned for next meeting.

[Adjourned to Tuesday next, at 11 o'clock.]

TUESDAY, 2 NOVEMBER, 1869.

MEMBERS PRESENT :—

Mr. Macleay in the Chair.

Mr. Lackey, Mr. Alexander,	|	Mr. Stimpson, Mr. Hoskins,
Mr. Morrice.		

John Whitton, Esq. (*Engineer-in-Chief for Railways*), called in and examined.

Witness withdrew.

Committee deliberated.

Ordered,—That A. Ashdown, Esq., R. Moody, Esq., and W. C. Bennett, Esq., be summoned for next meeting.

[Adjourned to Thursday next, at 10:30 o'clock.]

THURSDAY, 4 NOVEMBER, 1869.

MEMBERS PRESENT :—

Mr. Macleay in the Chair.

Mr. Lackey, Mr. Hoskins, Mr. Alexander,		Mr. Morrice, Mr. Stimpson, Mr. Sutherland.
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A. Ashdown, Esq. (*Accountant, Railway Department*), called in and examined.

Witness withdrew.

R. Moody, Esq. (*Traffic Manager*), called in and examined.

Witness withdrew.

W. C. Bennett, Esq. (*Commissioner for Roads*), called in and examined.

Witness withdrew.

Committee deliberated.

Ordered,—That E. C. Cracknell, Esq., and R. Moody, Esq., be summoned for next meeting.

[Adjourned to Friday next, at 10:30 o'clock.]

FRIDAY, 5 NOVEMBER, 1869.

MEMBERS PRESENT :—

Mr. Macleay in the Chair.

Mr. Lackey, Mr. Stimpson,		Mr. Morrice, Mr. Hoskins.
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R. Moody, Esq., called in and further examined.

Witness withdrew.

Committee deliberated.

Ordered,—That John L. Beeston, Esq., Thomas Dalton, Esq., and E. C. Cracknell, Esq., be summoned for next meeting.

[Adjourned to Wednesday next, at 10:30 o'clock.]

WEDNESDAY,

WEDNESDAY, 10 NOVEMBER, 1869.

MEMBERS PRESENT :—

Mr. Macleay, | Mr. Hoskins.

In the absence of a Quorum, the meeting called for this day lapsed.

THURSDAY, 11 NOVEMBER, 1869.

MEMBERS PRESENT :—

Mr. Macleay in the Chair.

Mr. Sutherland, | Mr. Morrice,
Mr. Lee, | Mr. Hoskins.

J. Beeston, Esq. (*Traffic Manager, Great Northern Railway*), called in and examined.
Committee deliberated.
Chairman handed in letter from W. C. Bennett, Esq., in explanation of a portion of his evidence.
Ordered to be appended. (*Vide Appendix.*)
Chairman submitted Progress Report.
Same read and agreed to.
Chairman to report to the House.

LIST OF WITNESSES.

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1869.

LEGISLATIVE ASSEMBLY.

NEW SOUTH WALES.

MINUTES OF EVIDENCE

TAKEN BEFORE

THE SELECT COMMITTEE

ON

RAILWAY EXTENSION.

TUESDAY, 2 NOVEMBER, 1869.

Present:—

MR. ALEXANDER,
MR. HOSKINS,MR. LACKEY,
MR. MACLEAY,

MR. MORRICE.

WILLIAM MACLEAY, ESQ., IN THE CHAIR.

John Whitton, Esq., Engineer-in-Chief for Railways, called in and examined:—

1. *Chairman.*] We want to ascertain from you, in the first place, the length of the different lines of railway now completed or authorized, and the average cost per mile? The southern line, from Sydney to Goulburn, is 134 miles in length; the total amount of its cost I have not with me, but the average cost from the Parramatta Junction to Goulburn, 121 miles, will be about £13,000 per mile. From the Parramatta Junction to Bathurst, about 132 miles, the estimated cost is about £14,000 per mile, that is, taking the actual cost, so far as it is ascertained, and the estimated cost of completing it to Bathurst. From Newcastle to Murrurundi, about 120 miles, the average cost will be about £11,884 per mile. Of course there may be some alterations in these figures when the lines are completed.
2. Does that include bridges? Yes.
3. *Mr. Hoskins.*] Stations too? Yes.
4. *Chairman.*] Rolling stock? No.
5. You have made an estimate, I suppose, of the further extensions proposed or about to be proposed by the Government? I have made no careful estimate—there are not sufficient sections in the office to enable me to do so—but I do not think they will cost more than £10,000 per mile; that is, from Goulburn to the Murrumbidgee.
6. Do you estimate the cost of these extensions at as much as £10,000 a mile? About £10,000 will do, I think, but it is impossible to say until surveys are made and careful estimates taken out.
7. Have you any return of the amount of traffic upon the different lines? I have not. I have made out as near as I could from the returns made of the number of waggons taken from Penrith to Mount Victoria, and I think it will be about 114 tons from Penrith to Mount Victoria in a day, and about 60 tons the other way to Penrith. The returns to Goulburn I have not got at all. But of course this information could be more accurately obtained from the Traffic Department.
8. You do not know anything about the traffic on the southern or northern line? I do not.
9. Do you know anything of the amounts received from each line? No; except from the Statistical Register; I have no official knowledge.
10. Do you know anything of the working expenses? No, I know nothing of the working expenses at the present time, as I believe no proper statement of the working expenses of the railways has been published since 1865. The Accountant should be able to furnish that information.
11. You are aware, I suppose, that the railways scarcely pay any interest on the money expended? I understand they are paying something like 2 per cent.; but it is not to be wondered at if they do not pay, from the rates we have in comparison with other Colonies. If the Committee will allow, I will state the

J. Whitton,
Esq.

2 Nov., 1869.

J. Whitton, Esq., the rates charged in New South Wales, Victoria, Queensland, and South Australia, respectively:—

2 Nov., 1869.

Passenger Fares.	First Class.	Second Class.
New South Wales <i>under</i>	d. 3	d. 2
Victoria	3½	2½
South Australia	4	2½
Queensland	4	3

Goods rates per ton per mile.

	Special.			First.	Second.	Third.	Fourth.
	d.	d.	d.	d.	d.	s. d.	d.
New South Wales	1	1½	1½	4	4½	5½	9
Victoria	5	6	7	9
South Australia.....	3	4½	6	9
Queensland	2½	5½	6½	.....	.....	.....
Do. owner's risk.....	8½	10½	.....
Do. Commissioner's risk	10	1 1½	.....

12. Do you think that if these rates were charged in New South Wales, they would be sufficient to make a great difference—that the railways would pay 5 per cent. then? I have not a shadow of doubt about it. If the lines were properly worked and proper rates charged, I have no doubt they would pay a good percentage upon the cost of construction. During the time the drays were carrying on the western line, the lowest amount ever paid by the contractors was 2s. 2d. per ton per mile, and our special rates are, as I have stated, from 1d. to 1½d., while the other rates are absurdly low when compared with the other Colonies. The difficulty in working these lines has been in assuming that we must approach as near as possible to the English rates, whereas our working expenses are nearly three times greater, and there is not one-tenth of the traffic. Some of our passenger trains run to Goulburn with probably half a dozen passengers. It is the same on the western lines—the carriages are rarely filled.

13. *Mr. Hoskins.*] In your opinion, would not one passenger train each way per day, from Sydney to Goulburn, and from Sydney to Mount Victoria, be quite sufficient? Quite sufficient. In fact, so far as I can understand, the only reason for running the second train is to carry the mails, for which we actually get nothing—literally nothing. I think all we get for the mails is 7s. 6d. per mile per quarter—about the expense of running one train. Whether we get the money or not, we certainly ought to take credit for it.

14. In point of fact, you are of opinion that one train a day each way would be sufficient to supply the travelling public. Yes.

15. *Chairman.*] Do you think it possible, in a newly peopled country like this, to expect such costly railways to pay at all? I think costly is a comparative term. My own impression is that the railways in this Colony are the cheapest railways ever constructed.

16. Is it possible they can pay interest on the cost of construction if continued on the present scale? I am satisfied that if we charged the Victorian rates they would pay not only the working expenses but a fair rate of interest on their cost as well. If they pay 2 per cent. with the present rates, there is no doubt that with a very small increase of the rates the receipts would largely increase. It is quite a mistake to suppose that by lowering the rates the receipts will increase; it is quite the reverse in every Colony.

17. I presume you mean an increase in the charges on goods going up the country from Sydney—not upon the produce of the country? The produce of the country might have special rates, no doubt, but I would increase everything as far as the carriage is concerned.

18. Would not an increase of the rates have the effect of stopping a great deal of traffic, for instance, coal or grain? I may have peculiar notions in reference to coal traffic, but I cannot see why the Government should expend public money, by running trains at a loss, to assist private enterprise. We are asked to bring down coals from Bowenfels, to compete with Newcastle, at rates which are perfectly absurd to dream they could ever be carried for. Considering the rates we have been charging for a number of years past, the wonder to me is that our railways pay anything at all. We carry for a penny or three half-pence a mile—a rate hardly heard of even in England.

19. Have you ever made any estimate of the probable result of further extensions as regards the quantity of traffic? I have made no estimate of the traffic. I can only assume, from what I am told the traffic is, that railways would pay to some extent beyond the present limit; indeed I think the southern line should be continued to Albury to join the Victorian Railway.

20. Have you made any calculations as to the effect, as regards traffic, of a junction between the Melbourne and Sydney lines? No, I have made no estimate of the traffic, but the traffic must be very considerably increased in that case. No doubt we should have the whole of the passenger traffic which now goes by sea, besides opening up a very fine country between Goulburn and Albury, which, whether a portion of the traffic went to Melbourne or not, would certainly be of great importance to this Colony.

21. Have you considered the question of having cheaper lines at less speed than the present ones? I have never considered it much. Of course if there be no traffic for lines such as we are now constructing, lines with a lighter permanent way might be made for locomotives.

22. Is not the weight of the locomotive the chief cause of the cost? It is no doubt the chief cause of the cost of renewals; but if you have steep gradients you must have heavy engines to work them.

23. However light the traffic, the locomotive must be very heavy where the gradients are steep? Where the gradients are steep the engines must be heavy.

24. What is the weight of the locomotive now used on the mountain line? 31½ tons, without the tender.

25. *Mr. Hoskins.*] Do you think engines weighing from 15 to 20 tons would suffice for the traffic beyond

beyond the authorized extensions? That depends altogether upon the gradients—it is not so much the traffic as the gradients that have to be considered—but I should never recommend a line to be constructed with a worse incline than 1 in 40, where it was possible to get that.

J. Whitton,
Esq.

2 Nov., 1869.

26. *Chairman.*] There are steeper gradients on the present lines, are there not? There are. It is very seldom supposed that there is any difficulty with the southern line, but there is a much worse incline on the southern line than on the western—1 in 30 for 3 miles.

27. *Mr. Morrice.*] That has to be ascended going towards Goulburn? Yes, from Picton to Mittagong. In 15 miles from Picton towards Mittagong we rise 1,500 feet. Returning from Mittagong there is an incline at Bargo of 1 in 33.

28. *Chairman.*] In going through level country—and I believe a large portion of the extensions would go through level country, either west, north, or south—would it not be possible to make the railways much cheaper? They could be made for much less money, no question about it; but it would depend entirely upon the amount of traffic as to whether it would be advisable to have substantially constructed railways with the present speed, or cheaper lines with a lower rate of speed. If you put down a lighter railway you must reduce the speed.

29. Not if the line is straight and level? Yes; you must have a thoroughly good road and maintain it well, or you cannot have high speed without danger.

30. The cost of the heavy rail is one very considerable item, is it not? Yes, one item of cost; the rail now in use is 75 lbs. to the yard—about 117 tons to the mile.

31. At £10 per ton? They cost more than that before they get into the country, say about £12 a ton; they cost something like £10 a ton delivered in Sydney.

32. In a level country a much lighter rail than that would do? A lighter rail would do, but I question whether it would be good economy. If railways were being constructed by a private company to sell to the Government then I would advise the use of as light a rail as possible, but making them for the Government I would put down the best rail I could get, which would be economy in the end. A 75-lb. rail of thoroughly good iron, with a light engine, would last perhaps forty years, whereas a 40-lb. rail would probably not last more than ten years.

33. *Mr. Hoskins.*] How long would you estimate 60-lb. rails, with engines of about 15 or 20 tons, would last? There is such a great difference in the quality of rails. I have known some to wear out in twelve months. 55 lbs. is the weight of the rail now on the Windsor line; the gradients are steep, and the engines too light to work the traffic satisfactorily, but we cannot put on heavier engines on account of the lightness of the rails.

34. *Chairman.*] What is the weight of the locomotive in use on that line? About 16 tons.

35. *Mr. Alexander.*] You say a rail 75 lbs. to the yard will last forty years. Do you think one of 55 lbs. would last twenty years, with engines of 15 or 16 tons? Probably it might. If you have lighter rails you must have lighter engines; everything depends upon the quality of the rail. Some of the rails made now will not last more than twelve months, and some rails we have had down for fourteen years and they are very good yet; but if we were to pay more for our rails, and get them made without competition, they would, I have no doubt, last five times as long as they do now, and cost very little more. There is nothing so destructive to good work as competition; the more you get of competition, the worse article you get.

36. *Chairman.*] You think that our railways ought to be of the very best description, if we make them at all? I do.

37. You disapprove of cheap railways,—that is to say, inferior descriptions of railway? I do entirely; but if a line be wanted through a district the traffic of which will not justify the construction of a heavy permanent way, we might put down lighter rails and use lighter engines. I will give an instance to show the difference in economy between light and heavy rails. In Victoria they have used rails of 60 lbs. and rails of 80 lbs. to the yard; but the 60-lb. rail will not turn, and the consequence is they do not last half the time that the heavy rails do.

38. Where the traffic is light, do you not think horse power might be substituted for locomotive power? I do not think that with economy you could substitute horse power for locomotive power. Wherever a railway can be made, horses should be dispensed with, and light locomotives used, if there is not sufficient traffic for a heavier railway. But so much depends on the nature of the district that, before any estimate could be given, a complete survey should be made of the whole country, and then a recommendation should be made upon the facts as you find them. To say a railway can be made for two or three thousand pounds a mile, without knowing the difficulties to be contended with, is simply an imaginary estimate. Bridges and culverts may be required, which cannot be estimated for beforehand, or the inclines may not be so favourable as may be supposed. The only thing that could be determined upon would be the weight of the rail you wish to use, and then you might have a survey made of the country with a view to the construction of a railway of corresponding character.

39. The use of an iron rail would of course enable a horse to draw much more than even on a macadamized road? No doubt of it. On a rail the friction is not more than about 8 lbs. to the ton; on a macadamized road it is from 44 to 60 lbs., and on gravel 150 lbs. to the ton.

40. A horse upon a rail alongside the ordinary roads, without any cuttings, could draw as much as five or six horses could draw on the road itself? No doubt.

41. And could travel at greater speed? Yes.

42. So that there would be a saving in the number of horses employed, and in the time? No doubt; but that again depends upon the country. Suppose there is much down-hill—say from Mount Victoria to Penrith—a certain number of horses would be required to take the load over the steepest gradient, yet with a little alteration of the gradients the road might be so made that the load could be run down with scarcely any power at all; yet on account of a few steep places these horses must travel over the whole road.

43. When we have got to Goulburn on the south, Bathurst on the west, and a little beyond Murrurundi on the north, are we not past all the mountain country? Yes.

44. And then it is a rare thing on the ordinary roads of the country to come across a gradient of more than 1 in 12? On the western line there are many of 1 in 8.

45. Beyond Bathurst? I do not know beyond Bathurst, but even on the other roads there are some very steep inclines. It is notorious that the roads of the Colony have been taken over the very worst places—

J. Whitton, Esq. wherever there is a hill the road goes over it. Therefore, the assumption is that by adopting new lines we might get round these hills.

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46. I suppose a horse will draw with ease, on an iron rail, 4 tons, upon a gradient of 1 in 15? No.
47. 3 tons and the dray? The gravity and friction on an incline of 1 in 15 is 160 lbs. to the ton, and the ordinary power of a horse is only 125 lbs. It would therefore require 3 horses to take up 2 tons. Of course for a short distance he will exert greater power, but at a speed of 3 miles an hour he can only exert 125 lbs. for any distance. No doubt there are horses that would do more.
48. I have seen eight horses taking a dray with over 4 tons on it, on a macadamized road, up a gradient of quite 1 in 12? Yes, it may be so, but that is an extraordinary exertion for a horse to make.
49. In a level country I suppose there could be no doubt one horse could draw 4 tons on an iron rail with the greatest ease—I mean in undulating country, but with no steep gradients? It depends entirely upon the gradients.
50. On a railway, whether for horse or locomotive power, where the speed would never exceed seven or eight miles an hour, or at the most ten, there would be no necessity for having such a broad gauge as is required for a higher speed? The broader gauge adds very little to the expense of a railway.
51. It must add to the cost of sleepers? Very little indeed. In some districts sleepers are a very heavy item, no doubt, but in making a horse tramway you would lay saplings from the bush, which might or might not be easily accessible according to the country passed through.
52. You think there would be no advantage in making very narrow gauges? No; the rails must be the same in any case; and if the tramway is to be laid on the ordinary roads, with no cuttings, the breadth of gauge cannot affect the expense in that respect. There is nothing but the sleepers and ballast on which any saving could be effected, and the amount would be so slight as to be hardly worth while making a difference of gauge.
53. The chief cost of a railway is owing to the necessity for making cuttings and embankments in order to keep the gradients as easy as possible? Yes.
54. Then in a perfectly level country, where there was nothing to do but form and ballast and lay the rails, it would not surely cost above £2,000 a mile? With a light rail it might be done for about £2,000, but it is difficult to say what the cost of a railway complete would be till we know what bridges and culverts would be required. Our railways cost about £3,700 a mile for rails, ballast, and sleepers. In a level country, all that would have to be done would be to cut side drains and form a bank to keep the rails above the level of the country; but how many bridges and culverts would be required it would be impossible to say.
55. I presume an open culvert, or a bridge on timber, does not cost more than any other portion of the line? Yes, it would cost more than earth-work, of course.
56. It would not be necessary to drive piles in cases of that kind, simply for drainage gutters? That would depend entirely upon what the soil was; if there was sand to deal with, you would be compelled to drive piles; sand makes the best foundation where it can be confined, and the worst where you cannot; if you can drive sheet piling to keep sand in its place, no better foundation can be had. If there are no works—that is to say, no bridges, no culverts, no cuttings nor embankments—no doubt a line might be made for £3,000 a mile; but I never saw a country yet that did not require something of that kind.
57. That is to say, a railway necessary for carrying a heavy locomotive? I mean for a locomotive.
58. Do you think a horse railway, say for light traffic, could possibly cost more for forming and making than the macadamized road alongside of it—It is just as necessary to have the gradients easy on a macadamized road as on a horse railway? No doubt it would be more useful if they were, but that has never been studied in this country; there are inclines of all sorts which might have been avoided. In laying a railway alongside a roadway you adopt these gradients, whether good or bad; and as the bridges on the roads are rarely made more than 15 feet wide they are not too wide for the ordinary traffic, therefore bridges must be made for the tramway. If the rails were laid on the existing bridges, probably the first dray that came over would displace them—I think the teamsters would take a special pleasure in displacing them.
59. The returns of the traffic and the receipts can be got from the Accountant or the Commissioner? The Commissioner is of course the proper person, but they have to be supplied to him by the Accountant. I may mention that in 1868 I find the receipts in New South Wales were £224,359, expenditure £144,080, and the net receipts £80,279; in Victoria the receipts were £581,402, the expenditure £282,976, and the net receipts £298,426.
60. You attribute the difference to the different charges? Almost entirely.
61. You are aware that the country population in Victoria is much greater than it is in New South Wales—that there are some large cities some distance inland, while there are none in New South Wales? Of course I am aware there is a larger population in Victoria, but whether they are a greater travelling population I cannot say. They have tried to increase the revenue by lowering the rates, and found it a mistake, but we have done nothing but reduce the rates since I came to the Colony, and have not yet found it a mistake.
62. You are aware that Ballarat and Sandhurst are large cities? I believe so.
63. And both must be supplied from Melbourne? No doubt. I believe our total tonnage, including mineral traffic, is almost equal to that of Victoria, but as we carry everything for almost nothing it can hardly be expected that our railways will pay. I think it an unfair argument that because these railways do not pay, no further extensions should be made; for the fact is, they do not pay because they have been badly managed; the rates are too low, and the mileage run is excessive.
64. When we get beyond those portions of the Colony where the population is comparatively dense, will there not be still less chance of these railways paying? I do not think so. Of course they will not pay if you take them into a country where there is no population and no traffic for them; but I do not think it follows that because these railways have been so worked that they have not paid, further extensions should not pay if properly worked. I think we require further extensions to make these pay, with proper management and proper rates of course.
65. When you go 30 miles west of Bathurst for instance, there is no direction beyond that in which you will find any large population? I do not know what the population may be now, but I think there is some of the finest land between Bathurst and Orange that I have seen in the Colony. The land in the vicinity

vicinity of Orange and Blaney is very fine agricultural land, and appears to be nearly all bought up; and no doubt if facilities were given for bringing produce to Sydney there would be a very large population there.

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66. When you get beyond that limit, say 30 miles west of Bathurst, is not the population very thinly scattered over the country? That I do not know. I have not been beyond Orange.

67. Would you not consider that it would be impossible for a costly line of railway to pay for a long long time in that country? I do not know that it would be impossible. The further we get into these districts the more cheaply we can make the lines, because I understand the country is more level. In such a country the difference in the cost of the two descriptions of lines is so small as to make it scarcely worth while to adopt the inferior kind; and the difference in the expense of working the two lines would be in favour of the heavier line, for with a heavy rail and heavy engine you could take as much in one trip as in four or five on the lighter rail. The only advantage in favour of the lighter line would be in the cost of construction.

68. Putting a locomotive railway aside as too costly, if we wish to make good roads into the western interior, do you not think a horse railway would answer the purpose better than a macadamized road? I do not think it would. In the case of a horse tramway you have the road as well to keep up; you cannot compel any one to use the tramway—they would compete with you by the road.

69. That would be the case with steam also? They cannot possibly do it, either with regard to rates or speed. But the horse-tramway would have but slight advantage over the road for ordinary traffic. Most of the inhabitants of these districts keep their own horses and teams, and they might prefer to cart their own produce instead of paying for it on a horse-tramway.

70. A horse railway could not cost more than a macadamized road, if so much? That would depend entirely on the facilities for getting metal.

71. If there were no metal in the district, a macadamized road would be much the more costly? No doubt.

72. But in the event of there being plenty of stone on the spot, they would cost about the same? Probably they might; but the cost of maintaining a horse tramway would be more than that of maintaining a railway, in consequence of the necessity for continually renewing the ballast worn away by the horses' feet. I may be prejudiced, but my impression is that wherever steam power can be used, animal power should be abandoned.

73. *Mr. Hoskins.*] Which do you think would involve the largest cost of maintenance, a macadamized road or a horse tramway? It is very difficult to say. I do not think there would be much difference. A macadamized road if properly formed with good metal, will last a long time. Probably a macadamized road would cost more.

74. *Chairman.*] There would be a clear saving as regards the traffic on a horse railway as compared with a macadamized road—in men, time, and the amount of horse traction required? No doubt.

75. *Mr. Lackey.*] Do you recollect the cost of the Windsor and Richmond line—the total cost per mile? I think it was over five thousand pounds and not quite six.

76. Does that include rails and station-houses? Everything—land, rails, and station-houses.

77. What is the weight of the rails per yard? Fifty-five or fifty-six pounds—I am not positive.

78. The line is worked by much lighter locomotives than the ordinary lines? Yes.

79. To your mind has that line proved a successful one? Quite the reverse; it is a very unsuccessful experiment. The traffic is limited by the steep inclines, 1 in 33, which there was no occasion ever to have made, and by the lightness of the rails. We have engines that can take up three times the traffic, but we cannot put them on the line, and therefore we are obliged to use small engines, taking very small loads.

80. Would it have entailed much greater expense to have reduced the gradients? Not much greater. The line I proposed to make would have cost about £7,000 a mile, exclusive of land, with no incline worse than 1 in 80, and with 75-lb. rails, precisely the same as we are using on the other lines.

81. Have there been any changes in the passenger and goods rates during the time the railways have been under your surveillance? There have been frequent reductions.

82. No increases? There have been slight increases, but not throughout the whole of the rates. The increases have been confined to some very small matters. But perhaps I had better explain to the Committee that I have nothing to do with the management of the railways—nothing whatever to do with the traffic or rates.

83. You are strongly of opinion that if the rates were increased, the revenue from the railways would be much greater? Yes, I have no doubt about it.

84. When increases were made some time ago, did you notice whether the receipts corresponded with your ideas? I do not know whether they did, but I know that whenever the rates have been lowered the net receipts have always decreased. I am not aware that any increases have been attempted to any extent.

85. The rates are lower than they were some two years ago? Everything has been lowered. We have special classes that we carry at a penny and three half-pence a mile, and we carry the great bulk of the traffic at these rates. The season tickets also have been lowered.

86. There is no difference between the down traffic and the up traffic? No, they are both the same I believe.

87. *Mr. Morrice.*] What was the cost of construction of the Melbourne railways per mile? About £37,000 per mile.

88. What was the cost of the Queensland lines? The last report I saw of the Queensland lines, the cost was given at a little over £15,000 per mile; but I believe the average has been reduced lately by the making of many miles on almost level ground. I find that in New South Wales we have special rates for goods, of 1d., 1½d., and 1¾d., and for first class 4d., for second class 4½d., for third class 5½d., for fourth class 9d. In Victoria there are, I believe, no special classes; but the first class rates are 5d. against our 4d., the second 6d., the third 7d., and the fourth 9d. In Queensland they have one special class 2½d., a second special class 5¼d., first class 6½d., and in the second and third classes they make a difference between the owner's risk and the Commissioner's risk. If the Commissioner takes the risk the second class is charged 10d., owner's risk 8½d.; the third class is 10½d. owner's risk, and 13½d. Commissioner's risk. They have adopted what they call low rates for the purpose of running the drays off the road.

89. What is the greatest weight of goods you can take up by one train from Sydney to Goulburn? We cannot

J. Whitton, Esq. cannot take more than about 130 tons up the incline beyond Picton; from here to Picton we can take between three and four hundred tons; from here to Goulburn, to run through, about 130 tons.

90. *Chairman.*] Is that loading or the entire weight of the train? The entire weight of the train; the weight of goods would be about 60 tons.

91. *Mr. Morrice.*] What weight could you bring down from Goulburn to Sydney? Not more than 60 or 65 tons, for we have nearly the same incline to come up—1 in 33 instead of 1 in 30.

92. What is about the average weight of the trains? I do not know. I limited them at first to 12 waggons. We work the line between Picton and Mittagong as a distinct portion, and that engine makes two or three trips between Picton and Mittagong for one that is made by the engines on the other parts of the line.

93. Have you any idea what is the average weight of goods you could take? If you mean to take them direct from Sydney to Goulburn, we could not take more than I have mentioned, but by dividing the trains at Picton and Mittagong we can take very heavy trains—say 150 tons.

94. Coming Sydney way, how much can you take? About the same.

95. Although the steepest gradient to go up is only 1 in 33? Yes, but you must remember it is more dangerous to take a very heavy train down an incline than up it. The incline of 1 in 33 is between Picton and Mittagong, and would be worked as previously stated.

96. When the trucks return from Goulburn do any of them come back empty? I do not know; I am very seldom on the line; the Traffic Manager could give you that information.

97. Supposing half these waggons do come down empty, would it not be better that they should bring down loading than come down empty? It would be better of course to bring down loading at a fair price, but it would not be at all advisable to bring loading that would not pay expenses.

98. No matter how low the rate, it would help to pay the expenses of the railway? No doubt, but if the working expenses of bringing traffic were more than we should get for the carriage of it, it would be better to leave it behind.

99. Would it not be the same expense to bring these waggons back empty? No; a waggon of eight tons will surely cost more to haul than one of four tons.

100. You would have the same expense for engine-drivers and engines? You might argue in the same way with regard to the whole railway policy,—that it would be better, if we run trains at all, to have them loaded at any price than have them empty. In my opinion, so long as we run trains at all, we ought to have a paying price for the traffic. If I understand the question you are asking me, it is as to the return empties, whether it would not be more advisable to bring down produce than to bring down empty waggons. Well, I should say that if those who grow the produce will not pay a reasonable price, I should leave it behind and bring down the empty trucks.

101. But supposing there were more goods to take up than you had to bring back, and you had to bring back half the trucks empty, would it not be better to have them loaded with goods at a reduced price than to bring empty trucks back? If I had the management of the railways, I should make the rates as low as possible, with due regard to the working expenses; but I would not, for the accommodation of people in the country, who would refuse to pay a reasonable rate, bring down produce at a rate that would not pay. I think produce should be brought down at reasonable rates; but if the owner refused to pay reasonable rates, I should let him bring it down in any way he pleased.

102. Suppose it would not pay him unless he could get it brought down very cheaply? Then he should not grow it. We have most absurd applications made to us to bring down things for nothing, simply because the trains are run.

103. I want to get an answer whether it would not be better to have these trucks loaded coming down, at a reduced price, than to bring them down empty? At a reduced price, unquestionably, but not at a losing price. My view is this: the Commissioner is in the position of a trustee for the whole country, and it is his duty to see that the railways pay working expenses and interest on the money they cost in construction, and he has no right to compel those who never use the railways to contribute as much towards the interest of the money expended upon them as those who do use them. As I have said before, I do not think the Government should spend the public money in assisting private enterprise, by carrying on the railways at losing rates.

104. You think then that private enterprise at Newcastle or Illawarra should be protected, while private enterprise in the southern or western districts should not be protected? I should not protect any private enterprise.

105. You think then that imposing a charge that prevents coals coming from the southern or western districts is not a protection to the northern? I would not prevent any one bringing coals from the south or west, but I should object to bring coals from the south or west at the public cost to benefit a private company.

106. You think it would be better not to bring coals at all? If they would not pay a reasonable rate for carrying, I think so. I would not with public funds assist a private company or person to compete with any other company or person.

107. Do you know what is the lowest paying price they can carry coals at in England? I believe there are not more than four or five railways in England that are paying at all; they are simply running their enormous traffic at low rates in consequence of the great competition. They are carrying, I believe, at $\frac{3}{4}$ d. per ton per mile, and can take forty waggons in one train, but it does not follow that it pays them. If you look to the dividends of all the English railways, you will find that very few are paying. When I was at home, two years ago, there were many of them in a state of insolvency.

108. Do you not think it would pay better to take $\frac{3}{4}$ d. a ton per mile for coals on the southern or western lines, coming to Sydney, than to bring back the trucks empty? If the coal-owners had to find their own waggons they would come back empty from Sydney, and this price would not pay working expenses.

109. Supposing the Government did find the waggons, do you not think it would be better that these waggons should bring down coals at $\frac{3}{4}$ d. a ton per mile, rather than come down empty? No, I do not. I believe the greatest portion of our waggons come down loaded. I do not know what proportion may come down empty; some do, no doubt; but even at $\frac{3}{4}$ d. a ton per mile it would not pay. If our own waggons had to come to Sydney, and we could load them as we might find it convenient, no doubt we could afford to bring them at a much less cost than in owners' waggons; but where, as in the case of the Bowenfels coal-owners, they propose to find their own waggons and pay $\frac{3}{4}$ d. a ton per mile for bringing

down

down the coal, and then ask to have the waggons taken back for nothing, it can only be done at a great loss. On that line the empty waggons would cost more to have them taken back than the full ones coming down.

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110. Where you say the gradient is 1 in 33 on the southern line, what is the distance for which it extends? About a mile I think; the incline of 1 in 30 is about three miles.

111. *Mr. Hoskins.*] Do you not consider that railway traction is the cheapest mode of land traction? Unquestionably.

112. And therefore, while you say that in your opinion loading ought not to be conveyed at unremunerative rates, it is your opinion further that by no other mode of land traction could produce or loading of any kind be conveyed so cheaply as by railway? Certainly not. In fact, I may say the traffic we are carrying for 1d. and 1½d. was charged for by drays not long ago at 2s. If we could get one-fourth of the price that used to be charged by drays, and one-half the price charged to passengers, our lines would pay uncommonly well.

113. I will give you a case. I was at the Waterview Bay Works the other day, and saw a boiler being loaded on a waggon for Lambing Flat; I expressed astonishment at its not being sent by railway, and they said the rates were too high. How do you account for that? I cannot understand it at all. How did they intend to take it?

114. By 8-horse waggon all the way through? I should let them have the benefit of it decidedly. I may give an instance to show how unremunerative our rates are in some cases. A clerk in my office got leave of absence for a fortnight, and wanted to go to Richmond for a boating excursion. He wanted to take a boat with him from Sydney. He paid 5s. for carting the boat from the harbour to the railway station; 6s. from Richmond to the Hawkesbury; and all that we could charge him for taking that boat 34 miles, from Sydney to Richmond, was 2s. 10½d. It was taken by weight instead of by measurement, and we had to send two trucks with it.

115. Would you not consider, as a matter of policy in the management of the railways, it might be desirable to have a difference between the rates for down country goods and those for goods going up, so as to ensure the conveyance of all produce and raw material by railway rather than by road? Yes. The rates are such now as they never could be brought by road for; but I think all agricultural produce should be brought down by rail.

116. I believe you have had some experience of railway traffic in England? Yes.

117. I believe traffic managers in England never think of running passenger trains to accommodate the public, unless they find they can make a profit by doing so? Not that I am aware of.

118. And if they found trains they were in the habit of running did not pay, they would withdraw them? Certainly.

119. Do you not think we run a good number of passenger trains on our railways here which might be very profitably withdrawn? I have no hesitation in saying we run double the number required. We run trains every hour to Burwood, and we could take the whole population of Burwood in one train. I understand we run trains for the express purpose of taking season-ticket holders to lunch, and bringing them back again.

120. That is comparatively a small matter. Do you not think we run too many trains to Bowenfels and Goulburn? I cannot quite agree that the suburban traffic is a very small matter. The engines are constantly running, and the trains do not pay. I think the trains to the interior should only go once a day.

121. One passenger train each way from Sydney to Goulburn, and from Sydney to Bowenfels, would be quite sufficient? I think so—quite sufficient.

122. Could you favour me, if not with an actually reliable estimate, with an approximate estimate of the cost of the railway from the Parramatta Junction to Picton, and from the Parramatta Junction to Penrith, and from Maitland to Muswellbrook? I could not give it now.

123. Can you state it roughly? From the Parramatta Junction to Picton it would be about sixteen or seventeen thousand pounds a mile, but that includes the Menangle Bridge and some other very heavy works. From Parramatta to Penrith, about £13,000 a mile, and from Maitland to Muswellbrook about £11,000.

124. I assume that the reason why these lines have cost so much, arises from the large and costly structures in the shape of bridges which it was necessary to erect? To some extent it does. The Menangle bridge, I think, cost nearly £100,000, the Singleton bridge about £42,000.

125. Have you been over the country through which it is proposed to take a railway from Goulburn to a navigable part of the Murrumbidgee or to Yass? I have been beyond Yass to Binalong, and also from Bathurst to Orange, and from Murrurundi about 16 miles further north—over the range as far as Warrah.

126. May I ask you whether you consider that in the direction in which it is proposed to make the railway from Goulburn to Yass, the country is more easy than that from Parramatta to Picton? Yes.

127. And therefore a railway constructed in as solid a manner as that from Parramatta to Picton would be less costly? Far less costly. I have the estimates made for a line from Goulburn to Yass, to cost about £10,000 a mile—not more, perhaps less.

128. From Bathurst to Orange ———? That is a more difficult country than I thought it was, but still there are no great difficulties—no inclines worse than 1 in 50, and no expensive works.

129. And when you have surmounted the Liverpool Range there will be no difficulties between that and Tamworth? No.

130. Do you not think one of the primary reasons why our railways have cost so much in constructing, say from Parramatta to Goulburn, and from Parramatta to Penrith, has been the extremely difficult character of the country, the lower part of the country having to receive the watersheds of the various tributaries of large rivers, and in the upper part the mountain range having to be surmounted? Not between the Parramatta Junction and Penrith; there have been very few important works; but beyond that no doubt it has been so.

131. Could you give me an idea what the railway has cost from Nattai to Goulburn? About £13,000 a mile I think, not more. We have got through now the most difficult country we shall have to pass in extending the railways; but it should be borne in mind that our railways, which have cost on the average about £14,000 a mile, are remarkably cheap lines, if you take into consideration the cost of labour in this country compared with the cost of labour in England. We pay 2s. 6d. for earth-work, whereas in England

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England they only pay 9d. ; and we have paid 5s. for rock as against 2s. ; and the importation of our rails adds £2 or £3 a ton on them.

132. Do you not consider that the country from Goulburn south, Bathurst west, and Murrurundi north, is of a character favourable to the construction of railways at a moderate cost? Yes ; on the southern line there will be no incline all the way to the Murrumbidgee worse than 1 in 50, and the works will be tolerably light.

133. I presume you are aware that the ordinary traffic beyond Goulburn, Bathurst, and Murrurundi, is much less than it is in the lower part of the country? I dare say it is.

134. The lower country is more thickly settled? Yes, no doubt.

135. Do you not think we might have what we may term good substantial railways, which you could approve of, and adapted to the requirements of the people south of Goulburn, west of Bathurst, and north of Murrurundi, of a less costly character than those you have hitherto supervised the construction of? Yes, I think they could be made in these districts for three or four thousand pounds a mile less. As I have said before, the estimates for the extensions amount to about £10,000 a mile, whereas the railways that have as yet been made have cost respectively about thirteen, fourteen, and twelve thousand pounds a mile. When these proposed lines are all thoroughly worked up, I may find that they may be constructed for something even less than I have stated.

136. Do you not think that railways with a smaller quantity of ballast under the rails, and with lighter rails, say of 60 or 65 lbs. to the yard, should be sufficient for these interior districts? I should not advise that for the southern line, because if you make a line to join the Melbourne line, it ought to be of a sufficiently substantial character to carry the traffic as fast as we are now doing ; but if you have a lighter rail and less ballast, the engines must be lighter and the speed less. The real difference in expense between a 60-lb. rail and a 75-lb. rail is not so much as to justify a departure from a rail sufficiently heavy for any engine we could possibly use.

137. What is the depth of the ballast on the present lines? It was 12 inches underneath the sleepers, but I have now reduced it to 6 inches. It is 18 inches altogether in the centre of the road.

138. Do you not think a foot of ballast would quite suffice? Then the sleepers would be on the formation.

139. I fully understand what you say with reference to the injudiciousness of running trains at a high velocity on cheaply constructed lines ; but do you not think an average speed of ten or twelve miles an hour would suffice for our extensions? I think it would never please anybody to run at those speeds. The speed is now too slow ; there is incessant grumbling at the speed of our trains.

140. We want to penetrate the country with improved means of communication, and our borrowing power is limited—the question is, whether we cannot do it more cheaply? If there is only a certain amount of money to be expended, the proper plan would be to have careful surveys made, and then see how the expense can be cut down to the lowest possible amount, so as to make the most of the money.

141. If we constructed a cheaper line of railway in the first instance, which would tend to the settlement of the country, could we not renew the line with a superior description of permanent way, when the population of these districts had largely increased and the traffic would warrant it? It could be done, on this assumption, of course,—that the railway you lay down shall be taken by the best route between any two places, that the line shall be properly surveyed, and that the necessary earth-works for a better description of line should be made ; and then, if you please, in time you may take up the light rails and put down heavy ones. But the difference in cost will be simply the difference between a heavy and a light rail. I am quite satisfied in my own mind that the heavier rail is the cheaper rail in the long run.

142. Do you not think less costly structures for station-houses would suffice for a country like this, especially beyond Bathurst, Goulburn, and Murrurundi? I do not believe any line in the world can show such miserable station-houses as some we have here.

143. They have much more flimsy structures in America? There the lines are made by private companies, whose object is to make them at the cheapest possible rate and then sell them at the dearest.

144. They seem to have found these cheap railways best adapted for the settlement of the country? If we were in the habit of killing as many people here as they kill there we should soon have a decrease in the population.

145. Do you not think timber buildings would be sufficient for ordinary stations? I should certainly not like to see worse stations than we put up here. After all, the cost of stations amounts to a very small proportion of the total cost of the lines.

146. Do you not think the stations would be much cheaper if made of timber? I do not think so ; in a very few years they would have to be renewed. My own impression has always been that if we put up buildings of any kind for the Government, they should be respectable buildings ; all ornamentation should be avoided, but the buildings should be substantial and fit to look at. Can anybody conceive anything worse than that wretched building of ours at Redfern? It ought to have been set fire to years ago.

147. I suppose you would be in favour of having railways enclosed in every case? Decidedly I should.

148. You have expressed an opinion that it is undesirable that our railways should be inferior to those of Victoria? I believe ours are quite equal to theirs ; and they are certainly superior to those the Committee reported in favour of constructing the other day.

149. I assume you do not think there is any necessity for our having a better railway than will suffice for the people of Victoria? If, after having expended £37,000 a mile on their railways, they think proper to go to the other extreme and make railways for £6,000 a mile, I do not see why that should be a guide for us. But I believe they are making a great mistake. They will not be able to run their trains, over railways costing only £6,000 a mile, at more than 12 or 14 miles an hour, while we could run express trains at something like 28 miles an hour including all stoppages.

150. Do you not think 12 miles an hour would suffice? People are never satisfied with a low rate of speed, and if we adopt such lines as you speak of there will be constant grumbling. When we first commenced our lines we were told if we could only beat the bullock-drays it would do, but the moment we began to run, the public called out for increased speed.

151. Are you aware that Mr. Higginbotham, the Engineer-in-Chief in Victoria, estimated the cost of constructing their north-eastern line, which is to tap our border, at £9,300 a mile, including stations and all, and that now he has sent in another estimate reducing it to £7,220 a mile, and that the Committee appointed to inquire into the best means of constructing a railway, and who sat for some months, sent in a report recommending a railway to cost £6,000 a mile? No doubt. I am quite aware of that ; but you will

will pardon me for saying I do not think the Committee are the persons to judge of a proper sort of railway. They may be carried away by prejudice to refuse to vote more than a certain sum of money, but it does not follow that the railway they recommend is the best sort of railway for the Colony.

J. Whitton,
Esq.

152. Would you not think the Engineer-in-Chief for Railways qualified to judge? No doubt he is. I 2 Nov., 1869.

153. Would you not consider that his estimate must have been given on authentic data, having in view the circumstances of the country? I have not the slightest doubt about it. His original estimate was £9,000, and possibly, to meet the wishes of the Committee, he has gone over his estimate and made reductions, and has made his estimate so that he can construct a line for £7,000 a mile. No doubt you can construct a line for almost anything; but the question is, whether that is the best thing to do.

154. If the Government told you they wanted to reach certain points, and that they had only £7,000 a mile to spend, do you think you could make that sufficient to give them a railway? I am not quite clear on that point; I should like to go through the country before I gave an estimate. All I could do would be to report to the Government my opinion, and then say that as there was only a certain amount of money for the purpose of constructing these lines, I would make the best use I possibly could of it, and state what I proposed to do.

155. Do you not think such a railway as you could construct for £7,000 a mile would answer all purposes for years to come? Possibly it might; but you would not be able to travel at the same speed, and the railway would cost more to maintain, and not be so serviceable to the country.

156. Do you not think that light railways and engines weighing from 15 to 20 tons would suffice for all the traffic for years to come? An engine weighing from 15 to 20 tons would take a very small load up an incline of 1 in 50. No doubt there are some things we could make less; we could make the ballasting a little less and the rails less, but there would be no permanent saving I am sure.

157. I believe you said the Richmond line cost between five and six thousand pounds a mile? Yes.

158. Was it not the fact that a great deal of the land the line intersects was purchased? Yes.

159. Therefore if that railway had intersected Crown lands the cost would have been very much less? Yes.

160. And you say you could have made a railway through private lands, the same as the Richmond Railway intersects, for £7,000 a mile, without having such steep gradients? Between £7,000 and £8,000.

161. Could you not apply that principle to these other parts of the country? You must admit that the line to Richmond was a very favourable one—the works are exceedingly light.

162. Could you not give us a railway in the interior for something like the same amount? No doubt in a level country a line could be constructed for £7,000 a mile with the present rails. But before any decision should be arrived at, proper surveys and estimates should be made, and then if we found the country sufficiently favourable to reduce the cost to about £4,000 a mile for works, we might be able to lay down then almost the same permanent way that we have now.

163. Take the country from Bathurst to Orange, or from Goulburn to Yass? The Yass extension would be through a tolerably easy country, where the cost would probably be about £3,000 a mile, and the western line about the same by adopting a little steeper gradients. The permanent way is a very small matter in comparison with the works.

164. Would you advise that the Government should import steel rails for the railways instead of iron ones? Yes.

165. What would be the difference in cost? Probably about £2 a ton.

166. As a matter of fact, on all portions of the English railways where there is great traffic, are they not relaying the lines with steel rails? Yes.

167. Have you heard that in America they use malleable iron? Yes. The Americans are also using Bessemer steel; I would propose to use puddled steel. The great objection to the rails we are using now is that they are piled in thin slabs before rolling, and instead of wearing out they laminate—that is to say the top pile comes off; the surface of the rail strips off before they are half worn out.

168. You have recently returned from England? Yes.

169. Is it not a matter of fact that our permanent way from the Parramatta Junction west and south is in better order than most of the lines in England? It is.

170. Did you read the last report of Captain Tyler, the inspecting officer of the Board of Trade, on the Bremaer Pass Railway on the Brindisi route? I did.

171. Did you observe the remark he made about the description of engines used? Yes.

172. Do you not think relatively they do more work than our engines do here? I cannot say I remember what he said on that point.

173. *Mr. Stimpson.*] I think I understood you to say you had travelled from Bathurst to Orange? Yes.

174. Are there any great obstacles in the way in the shape of watercourses? No.

175. Are there any main creeks to cross? There are a few creeks to cross, but nothing of great importance. I did not go over all the country where the survey has been taken, but from the sections it does not appear that there is anything important to cross between Bathurst and Orange.

176. What is your opinion of the Orange District as an agricultural district? It appears to be a very fine district, but I place more confidence on what I hear from others in that respect than on my own judgment.

177. Do you think a railway from Bathurst to Orange would be a paying speculation? I dare say it would.

178. Do you not think a great deal of labour and expense might be spared by using round timber, instead of having it sawn or squared, for viaducts and culverts? We have been using round timber for a very long time in all the timber bridges, but so far as my knowledge of timber bridges now goes I should never put up another if I could possibly avoid it.

179. *Mr. Hoskins.*] Why? On account of the white ant.

180. Do you not think the ravages of the white ant might be obviated by having the timber kyanized? You cannot kyanize timber here—the grain is too close.

181. *Mr. Stimpson.*] Have you ever noticed the white ant in the western district? I have not noticed it. But there is another objection to timber bridges in the western district. I believe there is no suitable timber there. In my travels I saw none likely to be made use of for railway purposes, either in the shape of sleepers or bridge timber, and the general impression at Bathurst appears to be that there is none fit for sleepers or bridges.

J. Whitton, Esq. 182. You are aware that there is a large population located round Orange towards Molong? I have been told so.

2 Nov., 1869. 183. Do you think the railway at present surveyed between Bathurst and Orange, if it diverged a little more to the south-west, so as to go through Blaney, would not be a greater benefit to the people in the district of Carcoar? It might be to Carcoar, but there are difficulties in going that way. It has been laid out as the best line to get through the district, and the cheapest line to construct. It has not been finally determined upon yet, but there are difficulties in getting through Blaney, I can see from the map.

184. Do you think a railway would certainly be much more suitable for that part of the country than a tramway? A tramway, I presume, would be a railway laid upon the existing roads of the country, and I think on the road from Bathurst to Orange it would be a difficult line to work. No doubt if there is sufficient traffic to justify the construction of a railway, a railway is the cheapest road you can make.

185. *Mr. Hoskins.*] Are you aware that Lord Lawrence, the late Governor General of India, left a minute at Calcutta, before he resigned his government, in which he recommended that the railways proposed to be constructed by the Government of India should be of a light description, as being better adapted to the circumstances of the people than a heavy line? I am not aware that he did so, but if he did it would amount only to an expression of his individual opinion. I may say that on one of the most pretentious lines in India about two thousand bridges and culverts will have to be reconstructed, at a cost of £1,800,000.

186. *Mr. Morrice.*] Do you think a railway constructed to join the Victorian line at Albury would be a paying line? I think it would if the rates were increased.

187. Do you not think more trains are devoted to the passenger traffic about Sydney than there ought to be? We are running too many trains I think.

188. The trains are not paying? The railways are not paying generally, and I think the suburban traffic is about the worst paying traffic we have; but I do not think the suburban traffic will ever be a paying traffic till we bring the station to Hyde Park—so long as the station is in its present position the omnibuses will always compete with the railway.

189. Do you not think that if a coal trade from the southern and western districts to Sydney were encouraged, it would cause a great many vessels to come to Sydney harbour? Yes, if you had a coal trade no doubt it would, but you would have to meet with competition from the north.

190. Do you not think that if coal mines were opened in the southern and western districts it would cause an increase of population in these parts? No doubt it would if you had thoroughly good coal; but from what I have seen of the coal from the southern district it is scarcely fit to use.

191. Do you think by the population being increased it would cause a great increase to the revenue of the railway? No doubt of it.

192. *Mr. Lackey.*] Have you formed any opinion with reference to railway extension generally beyond the present contemplated termini at Bathurst, Goulburn, and Murrurundi? The only extension I have formed a strong opinion upon is in reference to the south,—that the southern line ought to be extended to Albury at once to meet the Melbourne trains, so as to have a through line to Melbourne.

193. *Mr. Morrice.*] Are you aware that there is a great deal of fine agricultural land at the Tumut, Wagga Wagga, and the whole district towards Albury? I have heard it described as being the finest district in the Colony, but I have heard precisely the same thing of the district about Orange, and the same of that about Tamworth. It is very possible that when these lines are thoroughly examined it may be found that they can be constructed for something like £7,000 or £8,000 a mile—it depends entirely upon the works which may be found necessary upon them.

THURSDAY, 4 NOVEMBER, 1869.

Present:—

MR. ALEXANDER,
MR. HOSKINS,

MR. STIMPSON.

MR. LACKEY,
MR. MORRICE,

WILLIAM MACLEAY, Esq., IN THE CHAIR.

Archibald Ashdown, Esq., called in and examined:—

A. Ashdown, Esq. 194. *Chairman.*] You are Accountant of the Railway Department? Yes.

4 Nov., 1869. 195. We wish to ascertain the total receipts of the railways in the different districts? I have prepared a memorandum for the present year, commencing from the 1st of January, from which I will quote the figures. Taking the southern line first. The extension to Goulburn from Marulan was opened on the 1st of June, and therefore I must divide the amounts between the periods before and after the extension. The traffic to and from Marulan and Sydney, and all other places between those points, during the first five months of the present year, was:—Coaching (that is passenger traffic) £13,990 1s. 9d., goods £16,649 0s. 3d.; equal, on the coaching traffic, to £24 6s. 7d., and on the goods to £28 19s. 1d., per mile per month, or together to £53 5s. 8d. Then, after the opening to Goulburn, I have just taken the returns for the next month (June), and I find it keeps at about the same rate, notwithstanding the increased mileage. The coaching traffic for June was £2,805 2s. 0d., or £20 18s. 8d. per mile per month, and the goods traffic £3,709 14s. 2d., or £27 13s. 8d. per mile per month; or together, £48 12s. 4d.

196. A reduction in fact? Yes. I have the amounts also for July and August, and I see it has not altered these rates much. For the western line I have taken the amounts for the whole six months, because there has been no extension. The value of the traffic on the western line, to and from Mount Victoria and Sydney and all other places, for the six months ending June, was:—Coaching £15,801 13s. 1d., or £33 15s. 6d. per mile per month; the goods traffic, £21,089 18s. 10d., or £46 5s. per mile per month; together £80 0s. 6d. per mile per month. On the Windsor and Richmond line from the Blacktown Junction, including also the value on the trunk line to the Parramatta Junction, the value of the traffic to and from Richmond and Sydney during the same period of six months was:—Coaching traffic £2,714 17s. 3d., or £12 14s. 1d. per mile per month; goods traffic £2,441 14s. 2d., or £11 6s. 1d. per mile per month; together, £24 0s. 2d. per mile per month. The value of the suburban traffic between Sydney and Parramatta

matta Junction and Parramatta for the six months was as follows:—Coaching £5,201 1s. 9d., or £66 13s. 7d. per mile per month; goods £477 1s. 5d., or £6 2s. 6d.; together, £72 16s. 1d. per mile per month. This is exclusively the traffic between these places. On the northern line I have also taken only the first five months, because the extension from Singleton to Muswellbrook was opened at the end of May. For the five months the coaching traffic was £9,069 16s. 6d., or £34 17s. 8d. per mile per month; goods £16,071 19s., or £61 16s. 4d.; together, £96 14s. per mile per month. After the extension to Muswellbrook, an additional 31 miles, the value for three months (June, July, and August) was: Coaching, £7,222 5s. 8d., or £29 0s. 1d. per mile per month; goods £12,986 15s. 7d., or £52 3s. 1d. per mile per month; together, £81 3s. 2d.

A. Ashdown,
Esq.
4 Nov., 1869.

197. Have you any return of the working expenses of the different lines? I have not. The manner of keeping the accounts until recently was not such as to show the earnings and expenditure of each line. As the accounts were kept, they were utterly fallacious. For instance, the accounts published in the Statistical Register for 1867-8 profess to give the total earnings and total expenses, but they are utterly fallacious—not truthful.

198. Have you no way of ascertaining with tolerable correctness what the actual cost of running the trains is? I have introduced a system which came into operation during the first six months up to the end of June; and if my plan is carried out, it will show the actual cost of working on each division—keeping separate the earnings and expenditure on the different lines.

199. Have you got that? I cannot do that at present. As the accounts were kept, the earnings were credited in this manner:—Taking the Southern, Western, and Richmond lines, the way they applied the earnings was this: All sums received at all stations between Sydney and the southern terminus were credited to the south, including therein all amounts received for western traffic—all passengers booked going west. If the money was received within that area from Sydney, all went to the credit of the south. The western line had credit only for all amounts received at stations west of Parramatta Junction. The effect therefore was that all passengers that were booked beyond Parramatta Junction, and all amounts received for goods sent from Sydney which were paid for beyond Parramatta Junction, were credited to the west, but all goods coming to Sydney from the west, for which the amount was payable in Sydney, although they came from the west, would be credited to the south. In this way it was made to appear, in the accounts published in the Statistical Register for 1867-8, that the earnings from the south were £108,191 13s. 8d., while the total earnings for the west were put down as £46,936 17s. 8d. Then the appropriation of the expenditure was equally fallacious.

200. You could tell us the entire amount, I suppose? That I can give—I can get it for the last six months.

201. Can you tell us what is the cost per month per mile for working? You mean the number of train miles the engines have been running?—I have not been furnished with that yet.

202. Why? The Engineer-in-Chief has charge of that. I made application to be furnished with the mileage for six months ending 30th June, but I have not yet been supplied with it. If that be done, I shall be able to furnish a statement showing the actual expenditure upon the different divisions of the railways.

203. Is the Traffic Manager likely to have that information? No; that is quite with the Engineer-in-Chief, Mr. Whitton.

204. You can give us no idea of the cost? I can give you the actual amounts per month, but I have not got them with me. They can be furnished.

205. *Mr. Stimpson.*] Did I understand you to say that the goods booked or paid for at Redfern would go to the credit of the south, whereas they actually went to the west? That was as the accounts used to be prepared; but they have been prepared on another plan since the beginning of this year.

206. Consequently, more than three-parts of the goods going to the west would be credited to the south? All amounts that were payable here were credited to the south.

207. *Mr. Morrice.*] I suppose all the expenses as far as the junction were charged to the south? The expenses were charged in an extraordinary manner. If you refer to the Statistical Register you will see that the total working expenses charged against the south for 1868 were £87,780 6s. 11d., while the total expenses against the west were £14,805 16s. 10d.; the amount charged against the south being greatly more than it should have been, and that against the west greatly less. In fact, the whole expenses of wear and tear of engines and carriages—the whole rolling stock—was charged to the south, no portion being charged to the west.

208. The construction of the line as far as the junction was also charged to the south? Yes, I suppose it was.

Richard Moody, Esq., Traffic Manager, Southern and Western Railways, called in and examined:—

209. *Chairman.*] Can you give us a statement of the number of passengers and the number of tons of goods carried on the different railways? I am not in a position to do so at present. It was only late last evening that I received an intimation that I was required to attend the Committee, but I was not informed for what purpose. However, anticipating in part the questions that would be asked me, I set my clerks to extract certain information from the books, but I have not been able, for want of time, to obtain all that I wished. I have here some information which may be useful to the Committee—the total tonnage of goods carried, the number of bales of wool, and the values.

R. Moody,
Esq.
4 Nov., 1869.

210. Will you give us the weights? The total tonnage of goods carried through to the southern district proper, that is from Sydney to Goulburn, for the last twelve months, amounted to 9,294 tons. On the western line the through traffic amounted to 19,915 tons; but a large proportion of this would necessarily be permanent way materials for extensions very recently opened or now in progress.

211. *Mr. Hoskins.*] Would not that apply to the south also? No, the very small extent of permanent way material carried from Marulan to Goulburn is scarcely worth mentioning.

212. *Chairman.*] Is there any way of ascertaining exactly the amount of goods going up by the different lines for the supply of the districts beyond the termini? It would require a little time to supply that information.

213. How long? I could probably obtain it, in a form that would answer the purposes of the Committee, by to-morrow.

R. Moody, Esq. 214. *Mr. Hoskins.*] Could you favour us with the same information with reference to the northern line? The northern line is not under my control. The information could be obtained more directly from the auditor, who is now engaged on the particular duty of summarizing it.

4 Nov., 1869.

William Christopher Bennett, Esq., called in and examined:—

W. C. Bennett, Esq.

4 Nov., 1869.

215. *Chairman.*] You are Commissioner and Engineer for Roads? Yes.
216. You have all the main roads of the country under your charge? Yes, and all the minor roads that are in the hands of the Government—that are not in the hands of trustees. There are three main roads by law—from Sydney to Albury, Sydney to Wellington, and Morpeth to Armidale.
217. What is the annual grant for these roads? The annual grant for the portions of these roads outside the railway termini is £50 a mile; inside the railway termini nothing.
218. What are the chief minor roads under your supervision? From Armidale through Glen Innes to Tenterfield. There are three roads radiating from Grafton to the table-land, one to Armidale, one to Glen Innes, and one to Tenterfield. It would be rather a long statement to tell you all the roads.
219. I mean the principal ones? There is the road from Bowenfels to Mudgee —
220. Is that a first-class road? Yes.
221. How are these other roads rated? They are different grades. There is one of the roads from Grafton at £50 a mile.
222. Is that the road from Muswellbrook to Cassilis? The road from Muswellbrook to Denman was classified at £50 a mile, but it has been lately transferred to trustees.
223. I suppose you have a tolerable acquaintance with all these roads? Yes, I have been over most of them myself—there are very few of them I have not been over.
224. From your knowledge of the country beyond the present railway termini, do you think there are many difficulties in the way of railway extension—I mean as regards the character of the country? Nothing like the difficulties the railways have surmounted.
225. What are the ordinary gradients upon these roads? In order to answer the question thoroughly, I have brought the sections of the roads (*sections produced*). These are diagram sections of the roads, compiled from time to time as the officers in the field had leisure.
226. Take the line from Bathurst to Wellington if you please? From Bathurst as far as Evans' Plains Creek, if anything in the way of a modification of a railway were made, it would not follow the present main road, because a more level line might be found by going round to the right, following the river.
227. Would that go by Orange? Yes; that is only a minor deviation as far as Evans' Plains Creek. Then there is a gradient of 1 in 15.
228. Is that the heaviest on that part of the line? No, the heaviest is at the Rocks, 1 in 8 for a third of a mile.
229. Could that be obviated very easily? I do not think it could without heavy cuttings.
230. *Mr. Stimpson.*] The railway line is marked for miles? The railway line is altogether different from the road. Then come the following gradients; 1 in 26, 1 in 14 for half a mile, 1 in 15 for half a mile; then a very undulating country with varying gradients—1 in 8 and so on for short distances; 1 in 12; then it is tolerably easy to Orange, all metalled road. Beyond Orange there is a gradient of 1 in 17, going down to Mandillion Ponds, 1 in 18, 1 in 23, and several shorter gradients that are sharper, but which do not show on this section. Then from Molong towards Wellington it is tolerably easy, 1 in 11, 1 in 20 for 2 miles, then nothing to speak of to Wellington. These are characteristic gradients of a piece of country; in many places there are short bits which are very sharp.
231. It is a very easy country, is it not, from Muswellbrook, through the range to Cassilis? I have never been over the road further than Hall's Creek. There is one difficulty between there and Cassilis—Pike's Gap—but nothing considerable. It is a gap in the range through which the road passes.
232. In the country from the Liverpool Range, near Murrurundi, to Tamworth and Armidale, are there any great difficulties on the road? By the present road from Murrurundi to Goonoo Goonoo there would be the main range.
233. I say beginning from the west side of the main range? No; the country is rather rough, but nothing very heavy. But there is a better line, if anything like a railway were made, round by Currububula. The road did not go there because it is a detour and over black soil. Beyond Tamworth as far as the Moonbi, the country is easy, but the present road at the Moonbies has rather steep gradients.
234. What are the gradients? 1 in $5\frac{1}{2}$ at one place, but that can be avoided. Next year I think of bringing the main road away from that. It will cost about £3,500 to go up by New England Gully, where the main road ought to have gone in the first instance, and the worst gradient there will be 1 in 9 or 10. There will be two bad gradients north of that—I mean characteristically bad—one rising from Bendemeer, and one rising from Carlisle Gully. Then the rest of it is tolerably easy to Armidale.
235. Is much of the road made from Murrurundi in a northerly direction? I should think there is 60 miles of metal road between Doughboy Gap and Armidale. That is a very rough guess; I should like to give you the exact figures.
236. What is the entire distance? About 130 miles.
237. You have tolls on that road, I suppose? Not beyond Murrurundi; the country is too open—too many tracks; they would evade the tolls.
238. The tolls are let to people, I suppose? Yes.
239. Do these people keep any sort of account of the traffic? No. They naturally would not let us know if they did.
240. Is there much completed road—made macadamized road—on the western line? With the exception of about five or six miles near Bathurst, all the line from Bathurst to Orange is metalled.
241. The main road goes as far as Wellington? Yes.
242. Are many portions made between Wellington and Orange? There are several portions between Molong and Orange at short intervals, and there has been recently about a mile made at Wellington. If you will allow me, I will append to my evidence the exact lengths.
243. At what rate do you find yourself able to get on with the making of macadamized roads—how many miles in each year? I would not like to say absolutely, but will append a return to that effect also.

244. What is the utmost quantity your funds will enable you to do in a year? A great deal depends upon what sort of year it is. If it is a year that does not require much maintenance, we are able to get on with the metal road. W. C. Bennett, Esq.
245. What is the average cost of macadamized road, supposing good metal can be got at no great distance? The average cost might be put down at about £1,000 a mile, including culverts and small bridges. 4 Nov., 1869.
246. What width do you make the road? 18 feet.
247. What depth of metal do you put on? From 6 to 9 inches; about a cubic yard and a half to the yard forward.
248. At how much per cubic yard? It varies from five to eight shillings.
249. What do you calculate in average seasons is the cost of keeping these roads in repair? It varies very much in different localities.
250. I mean where the traffic is heavy—for instance, from Bathurst to Orange? I should not like to say without reference to figures.
251. Does it cost half the sum voted—£25 a mile? I should think it does.
252. So that in reality you have only £25 a mile left for the formation of new road? And the tolls.
253. Do the tolls yield any considerable sum? About £20,000 a year altogether, on the three main lines.
254. In reality the annual vote of £50 a mile amounts to about the interest on the cost of a mile of macadamized road, that is to say, £50 would be the interest on £1,000. You say macadamized roads can be made for £1,000 a mile? Yes.
255. So that in voting £50 a year for these roads per mile, we are paying as much without having the roads made, as if we borrowed £1,000 a mile, and paid the interest? I cannot admit you are paying it without having the roads made, because there have been considerable extensions of metal road as far as Orange, and as far as Yass; and there have been bridges made, and clearing, and other things done to facilitate the traffic on other portions not metalled.
256. If it were determined at once to form a road from Orange to Dubbo—to make the whole road—do you believe that it could be macadamized throughout for £1,000 a mile? Yes; but you would require some allowance for consolidating, which is done now by the traffic. The traffic would be unable to consolidate such an immense length of road at once, and we should have to employ steam road-rollers; but I question if that would be possible, because water is an essential requisite with steam road-rollers.
257. Then there would be great difficulty in getting a great length of macadamized road consolidated and brought into working order? Yes.
258. And still it would require £25 a year per mile for keeping it in repair? Yes.
259. Do you not think, under these circumstances, that a railroad not costing more than £1,000 a mile would be an improvement? Decidedly, if you can make a railroad that would not cost more than £1,000 a mile.
260. Have you ever given the subject of tramways, or light railways drawn by horses, any consideration? Yes.
261. Carriages drawn on rails? Yes.
262. Did you ever make any estimate of the probable cost of it? No; because I never could arrive at what sort of works to have. When I was in Europe in 1861, I made some inquiries on the subject. The question had been mooted before I went home, and before I came out here I went to the Secretary of the Institute of Engineers, and asked him if there was any work of the sort for general traffic in use anywhere on the Continent or in the United Kingdom, as I had made up my mind to make myself acquainted with it. He said he was not aware of any, but he said the honorary secretary was more acquainted with the Continent, and he would ask him. I consulted both, but neither knew of anything of the sort for general use.
263. Did they give any reasons for not —? They said that a locomotive line was economically preferable, and had been always found to be so.
264. Does not that depend upon the amount of traffic? They have all gradations of traffic in Europe and the United States, and they invariably find a locomotive line the cheapest.
265. Where the traffic was large? Whether large or small.
266. Would locomotive traction be cheaper than horse traction, where the tonnage to be drawn per day did not exceed some seven or eight tons? Yes, if you take the maintenance of the road into account, because the maintenance of a horse road with a railway line and sleepers across is the most expensive possible—more expensive than an ordinary railway or an ordinary road; you combine the disadvantages of both.
267. That is, that 3 feet of roadway on which the horses would walk would be more costly to keep up than 18 feet of macadamized road? Yes, under the circumstances. The vibration of the sleepers would never allow the metal to consolidate.
268. Where there is merely the weight of the horse? The weight of the horse and the weight of the carriage. Every time the load passes over the sleepers it must impinge on the sleepers to some extent, and cause the sleepers to vibrate.
269. Do you think that the ballasting on a railway line suffers in that way because of the jar of a heavy locomotive? The ballasting never does consolidate; it never gets a solid surface like a macadamized road; it is not wanted, too, for a horse to walk on.
270. Must not the wear and tear of a macadamized road be infinitely greater, for the amount of tonnage, than on an iron rail—As against the wear of one horse on a 3-foot road, have you not got the wear and tear of perhaps eight horses and four wheels on a macadamized road? If both were on a level, that would hold good; but when you have to draw up a gradient, the difference in haulage between a macadamized road and a rail decreases very much indeed. On an ordinary level, the difference is as one to eight in favour of the rail; but as you go up, the force of gravity becomes more sensible with the rail, and you arrive at a point where there is very little difference between the two. On a level it requires that a force of 10 pounds should be exerted to draw a ton; on a road, 80 pounds; that is to say, a weight of 80 pounds would-haul a ton.
271. Could you give us the calculation in horse-power? One horse will haul on a rail on a level as much as eight will haul on a macadamized road.
272. Surely much more than that in reality? No.
273. On a level on a rail a horse will move 15 tons? This is the usual allowance. Eight horses will haul as much on a road as one on a rail, on a level; at a grade of one in a hundred, three horses will haul

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as much on a road as one on a rail ; at a grade of one in twenty-five a horse and three-quarters will haul as much on a road as one on a rail ; at a gradient of one in twelve, a horse and a third will haul as much on a road as one on a rail ; and so on.

274. So that on a gradient of one in twelve, a horse will do nearly as much on a macadamized road as on a rail ? Very nearly as much.

275. *Mr. Hoskins.*] How do you arrive at that result ? It is the ordinary calculation. You take 10 lbs. per ton, the usual allowance for haulage, on a rail on a level, and 80 lbs., the usual allowance for haulage on a road. Then the ordinary way of calculating is to divide the ratio of inclination by the number of pounds in a ton, which will give the force of gravity ; add the force of gravity on the incline to the haulage on a level, and you will arrive at the amount. That is the calculation.

276. Would not the force of gravity be equal in both cases ? The force of gravity on an incline is equivalent to the number of pounds in a ton divided by the ratio of inclination.

277. *Chairman.*] It is confidently asserted by many that a horse, on a gradient of 1 in 15, can draw, on an iron rail, three tons, and that the same horse has drawn only one ton on a macadamized road ? This is the established rule as laid down by all writers on mechanics. It is a very old rule.

278. Then you are not disposed to favour the system of horse railways ? Decidedly not. Besides the objection I have stated, there is this further objection that you must have roads, in addition to whatever railway you have, for the ordinary purposes of traffic. Every person has a wheeled vehicle of one sort or other, and will want to go from place to place, to get access to towns, and so on, so that you would have to keep up a duplicate system.

279. It would be the same with a locomotive railway—you must have roads—the same objection may be urged in that case ? Yes ; but you have the advantage of speed, and greater power of haulage.

280. You are aware that the costly railways we are making do not pay ? Not directly.

281. You are aware, too, that the further we go into the interior the smaller must be the population to supply, and consequently the less the chance of the railway paying ? Yes, if you go right into the interior the railways will pay less *per se*, but their collateral advantages will be greater.

282. Have you ever considered the question of cheaper and less expensive lines of railway than we have at present ? I am not a railway engineer, and that is a matter that would come more under the consideration of the Chief Engineer for Railways. It is all matter of opinion as to what degree of stability is necessary, but I do not think any outlay on permanent way is wrong ; it will always be reproductive in stability and safety. The question of outlay on stations and so on is matter altogether for the public. The public are very exacting, and will require expensive accommodation, and it is impossible to put them off with less. I think no outlay would be injudicious to secure stability and safety, and the larger the outlay the more economical it will be ultimately.

283. Seeing the impossibility of carrying these costly railways to any great extent into the interior, could you not suggest any other way in which the wants of the distant districts might be met by improving the present mode of communication ? I think the country to some extent is committed to macadamized roads. All the lengths of road we have made, and which could be connected by a small outlay, would be useless for through traffic if any intermediate mode of transit were adopted.

284. Is not that practically the case now—the macadamized road was scarcely completed to Goulburn before the railway caught it up ? Yes, unfortunately that was the case.

285. And the same will be the case at Yass and in other parts of the country ? Yes. Then these macadamized roads were absolutely necessary to enable traffic to be kept up at all. All intercourse between Sydney and Goulburn would have been suspended if it had not been for that road.

286. You cannot suggest any better mode of facilitating the traffic of the interior than the present ? No, I cannot, and I have given it a good deal of consideration.

287. And you would not propose that the present system of roads should be carried on more rapidly—that larger lengths of macadamized road should be made at one time ? No, for the reason I have given—the difficulty of getting it consolidated.

288. The country for the most part beyond the present railway termini is of a much easier description for making roads than that already passed ? Yes, up to a certain distance ; but when you get into the flat Riverine country there is no material for making roads—no stone ; you must have a railway ultimately.

289. *Mr. Lackey.*] How would you propose to ballast, in case of the construction of a railway, without stone ? With burnt clay. All the lines near Sydney were ballasted with burnt clay before they used stone.

290. To Parramatta and Liverpool ? Yes.

291. It was not found to answer, was it ? Not very well ; stone answered better.

292. Have you had much experience of railway construction in the mother country ? No. I have had experience in laying out railways, but not in their construction. My experience at home and in France and South America was entirely in hydraulic works.

293. *Mr. Hoskins.*] Were not the roads from Bathurst West, Murrurundi North, and Goulburn South—and generally those that you call main roads—originally made by persons travelling, but since improved upon in various places, where there were bad pinches and bad places, by some deviations you have made. They were not originally surveyed as roads ? No ; the way they grew up was that as people settled and wanted to go from point to point the roads were made to facilitate intercourse.

294. I infer that if you were required to survey lines of road from the points I have mentioned, you could find a much better country to make the roads through, and with less severe gradients ? Totally irrespective of any towns you could.

295. To reach certain termini ? From Sydney to Albury, for instance, I have no doubt you could.

296. As a matter of policy, if there is danger of the trade of Sydney being tapped from Victoria by more improved means of communication than a macadamized road, would you not think it desirable to find some better means on our side also ? I have on another occasion given very forcible evidence on that point in reference to the south, and that is, that New South Wales ought to abandon every other work and make the southern railway. If you do not do it you cannot prevent the Victorians pushing on theirs—you cannot be the dog in the manger ; and whatever country makes the railway possesses all the advantage, and you have merely the expense of governing.

297. On a tramway could not some sort of road be devised between the rails which would not suffer unusual deterioration through a horse travelling over it ? I think not. The vibration of the sleepers will

will prevent the metal ever settling. In several cases on the western roads, where there were corduroy roads laid down, we thought it would be most economical to make the metal road on the corduroy—that it would make a good foundation. We tried it, but the vibration entirely prevented the metal settling.

298. I will take the liberty of pointing out that the sleepers on which it is proposed to place rails for a tramway would most probably be dressed sleepers and larger pieces of timber, and that the weight would be more equally distributed? I do not think you will find they will be larger. Some of the timbers on the western road were 2 feet thick.

299. You will observe that these pieces were laid on the road, and no means were taken to keep them in their places? If you are going to have longitudinal sleepers in addition to cross sleepers, you will have a first-class road, equal to the Great Western permanent way, which would come very expensive.

300. It would be less expensive than a first-class railway? I question whether the maintenance of it would not make it come dearer. We have the experience of the whole world to guide us. Everybody has been trying the same as we are. But I do think, as this question has taken so much hold, that it would be a very judicious thing of the Government to make ten or fifteen miles of the road it is proposed to have, just as an experiment. Of course it is only my opinion, which must be taken *quantum valeat*, but I do not think it would succeed.

301. Have you not observed that in England horse tramways are used very extensively for coal-pit lines, to bring coal to the port of shipment? They are used.

302. Do they not appear to answer very well? They are not used for general traffic, and the traffic generally is all one way, and comes down almost by gravitation, so that all the horses have to haul are the empty waggons back again.

303. Have you not seen long lengths of tramway—ten or twelve miles? No.

304. Would you favour us with your opinion as to whether some cheaper mode of railway for locomotive traction could not be devised, to suit the more sparsely settled districts? I think the extension of the present railway, with any modifications the Chief Engineer may suggest, the cheapest thing you can have. Before the Deniliquin Committee I said I thought about £6,000 a mile would make a good railway, and I do not think you can get any tramway or anything else cheaper than that. That is exclusive of stations and rolling stock.

305. We all know that our population is limited, that the area of New South Wales is very large and that consequently our borrowing power is limited, yet we are anxious for self-protection to extend improved means of communication to our borders—Do you not think we should have some system of locomotive traction somewhat cheaper than we have had hitherto? The natural facilities of the country will enable you to have it much cheaper. I think it very desirable indeed to have it. I would wish to add that when I say the present system of roads is the best that occurs to me, I do not say I think £50 a mile the best possible sum that could be given. The Treasurer would know best what the country could afford to give from revenue. I do not think any of these road works should be done from loan, but by whatever the country could afford to give from revenue. The present way, rough and ready as it is, is the most judicious that can be devised, because it utilizes the great length of natural good road in the Colony, by making all these small pieces connecting the good natural roads. If, instead of doing as we are doing at present, another means were devised, the tramway would have to be made throughout the whole length before it could be used; but by following the present mode, we utilize all the length of good natural road, by making a few lengths of metalling, bridges, and improving bad places.

306. *Mr. Alexander.*] How about the facilities which the country offers for raising and manufacturing iron for locomotive purposes—There are iron mines and works at Nattai—If the Government were to go into extensions of the railways, would it answer for them to take up these works? I am very chary of recommending the Government to do anything of the kind. I think they do too much in this country. No doubt it would be very advantageous to the country if the iron could be used.

307. Would it be worth while for the Government to exert themselves to take some action in the matter? Most decidedly. I think they might offer encouragement. I go so far as to advocate something like protection in matters of that sort.

308. You are aware the proprietors of these works have made some application to the Government? Yes.

FRIDAY, 5 NOVEMBER, 1869.

Present:—

MR. MORRICE,
MR. LACKEY,

MR. STIMPSON,
MR. HOSKINS,

WILLIAM MACLEAY, ESQ., IN THE CHAIR.

Richard Moody, Esq., called in and further examined:—

309. *Chairman.*] Have you procured the information asked for by the Committee? I have, as regards the goods traffic up and down, including the wool, from Mount Victoria, and from the southern districts. On the southern railway, the tonnage of goods on the down line—that is, from Sydney to Goulburn—for the twelve months past, including the goods forwarded to Marulan—Marulan having been opened for some nine months, and Goulburn only three—amounts to 9,294 tons for the whole year, from October to October. On the western line the whole through traffic to Mount Victoria amounted to 19,915 tons. The permanent way materials carried on the south, which should be deducted from the general traffic, amounted to 2,146 tons, and on the west to 4,365 tons, giving a total for the south of 7,148 tons of goods, as against 15,550 tons for the west, actual traffic. From Goulburn, including Marulan, the southern traffic to Sydney for the like period was 1,759 tons; from Mount Victoria, 3,560 tons. The bales of wool, which are not included in the tonnage I have just given, received in Sydney from the south, amounted to 14,348 in number, and from the west to 19,868 in number. These are in addition to the traffic in merchandise generally. The number of passengers I have been unable to get out for the whole year. I have taken the past three months, as they are a fair average three months for the year, and give a very fair estimate

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estimate of the actual travelling during the year. The single tickets from Sydney to Goulburn for the three months were 695½, the return tickets 68½. These return tickets are extended for a week.

310. That is only just commenced? Within the last two months; but I have taken the return tickets for the other month also. The tickets issued from Goulburn to Sydney—and it is a singular thing that the through traffic is the same both ways—were, single, 695 for the quarter; return, 22. The tickets from Sydney to Marulan I can give for a like period. A great number of passengers going to the Braidwood district travel to the south, *viâ* Marulan. The tickets we have issued show the traffic to Marulan —

311. This is since the railway was opened to Goulburn? Yes.

312. The number of people who have actually stopped at Marulan? Yes. From Sydney to Marulan, 129 single tickets, return 30; Marulan to Sydney, single 132, return 48½. On the western line, from Sydney to Mount Victoria, single tickets 1,513, return 117½; Mount Victoria to Sydney, 1,288½ single, return 213.

313. This is for the three months? For the three months only; and it is an average three months for travelling, as we find on comparison with our books. The travelling in the winter months is very small; but in December and January it is very large, so that August, September, and October, are a very fair average quarter; they always give us the annual receipts as near as possible.

314. You know nothing of the northern traffic? No, it does not come under my supervision at all.

315. Can you give us any idea of the working expenses of the railways? The working expenses have not yet been furnished to me. So far as I am aware, they are not yet in a reliable form.

316. We cannot get the slightest information on that point? Nor can I, I am sorry to say. So far as I have been able to approximate it, it would come to about 3s. 11d. per train mile run; but I have been furnished with no data upon which I could rely. During the current year the accounts are being kept in a way to enable us to obtain any information we require; but it is not yet tabulated.

317. Taking the entire expense of working the three lines, or any one of them, what is an approximation to the amount per mile? The mile run costs about 3s. 11d. That is the only way in which we can as yet obtain the information. The trains run so many miles during the year, and the cost is, so far as I have yet been informed, about 3s. 11d. per mile; but I have no reliable information on the subject.

318. That is to say, every train to Goulburn, for instance, will cost about £26? Yes, about that.

319. That allows for wear and tear and everything? Covers all expenses. Of course this is not yet furnished in a definite form to deal with—it is a mere approximation. We ought to be able to say exactly what the working expenses are from point to point, to enable us to work the railway efficiently.

320. The size of the trains must make a difference? Unquestionably. The accounts are now being kept on a plan which will enable us to ascertain the cost of the different trains from point to point; for instance, the suburban traffic, the traffic south as far as Campbelltown and Picton, and from the Junction to Penrith, and from Penrith to the Mountains, are all kept separately; but I believe at present no reliable information has been obtained; at all events I have seen none, although I ought to have it.

321. Taking one line with another, you believe about 4s. a mile is an approximation? Yes. I believe the expenses have been considerably reduced of late; and that may arise in great measure from new lines being opened which require less expense in keeping in repair.

322. *Mr. Morrice.*] Do you think that if the southern line were extended to Yass, Wagga Wagga, and Albury, to join the Victorian line, it would increase the traffic? No doubt a very large amount of traffic must necessarily pass backwards and forwards along the extension, but how far it may be diverted to Sydney is of course a mere matter of time to ascertain.

323. *Chairman.*] Passenger traffic I presume you mean? Passenger and goods traffic. No doubt we should have all the through traffic for passengers; I can hardly suppose people would travel by water when the railway was opened to Melbourne. The passenger traffic is very great.

324. *Mr. Morrice.*] Do you not think a great deal of grain and other produce would come down from Wagga Wagga? As far as our freights would enable the people to compete, and only to that extent. Our rates are considerably lower than Melbourne rates, and would enable us to carry grain nearly treble the distance for the same money.

325. Do you think, if facilities were given to open coal mines and any minerals from the south or west, that it would not increase both the passenger traffic and the other traffic? Unquestionably it would increase the passenger traffic as well as the carriage of goods. Then comes the question as to the freight of the coal, how far it would pay the freights. If a coal trade could be established on the western or southern line at a point where it could pay the railway freight into Sydney, unquestionably it would increase the railway revenue, on account of the large population that would be required to work the coal, which would necessitate the sending of large supplies as well as a good deal of passenger travelling.

326. *Chairman.*] I suppose you have no means of knowing what portion of the tonnage of goods that cross the Blue Mountains goes to Bathurst, and what portion to Mudgee? Since I have held the office of Traffic Manager, I have made every endeavour to ascertain that, but I have yet no reliable information. I hope to be able to give that information by and by, as I have taken means to procure it. The consigning notes brought to us seldom describe for whom the goods are intended. It is the same with wool—we do not know where the wool comes from; but in the southern districts I have some information showing that the greater portion of the wool comes *viâ* Wagga Wagga to us.

327. *Mr. Lackey.*] In your estimate of the expenses of the lines, have you taken into consideration the relative cost of working short lines and long ones? The information as supplied is simply a rough estimate given to me, and I believe it is a general estimate including all the lines, because unquestionably one length could be worked very much cheaper than another. The western traffic, for instance, from Penrith to Mount Victoria, is dreadfully expensive, and must be so; but larger quantities of goods will shortly be taken up the mountains at each trip than has hitherto been the case. At present the trucks come down in two journeys from the Tank at Wascoe's.

328. *Chairman.*] How will you manage to effect the change? Because the points on the Zig-zag will be lengthened, to enable us to put in double the number of trucks in coming down, so that we shall make but one trip, bringing down double the number of trucks.

329. *Mr. Lackey.*] Since you have been in the position of Traffic Manager, has it come under your notice that the working expenses of the western line are greater than any others? No, not specially under my notice; it has only been occasionally talked of in the office as a fact.

330. It is a fact? It is a fact, I believe.

331. Are they considerably greater? I should imagine they are; but I am not in a position to say how much. The expenses will, no doubt, be greatly reduced shortly.
332. The return of information you have includes the Windsor and Richmond line? The whole of the lines were amalgamated in that way to give a general impression. We have no reliable returns; the information was simply given verbally.
333. In the returns you have furnished to the Committee, under what heading do you put live stock? They would come under goods, but are not included in the return.
334. Is there not a tolerably large traffic in that respect? Very large, and increasing beyond our means of supplying trucks.
335. Are you able to state from what part of the country the greater quantity comes? At present there are more sheep from Mount Victoria, and the larger number of cattle from Sutton Forest.
336. Is that only temporarily, or does it date back any time? It is very recent; we have recently commenced what I call the cattle and sheep traffic.
337. Since the commencement of the cattle and sheep traffic, has it come under your notice which line has most of it to do? I could not speak from memory, but I am satisfied that the greater number of sheep have come from the west,* and the greater number of cattle from the south.
338. Altogether? Altogether.
339. Have you special rates for fat stock? We have.
340. Have you had applications for increased facilities for supplying the market with fat stock? I have had several applications, and have made applications to the head of my department to increase the facilities; in fact, increased facilities are absolutely necessary to carry on the present traffic.
341. At what stations have you yards for putting fat cattle on the train? At Goulburn there is a very large one; we have one also at Sutton Forest, but these are the only yards for cattle worth mentioning.
342. It is necessary to have these yards specially built? Absolutely necessary.
343. There are no yards of that description on the western line? Not yet.
344. Are you aware whether there are any on the northern line? I am not aware; I am aware there has been some conversation about it, but whether it has been carried out or not I cannot say.
345. Is there any accommodation in the metropolitan districts for transmitting fat stock from the sale yards here into the interior? No facility which can be regarded as real facility for carrying out the traffic. We have a large traffic to Homebush, and really no facilities for carrying it on. It is a haphazard sort of thing.
346. Has there been any alteration in the passenger rates since you became traffic manager? The passenger rates have been decreased slightly since I took office. The suburban rates were left as they were, and the same rate carried throughout the whole length of the line.
347. Has the traffic increased since the reduction in the fares, or decreased? I have not yet had the opportunity of comparing the returns, but so far as I am aware from the total amount, the increase in the receipts is something between three and four thousand pounds a month.
348. There have been several alterations in the passenger rates within the last few years? They have been frequently altered within the last few years.
349. Are not the passenger rates rather lower now than they have ever been? I think not; I think they were lower in Mr. Eagar's time than they are now.
350. The passenger rates generally? I think so, speaking from memory.
351. Are they as high now as they were during Mr. Holroyd's tenure of office? That I could not say without comparison.
352. Are the goods rates as low now as they have always been? The goods rates have been much lower than they are now. The special class rates are not so high by 1 mile in 5,† but the general rates are higher than they have been for a long time.
353. Much higher? The great increase is upon the third class rates, in which is the great bulk of the traffic. The special class rates one can hardly say pay working expenses. The greater the quantity we carry in the special class, the greater the loss to the country.
354. Does the increase in the passenger traffic correspond with the increase in goods? That I have not been furnished with, but I apprehend the greater increase would be in the goods.
355. There is an increase in the passenger traffic? That I cannot say; I have not been furnished with the returns.
356. How often are the returns of the Railway Department furnished? They are made up month by month, but they seldom come to hand until the middle of the next month. With the present staff, it is utterly impossible to work them up sooner.
357. In what way are the railway finances managed now—I mean with regard to their custody and care? The cash received by the station-masters, who are all responsible by bond, mostly in the Guarantee Society, is all made up daily, forwarded by the first train in the morning, and received by the cashier at Sydney in locked boxes, the bag at each station being put in in the presence of the guard, who gives a receipt for it. The money is counted by the cashier at the Sydney station and conveyed by him to the bank, the bank receipt being carried back by him to the accountant, who furnishes a copy to the Treasury every morning.
358. Then the guard for the time being is the sole custodian of the money from the different stations? It is in a locked box, which he can have no control over. The bags are put in through a trap-door with a spring, so that a bag once in cannot be got out again.
359. It is a portable box? Yes, rather a heavy one, but not too heavy for two men to carry with facility.
360. The guard gives no security? No.
361. By whom is this cash conveyed from the station to the bank? By the cash clerk.
362. What means of conveyance has he? He is supplied with a cab; and I believe he gives security for £500.
363. What are the methods of checking the railway receipts at the various stations? The system at present I believe is quite perfect; it is the same system that is in use on all the great railways in England. It is probably not carried out to its fullest extent for want of an efficient and sufficient staff; but I believe

* NOTE (on revision):—I have since got out returns, and I find the largest number of sheep come south.

† NOTE (on revision):—If I said this I was wrong. I should have said, and meant to say, that "special rates are higher by 1 mile in 5," as previously 1 mile was allowed in every 5.

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- believe the audit is very efficient, so much so that we discover the discrepancy of a penny at any time.
364. In goods or passengers? In goods or passengers. Then in the event of any discrepancy being found at the stations, no matter to what extent, the auditor immediately communicates with me.
365. Are the stations on the various lines, to your mind, suitable for the purposes they are erected for—the station-houses and buildings? Some of them certainly are good stations, but there are some that can scarcely be called stations. The station-masters' houses are perhaps hardly the sort of thing they ought to be—at Blacktown, for instance—the rooms being badly lighted, not ventilated, and the roof almost touching your head as you go in.
366. How many rooms are there at Blacktown? I believe three or four.
367. Is there a post office there? Yes.
368. As well as the railway station? Yes. The station-master's office is about six feet by five.
369. Is the station-master a married man? He is, with a large family; and unfortunately, has lost several of his children there, I believe through the ill-adapted house he is living in.
370. *Mr. Hoskins.*] Do the station-masters at the different stations send up train-sheets to the head office, these train sheets specifying the number of passengers that have left their stations, where the passengers have been booked to, the number of horses, cattle, and sheep, and the quantity of goods? Yes, that is sent every day. A train report leaves every station every day, but a weekly sheet is forwarded to the auditor.
371. You said the system is the same as on the principal lines in England. The system in England is that every day a train-sheet is sent by the station-master of each station to the accountant's office? Yes, that is so on some of the lines.
372. Always; and the different classes of passengers, as well as other merchandise and stock, are specified? Yes, we have all the goods traffic every day sent to the audit office. The auditor has sufficient information to enable him to check all the traffic. The passenger traffic is checked by the daily issue of tickets.
373. How can you check the daily issue of tickets if you have not a train-sheet to show how many tickets were issued? The train report shows the number of passengers.
374. I will explain the English system. A large train-sheet, showing every station on the line, is printed in tabulated form, with columns for the different classes of passengers, merchandise, and stock. The tickets are numbered consecutively from one to ten thousand; therefore, in making out the train-sheet for to-day, the station-master has to put down the last number issued on the previous day and the last number issued to-night; and then has to account for that number——? We have no form of that kind at present in use. I know it has been in use in England, but a great many of the railways have discontinued it. The auditor who checks the accounts could, I think, furnish the Committee with information which would show that we have a sufficient check.
375. How long would the auditor be before he discovered a discrepancy in the accounts between the cash received and the amount remitted? I cannot say from practice, but I should say he would be able to discover any discrepancy of importance in a week.
376. Did you not say you would shortly be able to work a larger traffic on the mountain line? Yes, in consequence of the Zig-zag being lengthened we shall be able to put on more trucks coming down.
377. But you cannot take up more? We cannot take up more than the engines will draw.
378. You cannot increase the number of trucks ascending the mountain lines? Yes. I believe five trucks were formerly considered the limit; now we take eight or nine; I think I have seen more.
379. *Chairman.*] What weight of goods do you put on a truck? The average is about five tons.
380. *Mr. Hoskins.*] Has this proposal to increase the number of trucks behind an engine coming down Mount Victoria, received the sanction of the Engineer-in-Chief for Railways? I believe it will not meet with any objection from him. He will have, in fact, to make the length on the Zig-zag for the purpose. It has been as yet only matter of conversation, but I have no doubt it will be carried out.
381. You have not commenced this? No, but we have it in contemplation. It will reduce the working expenses very much, because now the engine has to make two journeys instead of one. Suppose there were 36 trucks at Wascoe's, the engine would bring down 18, and then have to go back for the others; but as soon as the Zig-zag is a little lengthened we can bring down a larger number.
382. Do you propose to bring down 36 loaded trucks at once? No, I am not speaking of loaded trucks. We bring 8 or 9 loaded trucks.
383. *Chairman.*] A large number of trucks must come down empty both from Goulburn and One-tree Hill? A very large number from One-tree Hill. On the Goulburn line a great number of trucks are filled with hay and other things at Campbelltown and other places, and a great number are filled with lime and limestone from Marulan.
384. During a great part of the year a number of trucks must return from Goulburn empty? Necessarily.
385. Is there much difference between the cost of bringing down an empty train and bringing down a full one? The cost is considerably enhanced by loading a truck, in wear and tear of the axles and rails. Bringing down trucks empty costs less than bringing them full. The wear and tear of axles and friction on rails is very great. The weight of the truck is about half the weight of the load carried.
386. Would it make a difference of half the cost of running the train? I could not put it in that way. I am talking about the actual friction on the rails and axles being about half what it would be if the trucks were loaded; but it would scarcely make a difference of half the working expenses, because we must have an engine.
387. The actual outlay would be very little additional—it would be simply the wear and tear? That is all.
388. In that case cannot you afford to bring down any wheat or anything grown in the country at a very cheap rate indeed? That we are doing. It was to meet that that grain is now carried to Sydney at a penny a ton per mile—grain of all kinds is carried on the up journey at a penny a ton per mile, with of course the terminal rate of 2s. 6d.
389. Is that the case with all things coming from the interior—minerals for instance? We have a special class rate under which certain articles are brought to Sydney for the purpose of working up these empty trucks—limestone, general agricultural produce, and other things. Sometimes we are compelled to send empty trucks to Campbelltown, for instance, to bring hay at this special rate. So far as I can see, I should hazard an opinion that this special class rate does not pay working expenses.

390. *Mr. Morrice.*] Is there any difference where there is only one ton or four tons? A number of articles we only carry in four ton lots; we must have a truck load.
391. *Mr. Hoskins.*] What is the maximum number of loaded trucks you have hitherto considered it safe to follow behind an engine down the inclines at Lapstone Hill? I do not think there would be any difficulty in bringing down thirty-six.
392. What has been the maximum hitherto? About eighteen.
393. There will be no attempt to increase the number without the knowledge and consent of the Engineer-in-Chief? Certainly not.
394. *Mr. Lackey.*] What train is the mail brought down in? By the 7.45 in the morning.
395. From both west and south? Yes.
396. Is it received at the various station-houses on the line by the guard? By the guard, who gives a receipt for the bags.
397. Are the bags in charge of the guard? Entirely.
398. Is he the same official who has charge of the money collected on the line? No, the money comes down by the half-past 9 train. It comes part of the way by the mail train, and the other part by the half-past 9 train.
399. Where is it taken from one train to another? I believe the accountant has made some arrangement by which the western money comes down to Penrith, and is there locked up in a safe until it comes down by the half-past 9 train.
400. At what time would it get to Penrith? 5 o'clock. This is an arrangement with which I have nothing to do. I am aware there has been some arrangement of the kind—that the cash clerk is waiting to receive the bags at half-past 9.
401. Is there no stated average, in the department, of the relative cost of a loaded and of an empty train per mile? No. The information obtained in a statistical form hitherto has been very unreliable; but I believe now a system is adopted which will give us every information as soon as a sufficient and efficient staff is provided.
402. Then the staff is not sufficient? I am sure it is not sufficient in scarcely any branch of the service where real skill is required.
403. Is there not a large trade springing up, from some portions of the southern district, in limestone? I believe there will be a very large trade even from Marulan.
404. What is the rate for limestone? A penny a mile; that for lime is about double. It requires, I have been informed, 2 tons of limestone to make 1 ton of lime, and the rate has been so arranged as to cover the same expense.
405. Have you to send special trucks for it? Not yet.
406. It is brought to Sydney in the ordinary way? Yes, in the empty trucks at present.
407. Do you think it would be a great tax upon the railway traffic to bring coal from the same district, or from Bowenfels on the west? There is this difference between the coal and lime traffic,—that if the coal mining succeeded, where we have to carry 10 tons of lime we should have to carry 1,000 tons of coal, and to send trucks empty for carrying it, which would enhance the expense considerably, so much so that the two are not to be compared. To send empty trucks for coal at the same price, to any distance, could not pay.
408. *Mr. Hoskins.*] Have you ever given any consideration to this point,—the number of passenger trains that are run—Do you think the number could not be reduced? No doubt we run one too many both west and south. The mail train we run in the morning is run specially for the mails; we seldom carry half a dozen passengers either way. It comes in to Sydney at 7.45.
409. Is it your opinion that one passenger train per day either way would be quite sufficient? It would be ample for the passenger traffic.
410. Would you suggest that as a recommendation? Unquestionably. I have already done so. For the mails we get only 7s. 6d. per mile per quarter—just the price of one special train per quarter; and the passenger traffic by the mail train is very small indeed. I myself have travelled by it, when on business, when I have had something like two fellow-passengers for the journey. As regards the passenger traffic one train a day would be ample, and if that train were run at a more convenient hour the line would be more used than it is. I believe it is very objectionable to run trains in the night; a great many persons are deterred from the journey in consequence of the night travelling.
411. Do you think a reduction could be made in the number of suburban trains without inconveniencing the public? I am quite sure it could, if any Minister can be found with sufficient courage to do it.
412. Is it not the fact that many of these trains are run at a considerable loss? At a serious loss. There are very few persons travelling by some of them. For instance, in the middle of the day one train is called the “lunch” train—half a dozen people travel by it to get lunch; another is called the “ladies’ market” train, by which there are half a dozen passengers or so. Several trains are positively run for nothing.
413. Does not a train leave Sydney for Parramatta at 11 o'clock at night—Does that pay? No, nor never will. We use it for the goods, and so make it pay. We put on a passenger carriage.
414. Still you might run the goods trucks in another train? It is convenient to run at that hour with goods to Penrith.
415. Are there any other trains that might be discontinued with profit, and without inconvenience? I believe the time-table might be so revised as to save £10,000 a year.
416. Would you recommend that this revision should be made? I certainly should recommend it, so as to give the general public sufficient trains to the suburbs, as well as the reduction of one train off the long journey.
417. *Chairman.*] Do you not send a goods train to Goulburn every day? Every night at 9 o'clock. There is a general impression that it is dangerous to run passengers with goods trains, and I really think it is objectionable. My instructions are never to run passenger carriages with goods trains when it can be avoided.
418. Could not the mails be carried by the goods train? They could; but I believe great objection has been made by the Post Office authorities that the detention would materially interfere with the working of their arrangements throughout the country.
419. Of course if there were only one passenger train to Goulburn in the twenty-four hours, the most convenient would be the day train? Yes.
420. And that would not at all suit the postal arrangements? It will not. The only way in which the postal

R. Moody,
Esq.
5 Nov., 1869.

postal arrangements could then be carried out would be for the Post Office authorities to take a special train to themselves, letting their own guards take charge of the mails, so as to save a good deal of expense in that department; and, as is done in England, the mails might be sorted on the journey.

421. *Mr. Morrice.*] Could not the mails and passengers go with goods trains? I would not advise that a passenger train should be attached to a goods train.

422. It is done now? We are compelled to bring goods up with the mail train, and we have to run that goods train at a particular time to suit the Post Office; otherwise we could work it with greater economy, and under circumstances that would be more convenient.

423. *Mr. Stimpson.*] Do you think one train would be sufficient to bring the wool from the western districts in January, February, and March? I have no doubt that one train properly worked would be sufficient to bring the wool down. The wool comes in, as a rule, pretty regularly on the average; sometimes there is a little flush, but only for two or three days.

424. I have noticed a large quantity lying about for want of accommodation? Yes, that has been so. The arrangements were not then so well matured as at the present time; although I fear there will be a good deal of annoyance this year for want of sufficient engines. We have only a limited number, and if there is any accident we shall have to use another class of engine which would not be sufficiently powerful. We are very short of engine-power at present.

425. There appears to be an immense number of them about? Only half the number they have at Melbourne.

426. Does the engine require to be more powerful for the western line than for the southern line? It requires to be very heavy for the heavy gradients. We have a very large engine on the southern line for the heavy gradients.

427. *Mr. Lackey.*] Is it your duty, as Traffic Manager, to make any suggestions or recommendation in working the line, with regard to economy? I believe that that should be part of my duty, and I shall make it part of my duty, although I am aware it has not been looked upon as a popular portion of the Traffic Manager's duty hitherto.

428. I suppose the whole line is under your surveillance? I hope it will be. Hitherto, I believe, the Traffic Manager has been very much hampered, so far; but my instructions lead me to believe I shall not be so hampered.

429. For instance, suppose you were travelling on the line, and found half a dozen porters on a station where your experience showed you two would be quite sufficient, is it within your province to have the extra men removed? At present I believe that question is under consideration. I believe the Traffic Manager, to perform his duty faithfully to the public, should be in a position to do what you now put to me—that where two men are employed to do one man's work, he should have power to dismiss one of them.

430. Who does that at present? I believe up to the present time that has been more in the hands of the Minister than anybody else—the Commissioner in fact.

431. How does the Minister obtain his knowledge of the working of the line or the number of men required at any particular station? I could not answer that question.

432. *Chairman.*] Has the station-master anything to do with it? The station-master has simply to work the station with the least number of men the Traffic Manager should consider he is fairly entitled to. He knows the tonnage and the general duties, and that a man can do so much work in a day. But unfortunately, hitherto a class of men have been employed on the railways who are utterly unsuited for the working of the lines. I could point out instances where two or three men are employed to do one efficient man's work. I have already taken steps in that direction, and some changes are now going on by which I believe we shall get more efficient hands and less men. There is one thing certainly which is very important in the management of the railways: if the men for one moment supposed the Traffic Manager's power does not extend to dismissal he would be a mere puppet in his position. It is a matter which requires prompt action. If a man commits himself he should be at once dealt with on the spot. It is a very serious matter to let the affair stand over, because in the meantime other accidents may happen.

433. *Mr. Stimpson.*] I should think the Minister would have very little knowledge of the proper qualifications required? Very little indeed. Unless the Traffic Manager be vested with full power, of course with power of appeal to the supreme authority, the men will not be brought into a state of discipline. He should have the power to dismiss, but the men should have a right of appeal to the Minister against his decision.

434. *Mr. Morrice.*] I suppose you mean suspend? The worst thing that can happen to any man, as regards the efficiency of the service, is to suspend him. In the meantime every kind of interest is sought for, influence of all kinds is brought to bear, and no matter what the man's delinquency may have been, the thing generally blows over in a few weeks, and the man is restored to his position. It is a most unfortunate thing for the public, and most unfair to any gentleman placed in a position of trust.

THURSDAY, 11 NOVEMBER, 1869.

Present:—

MR. HOSKINS,
MR. LEE,

MR. MORRICE,
MR. SUTHERLAND.

WILLIAM MACLEAY, ESQ., IN THE CHAIR.

John Lievesley Beeston, Esq., Traffic Manager, Northern Railway, called in and examined:—

J. L. Beeston,
Esq.
11 Nov., 1869.

435. *Chairman.*] Can you give us the total traffic carried up and down upon the northern line for any specific period? Since we opened to Muswellbrook, the total traffic for four months, commencing 1st June and ending 30th September, has been as follows:—43,621 passengers, and 17,442 tons of goods, exclusive of wool and hay. The number of tons of coal carried during the same period was 204,704, and the number of bales of wool 1,790, but the wool season had not then commenced. The number of bales of hay was 3,107; the receipts for parcels were £706; for horses, carriages, and dogs, £525; miscellaneous £146.

436. Can you tell us the quantity of goods arriving at Muswellbrook, and departing from it in the direction of Newcastle, during the same period—that is, to and from Muswellbrook and Morpeth or Newcastle? The inwards tonnage to Muswellbrook for the past three months is 4,642 tons—an average of about 1,500 tons per month; that is, arriving at Muswellbrook. 257 tons have left Muswellbrook. The number of bales of wool for the past three months was 3,200 bales for August, September and October. J. L. Beeston,
Esq.
11 Nov., 1869.
437. How long have you been Traffic Manager? Since June 1859.
438. Can you give us any estimate of the number of bales of wool in the year? The number of bales carried in 1868 was about 18,500.
439. What has been the passenger traffic to and from Muswellbrook since the opening of the line to that place? _____
440. *Mr. Hoskins.*] Before the line was opened to Muswellbrook what was the passenger traffic to Singleton for a similar period? _____
441. *Chairman.*] Can you give us any idea of the direction which the goods carried to Muswellbrook take after they leave the railway station—There are two roads, are there not, from Muswellbrook; one towards Murrurundi and one towards Cassilis, northward and westward? Yes.
442. What proportion of goods goes in each direction? I should think about three-fifths Murrurundi way.
443. The chief population on that line is in the direction of Tamworth and Armidale—these are the largest places? Yes.
444. Do you think the Armidale traffic goes chiefly by Muswellbrook and Murrurundi? Yes.
445. Not by the coast? No. We have a deal of traffic to Armidale, I know.
446. *Mr. Sutherland.*] Can you give us any idea of the increase of your traffic for the last six months, or any other period? The increase of the traffic, taking the four months I have before quoted, since the opening to Muswellbrook, is about 34 per cent.—that is the increase on the receipts. I may mention that the figures I have given you are not audited, and there may be some slight discrepancy.
447. *Mr. Lee.*] Do you anticipate that on the completion of the line to Murrurundi the quantity of goods carried by the railway will be decreased or increased, by the carrying out of the Clarence and New England road—Will that have a prejudicial or other effect when the present line of railway reaches Murrurundi? I should say it would have a prejudicial effect.
448. What is your general experience, as Traffic Manager, of the working of the northern railway—take the present fares and rates? The present fares and rates are giving a steady increase of trade.
449. Do they give general satisfaction or dissatisfaction? Since the present rates have been established I have not heard a single complaint, therefore I assume the people are satisfied.
450. Is your traffic generally increasing? Yes.
451. You say 4,642 tons of goods arrived at Muswellbrook in three months—Can you give us the quantity for the corresponding period last year to Singleton? _____
452. *Mr. Hoskins.*] Can you tell us whether the through traffic from Newcastle or Maitland, by the Great Northern Railway to Muswellbrook—the goods intended for New England—has increased since the railway was extended to Muswellbrook? It has increased, I have every reason to believe.
453. Taking into consideration that the returns you have given us, of the goods received at Muswellbrook, are returns for the dullest season of the year—Can you say whether the quantity of goods dispatched from Muswellbrook for New England has increased in comparison over the same period last year, when the goods were dispatched from Singleton? I believe there is a general increase in the goods traffic since we opened to Muswellbrook, but I cannot say whether it is to New England, or to what part, because I am not stationed at Muswellbrook.
454. This Committee is appointed to consider whether it is desirable to extend railways beyond the termini at present sanctioned, and we would like to know whether the through traffic has increased since the railway has been extended? I am satisfied it has increased.
455. Can you say of your own knowledge whether there is much loading taken down by the road past Muswellbrook? I should say 15 per cent. of the through traffic still goes by the road, but we catch part of that again at Singleton. Some of the carriers live about Singleton, others about Maitland, and we catch the traffic brought down by some of them at Singleton.
456. *Mr. Lee.*] Does your statement apply generally, or only to the wool traffic? Generally.

RAILWAY EXTENSION.

APPENDIX.

A.

(To Evidence given by *W. C. Bennett, Esq., Commissioner for Roads, 4 November, 1869.*)

The Commissioner and Engineer for Roads to The Chairman of Select Committee on Railways.

Department of Public Works,
Roads Branch,
Sydney, 5 November, 1869.

Sir,

In reference to your question on yesterday, as to whether I considered the present system of internal communication in the Colony susceptible of improvement, I should wish to qualify my answer by stating that it was intended to convey the opinion that no general change in the system by the introduction of any mode of transit intermediate between railways and roads was desirable, and not that the road system in present use did not admit of improvement in details.

The chief improvements I would suggest are those pointed out in my general Report of 31st March, 1865 :—

1st. The restriction of the weight to be carried on specified widths of tires, as in England, and—

2nd. The transfer of the charge of the roads and bridges to local bodies, as in Victoria, as soon as possible, under the conditions set forth in Report referred to.

The additional experience since gained in the management of the department has still further strengthened my views on both these points.

With reference to my reply as to the advisability of *at once* metalling long lengths of road, as from Orange to Dubbo, throughout,—while I do not think such a course advisable, for the reasons stated by me, I do not at the same time wish to convey that a larger sum than at present allocated could not be spent with advantage. The amount to be expended on the roads has always been determined by the state of the Treasury, and the duty of the department has hitherto been to expend that amount in the most advantageous manner possible. If a larger sum were available, of course a greater length of road could be metalled. The greatest amount to be profitably expended each year would entirely depend on the character of the season. Weather like the present is the best time for making roads—extremes of wet or dry weather are equally bad.

May I respectfully ask the favour of your attaching this amendment to my evidence in any way you think proper.

I have, &c.,

WILLIAM C. BENNETT,
Commissioner and Engineer for Roads.

1869.

LEGISLATIVE ASSEMBLY.

NEW SOUTH WALES.

RAILWAYS.

(CORRESPONDENCE RESPECTING RAILWAY PLANT AND STATISTICS.)

Ordered by the Legislative Assembly to be Printed, 6 October, 1869.

RETURN to an *Order* of the Honorable the Legislative Assembly of New South Wales, dated 12 March, 1869, That there be laid upon the Table of this House,—

- “ (1.) Copies of all Letters, Reports, and any other Papers, referring to the
 “ imperfect construction and inferior workmanship of eighteen Railway
 “ Carriages, lately imported for the Great Western Line; together with
 “ Invoices for the same.
- “ (2.) Copies of all Reports on the condition and proposed relaying of the
 “ permanent line of Railway between Sydney and the Parramatta Junction.
- “ (3.) Number and condition of Engines employed in working the Great
 “ Southern, Western, Windsor and Richmond lines of Railway, number of
 “ Engines in steam daily, average number of miles run daily by each
 “ Engine, number of Carriages of each description, and all other rolling
 “ stock, classified, with their state and condition clearly set out, and the
 “ number of years each description has been in use.
- “ (4.) Number of Break-vans, Trucks, Carriages, and any other rolling
 “ stock constructed, or ordered to be constructed in the Colony, for the
 “ Railway Department, during the tenure of office of the late Government.
- “ (5.) Copies of all Specifications and Schedules prepared by the Engineer
 “ for Existing Lines, by order of the late Government, for additional rolling
 “ stock; with Advertisements for Tenders.
- “ (6.) Number of Tenders received for such rolling stock by present
 “ Government, and names of parties who tendered.”

(*Mr. Byrnes.*)

SCHEDULE.

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V.

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VI.

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RAILWAYS.

No. 1.

THE STOREKEEPER to THE COMMISSIONER.

Government Railways, Store Branch,
26 February, 1868.

I have the honor to report for the information of the Commissioner, that several portions of the 2nd class carriages now being discharged from the "Canaan" and "Landsborough" are more or less damaged by sea-water and breakage to such an extent that I consider it would be advisable to hold a survey with a view to ascertain the amount of damage sustained.

I enclose bills of lading—Messrs. Willis, Merry, & Co., Lloyd's Agents.

EDWARD FIELDING.

Mr. Moody to see Messrs. Willis, Merry, & Co. J.B.—28/2/68.

Arranged for survey. R.M.—28/3/68.

[Enclosures.]

COPY OF BILL OF LADING.

SHIPPED in good order and well-conditioned, by William C. Mayne, Esq., the Agent of the Colony of New South Wales, in and upon the good ship or vessel called the "Landsborough," whereof Maxwell is master for this present voyage, and now lying in the port of London, and bound for Sydney, New South Wales, 81 pieces and packages, six second-class carriages complete, as per indorsement, being marked and numbered as per indorsement, and to be delivered in the like good order and well-conditioned at the aforesaid port of Sydney, at the Government Wharf (the act of God, the Queen's enemies, fire, all and every other dangers and accidents of the seas, rivers, and navigation, of whatever nature or kind soever, excepted) unto the Commissioner for Railways, or to his assigns, freight for the said goods to be paid in London, as per margin, with 5 per cent. primage, and average accustomed. In witness whereof the master of the said ship or vessel hath affirmed to three bills of lading all of this tenor and date, one of which bills being accomplished the others to stand void.

WM. MAXWELL.

Dated in London, this 16th day of October, 1867.

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		14	13		14				

}	12 half under-frames
}	12 radial arms (6 pairs)
}	24 pairs wheels and axles
}	6 packages foot-boards.
}	6 cases body.
}	6 cases ends
}	6 " iron-work
}	3 " lamps
}	2 " lamp protectors
}	3 axle-blocks
}	1 head stock cap in charge of captain, to be put on the under-frame by him before leaving the ship.
}	81 pieces and packages.

x marked 4 J.

COPY OF BILL OF LADING.

SHIPPED in good order and well-conditioned, by William C. Mayne, Esq., Agent of the Colony of New South Wales, in and upon the good ship or vessel called the "Canaan," whereof Wilson is master for this present voyage, and now lying in the port of London, and bound for Sydney, New South Wales, sixty-five pieces and packages, four second-class railway carriages complete, as per indorsement, being marked and numbered as per indorsement, and to be delivered in the like good order and well-conditioned at the aforesaid port of Sydney, at the Government Wharf (the act of God, the Queen's enemies, fire, all and every other dangers and accidents of the seas, rivers, and navigation, of whatever nature or kind soever, excepted) unto the Commissioner for Railways, or to his assigns, freight for the said goods to be paid in London, ship lost or not lost, as per margin, with 5 per cent. primage, and average accustomed. In witness whereof, the master of the said ship or vessel hath affirmed to three bills of lading all of this tenor and date, one of which bills being accomplished the others to stand void.


W. WILSON.

Dated in London, the 10th day of October, 1867.

	t.	cwt.	qrs.	lbs.		£	s.	d.
Weighing	12	2	0	0	@ £45 per ton	27	4	6
Measuring	6,786	feet			@ £35 "	296	17	9
					Primage, 5 per cent.	16	4	1

£340 6 4

N.S.W.G. R. 28.	1/2	8	11	27	28	36/37	8 half under-frames
	3	12	29	38			8 pairs radial arms (in 4 packages)
		4	34				2 cases lamps
	5	10	23	33			4 " body
	6	9	24	35			4 " ends
			7				1 " lamp protectors
	13	14	26	43			4 packages step-boards
	15/22	25		30/32			} 16 pairs wheels and axles
		39/42					
	C 12	D 13		E 11			} 4 cases iron-work
			F 11				
	C 13		D 14			2 axle-boxes	
						12 kegs paint	
						65	

R.C.C.L. 

No. 2.

THE STOREKEEPER to THE COMMISSIONER.

Government Railways, Store Branch,
3 March, 1868.

I have the honor to enclose memo. showing result of survey held this morning on carriages received *ex* "Canaan" and "Landsborough."

EDWARD FIELDING.

Surveyor's reports enclosed herewith; fees £6 6s.

Mr. John Russell to be requested to value the damage, &c., &c. J.B.—6/3/68.

Return to Mr. Thomas, for further report. J.B.—31/3/68.

No. 3.

LLOYD'S AGENCY.—SURVEY REPORT.

Under instructions from Messrs. Gilchrist, Watt & Co., Lloyd's Agents at this port, and at the request of the Hon. James Byrnes, Esq., Commissioner for Railways, I the undersigned, marine surveyor, this day held a survey at the Redfern Railway Station, on railway carriages said to have been landed from the ship "Landsborough," Maxwell master, from London, and have to report as follows:—

No.	Description.	Condition and Remarks.
1	Half under-frames ...	Rusty—damaged by sea-water.
2	"	Do. do.
3	"	Do. do.
4	"	Do. do.
5	"	Do. do.
6	"	Do. do.
7	"	Do. radial bar centre casting broken, and centre casting buffer broken.
8	"	Do. buffer plank end casting broken.
9	"	Do. centre buffer casting broken.
10	"	Do. damaged by sea-water.
11	"	Do. do.
12	"	Do. centre radial bar broken, eleven centre radial bolts wanting.
1/18	Cases	Seventeen sound, one broken, contents sound.

Given under my hand, at Sydney, N. S. Wales, this 3rd day of March, 1868.

ROBERT T. MOODIE.

Received a fee of three guineas for this survey and report. R.T.M.

Confirmed. Gilchrist, Watt & Co.—6/3/68.

LLOYD'S

6

No. 4.

THE COMMISSIONER to CAPTAIN MAYNE.

Department of Public Works,
Railway Branch,

Sydney, 27 March, 1868.

Carriages per "Landsborough."

SIR,

I regret to state that much damage has arisen to the packages, by which the carriages have been injured, and damage has also arisen to some portion by sea-water, the entire estimated cost of repairs amounting to nearly £100.

I have, &c.,

JAMES BYRNES,

Commissioner for Railways.

No. 5.

THE COMMISSIONER to CAPTAIN MAYNE.

Department of Public Works,
Railway Branch,

Sydney, 27 March, 1868.

Carriages per "Globe," "Landsborough," "Canaan," and "Earl Dalhousie."

SIR,

I have the honor to inform you circumstances have been brought under my notice in reference to the alleged inferior quality of above, and that I have in consequence considered it my duty to direct a most rigid inspection of the whole of the carriages to be made, and a full report thereof to be furnished to me, with as little delay as possible, a copy of which I shall cause to be forwarded to you by next mail for your information and guidance.

I may perhaps remark my fears that these shipments will not turn out satisfactory.

I have, &c.,

JAMES BYRNES,

Commissioner for Railways.

No. 6.

REPORT ON NEW CARRIAGES.

I FORWARD a report from Mr. Bingham, the foreman carriage-builder, regarding the recently imported carriages for Western Extensions.

It would perhaps be advisable for the Commissioner, before taking any further action in this matter, to call upon two competent persons (say Mr. Russell and Mr. Robertson the coach-builder), unconnected with the Service, to hold a survey upon these carriages.

JAS. HY. THOMAS.

4/4/68.

Approved. J.B.—7/4/68.

Wrote Mr. Russell and Mr. Robertson to communicate with Mr. Thomas for an appointment.
R.M.—8/4/68.

Mr. Thomas, 8/4/68.

Seen. J.H.T.—9/4/68. Copy furnished to J.W. for the Government report and letter. R.M.—
30/5/68.

Mr. Whitton, by order of the Commissioner, 5/6/68.

J.W.—6/6/68.

Contingent bills for Messrs. Robertson and Russell's fees on survey of carriages—£3 3s. each.

Mr. Ashdown. R.M.—10/9/68.

Entd. vou. 3,148 and 3,149, 299 for £3 3s. each. H.A.H.—14/9/68.

Mr. Moody.—14/9/68.

[Enclosure.]

Engineer for Existing Lines.

Sir,

I respectfully report to you as requested, as to the quality of materials and workmanship put into the carriages for the Great Western Extensions. I believe the materials of the wood-work, likewise the framing, to be of good quality, but the style of framing the sides is not suitable for a warm climate, and is not according to specification, as it states that no nails are to be used in the construction, whereas all the panels on the sides and ends are nailed in and mouldings nailed over the joints, and badly nailed, for several of the panels are split by nailing when constructed, and as soon as exposed to the weather they will open and go further across the panel. If they had been grooved into the pillars, nails would not have been required, and would have allowed the panels to give to the weather.

There are some iron plates inside to strengthen the body and form battens to the panels. The panels run the same way of the grain as the plate, which should have been the reverse way. Screwing the plate to the panel causes it to buckle and split from each screw-hole, as they are bored through to the outside in a line with the grain of the wood. The roofs of first-class carriages are very slightly constructed, the outer roof especially not having sufficient roof-sticks to properly support the roof.

The painting, in my opinion, has not been done to specification, as the grain of the wood is so plainly to be seen, which could not have been the case if the quantity as specified had been put on to the wood. As to the workmanship, it is not first-class.

The inside trimmings and workmanship are of the best class of that description of work.

G. BINGHAM.

3/4/68.

No. 7.

No. 7.

REPORT ON RAILWAY CARRIAGES.

THIS is to certify that we, the undersigned, at the request of the Honorable the Minister for Works, held a survey this day, at the Railway Station, Redfern, on a number of railway carriages imported from England, said to be manufactured by the Midland Waggon Company, Birmingham, and the Oldbury Railway Carriage Company, Birmingham, and find as follows, viz. :—

- No. 1. First-class saloon carriage put together and put on the line on the 1st March. We have carefully examined this carriage. The workmanship on the wood-work is very inferior; the timber put in the panels must have been worked green, as many of them have shrunk to the extent of $\frac{3}{8}$ ths to $\frac{1}{2}$ an inch, and many of them split, having been nailed to keep them in their place; the mouldings or beading are planted on to cover the joints, the panels not being grooved into the framework as is usual; the painting is also very inferior workmanship, and we are of opinion that the painting has not been done according to the specification. We also find the upper roof very slightly constructed, the roof-sticks being too far apart and the framework too narrow, so that the scroll ends rest on the roof-boards instead of on the frame. From the present appearance of this carriage, it looks as if it had been in use for the last two years.
- No. 2. First-class saloon carriage, put on the line 1st February. This carriage we find in a similar condition to No. 1.
- No. 3. First-class saloon carriage, put on the line 1st April. This carriage is in a very bad condition, ten panels having split and shrunk out of their places, showing the joint outside the bead.
- No. 4. First-class saloon carriage, put on the line on the 10th April.—This carriage is also in very bad order, many of the panels being split and shrunk from the beads. We find that all the blinds of these carriages have been altered by putting a batten on the centre of the louvres to keep them in place, being too light.

We have also examined the iron under-frames of Nos. 5 and 6 first-class saloon carriage, not yet put together, and find some of the riveting badly done, many of the rivets not drawn up, particularly where the cross beams are riveted to the frames, also the plates for radial bars badly fitted and riveted.

We also find that the springs in all first-class carriages are set too low, the buckles pressing up against the brackets, cutting into both. The buffers do not stand the height specified, being 3 inches below the other carriages on the line.

We have also examined the second-class carriages, and find the windows are fixtures, which we consider objectionable in this climate. One of the buffer rods of No. 10 second-class carriage we find broken, being bad workmanship, the shank being welded on the plate, and not forged out of the solid.

JOHN ROBERTSON.

JOHN RUSSELL.

Sydney, April 21st, 1868.

Received the sum of three pounds three shillings sterling each for this our survey and report in duplicate.

£3	3s.	J.R.
£3	3s.	J.R.
£6	6s.	

No. 8.

CAPTAIN MAYNE to THE COMMISSIONER.

(No. 169.)

New South Wales Agency,
118, Cannon-street, London, E.C.,
22 May, 1868.

SIR,

I have the honor to acknowledge receipt (on the 18th instant) of your letter No. 68/102, dated March 27, 1868.

With reference to carriages shipped by the "Landsborough," I beg to call your attention to my letter of No. 143, dated November 26th, 1867, in which I advise you that I have retained £250 from the Oldbury Carriage Company, to meet possible damage for defective packing of carriages by that vessel, and I shall wait the full information and certificates as to amount and cause of damage, which I shall hope to receive by an early mail, before I part with any portion of that sum.

I have, &c.,
W. C. MAYNE.

No. 9.

CAPTAIN MAYNE to THE COMMISSIONER.

(No. 166.)

New South Wales Agency,
118, Cannon-street, London,
21 May, 1868.

SIR,

I have the honor to acknowledge the receipt of your letter, No. 68/104, of the 27th of March, respecting the railway carriages per "Globe," "Landsborough," "Canaan," and "Earl Dalhousie."

2. It is with much concern that I have received the intimation that doubt is felt as to the work in these carriages, and that you fear that they will not prove satisfactory. I shall look with anxiety for the result of the inspection which you inform me has been ordered.

3. I have before me the reports made by Mr. Fowler's inspector on the spot from time to time during the progress of the work and up to its completion. These evidence constant and generally stringent inspection over, and watchful attention to the details of the specifications, with certainly no leaning towards the contractors, and justify hope that the result of the examination will as regards work and materials show that their contracts were fairly carried out, except in the putting together of the undersides of the second class carriages—a matter now just brought to my knowledge by the inspector's report, and respecting which I am in correspondence with Mr. Fowler.

4. As regards the particular kind of carriage, I learn that the form has worked so well on the Metropolitan Lines, that the Company has recently had 30 new carriages of the same kind.

5. From the accounts of the misfortune which befell the "Earl Dalhousie" I should quite look for serious damage to the carriages shipped in her; such however would be covered by the insurance.

I have, &c.,
W. C. MAYNE.

No. 10.

No. 10.

THE COMMISSIONER to CAPTAIN MAYNE.

Department of Public Works,
Railway Branch,
Sydney, 22 April, 1868.

SIR,

See No. 7 in
Schedule.

With reference to my letter, No. 68/104, respecting bad condition of carriages, &c.,—I have now the honor to enclose herewith a joint report of Messrs. John Robertson and John Russell, which you will be so good as to bring under the notice of Mr. Fowler, and request his explanation thereon. You will also take such steps as may be necessary to protect the interest of this Government, in having the matter brought under the notice of the manufacturer, as it is the intention of the Government to have the carriages put into proper condition, and charge the account to whom it may concern.

I may remark that the gentlemen reporting on this matter are well known here; Mr. Robertson being the leading coach-builder, and Mr. John Russell a member of the firm of P. N. Russell & Co., the well-known iron-founders and engineers of this city.

I have, &c.,
JAMES BYRNES.

No. 11.

THE COMMISSIONER to THE COLONIAL SECRETARY.

Department of Public Works,
Sydney, 30 May, 1869.

SIR,

See No. 7 in
Schedule.

I have the honor to enclose herein a copy of a joint report which has been obtained from Mr. John Russell, of the firm of Messrs. P. N. Russell & Co., engineers, and Mr. Robertson, the well-known coach-builder of this city, relative to the inferior construction of a number of railway carriages recently imported from England, through the Government Commercial Agent, Captain Mayne.

2. By the mail which left Sydney on the 22nd ultimo, I addressed a letter to Captain Mayne on this subject, in my capacity of Commissioner for Railways; but on more mature consideration, I am of opinion that the matter is of so much importance, involving as it does such serious interests, as to render it imperative that it should be brought under the attention of the Government, with a view to steps being taken to prevent a repetition of such reprehensible carelessness and neglect as have been evinced in carrying out the instructions of this department in the present case. I have the honor further to state that since the receipt of the report in question, some of the carriages referred to have been tried on the line, and the result has confirmed the averments of Messrs. Russell and Robertson.

From personal observation, I am in a position to state that portions of these carriages are literally falling to pieces.

I have, &c.,
JAMES BYRNES.

Letter sent to Captain Mayne with enclosures, 1/6/68.
Captain Mayne, 1 June, 1868.
(See Messrs. Russell and Robertson's report.)

No. 12.

THE PRINCIPAL UNDER SECRETARY to CAPTAIN MAYNE.

Colonial Secretary's Office,
1 June, 1868.

SIR,

I have the honor to transmit duplicate copy of Mr. Byrnes' letter of April 22 to yourself, enclosing copy of report on railway carriages.

I have desired the Colonial Secretary to impress on you the very serious injury sustained by the Railway Branch of the Public Service by the defective manufacture of these carriages, independently of the money loss which must result.

2. In ordering from English manufacturers, the Government expected to be supplied with carriages in all respects of the best class, and relied upon your vigilance in seeing that every possible guarantee for this end was secured. It is hoped that you have made such conditions in the contract with the manufacturers as will enable the Government to recover the cost of repairing and completing these carriages so as to render them fit for use.

3. Particulars of the necessary reconstructing will be transmitted to you by an early mail.

I have, &c.,
HENRY HALLORAN.

No. 13.

THE COMMISSIONER to CAPTAIN MAYNE.

Department of Public Works,
Railway Branch,
Sydney, 15 July, 1868.

SIR,

I have the honor to acknowledge the receipt of your letter, No. 166; and, in reply to paragraph 3, have to refer you to my previous correspondence as well as to the report of the gentlemen who have inspected these carriages, which, as I am informed, has been forwarded through this Government to you,
by

by last mail; from which you will perceive that, however constant and generally stringent the inspection is reported to have been, it has undoubtedly failed in the obvious object in view by the appointment of an inspecting engineer.

As to paragraph 5, claim has been made on the ship, "Earl Dalhousie," in the usual manner, the result of which shall be communicated to you as soon as the necessary information has been received.

I have, &c.,
JAMES BYRNES.

No. 14.

THE COMMISSIONER to CAPTAIN MAYNE.

Department of Public Works,
Railway Branch,
Sydney, 15 July, 1868.

SIR,

I have the honor to acknowledge the receipt of your letters, Nos. 167, 168, 169, and 170.

No. 169—*carriages shipped per "Landsborough."*

Nos. 167, 168,
and 170, have no
reference to this
subject.

With reference to the amount of £250 retained by you to meet possible damage by defective packing, I have the honor to inform you that I am unable to perceive in what way any portion of this money can be made available in the present case, as the entire damage to the carriages appears, by the marine surveyor's report, to have been mainly owing to sea-water; and as the cost of repairs is under 3 per cent. on insurance, I fear there is no remedy, and that the Government will have to lose the entire amount estimated for repairs, viz., £89.

I have, &c.,
JAMES BYRNES.

No. 15.

CAPTAIN MAYNE to THE COMMISSIONER.

(No. 180.)

New South Wales Agency,
118, Cannon-street, London, E.C.,
17 July, 1868.

SIR,

I have the honor to enclose for your information Mr. Fowler's report, with reference to the first and second class railway carriages, made respectively by the Midland Wagon Company and the Oldbury Carriage Company, accompanied by the replies to his reference to the manufacturers, and to his inspector who resided on the spot while the carriages were under construction.

2. From repeated conversations which I had with Mr. Fowler's principal assistant, Mr. Baldry, I know that he took a particular interest in the construction of those carriages, and felt an absolute confidence that they would prove not satisfactory merely, but that they would be regarded with approval and admiration.

3. The shrinking of the panels reported on in the Colony appears to me conclusive of the fact that the wood used was not such seasoned wood as was required by the specifications, assuming that none of the panels in question were on board the "Earl Dalhousie," which caught fire on her voyage out.

The contractors, I do not doubt, did their best to obtain properly seasoned wood, and thought they had done so, but that would not relieve them from responsibility for defective materials.

It must be admitted that, unless wood has been actually in the possession of contractors for the full time required to render it perfectly seasoned, it is almost impossible for them to have positive certainty that it is in such seasoned state; and the contractors in this instance may have been, and were probably misled. Of course neither Mr. Fowler nor his assistants could, by examination of the wood, ascertain its exact state as regarded length of seasoning.

I have, &c.,
W. C. MAYNE,
Agent for the Colony of New South Wales.

[Enclosures.]

John Fowler, Esq., to Captain Mayne.

No. 2, Queen's Square Place,
Westminster, 17 July, 1868.

New South Wales Railways.

Dear Sir,

I beg to acknowledge the receipt of your letter of the 19th June, enclosing copies of reports received from the Colony as to the condition of the 1st class carriages made by the Midland Wagon Company, and 2nd class carriages made by the Oldbury Carriage Company.

I have no doubt that the report is a fair and impartial one—indeed the names of the gentlemen whose signatures are attached are a sufficient guarantee that it is so—but I do not think the defects mentioned are of a serious or important character.

With regard to the shrinkage of the panels, I am at a loss to account for it. I know that the manufacturers took every possible pains to procure the wood perfectly dry.

The mode objected to, of fixing the panels by pins and by beadings over the joints, is the usual practice when it is required, as in this case, to keep the framing as light as possible.

The framing of the Venetian blinds was necessarily light, and two patterns were made for my decision, the first of mahogany, and the second of teak, and I selected the latter in preference.

The upper roof, which is complained of as being weak, was made in strict accordance with the drawings, and I think will be found in practice to answer the purpose very well.

The riveting of the under-frames where the cross beams intersect is certainly not particularly neat work, but this is accounted for by reason of the difficulty of its position; but the work is strong, and the neatness is immaterial, as it cannot be seen.

The setting of the springs, which are referred to as being too low, I presume are now set right; they were at the proper level in England.

In respect of the other complaints, I cannot agree with them, as the specification was in all instances strictly adhered to, and in some cases, such as painting, &c., excess of work was done,

As regards the buffer rods of the second class carriages, I am assured the disc and the rod were forged out of the solid. It is perhaps hardly fair to judge of the carriages as they stand immediately after re-erection, as it is always understood that they must be cleaned and varnished after a long voyage before being brought into use.

Personally I paid more than usual attention to these carriages, and on the several occasions on which I visited the works I experienced the greatest anxiety on the part of the makers to do everything that was suggested or required to make them satisfactory.

I enclose herewith the replies from the manufacturers, and from my inspector who resided on the spot during the time the carriages were under construction.

I am, &c.,
JOHN FOWLER.

Mr. E. M. Wood to John Fowler, Esq.
New South Wales Railway carriages.

30 June, 1868.

Sir,

In respect of a report from Sydney, dated April 21st, 1868, complaining of the workmanship and materials of the railway carriages forwarded to the Colony during the latter part of last year, under indent R. 28,—I have gone very carefully through my notes and memoranda, and beg to lay before you the following information:—

I have read the complaints and made a re-examination of the contract drawings and specification; and, from being on the spot during the time the carriages were under construction, and having had considerable experience in similar work, I am able to state that I have known no instance in which plans and specification have been more closely adhered to.

Both firms showed great desire to do justice to the work, and in the few cases of workmanship that I objected to it was replaced by new materials.

The following are the particulars of the complaints:—

Shrinkage of panels of first class carriages.

No doubt the shrinkage of the panels to the extent reported, namely $\frac{3}{8}$ ths to $\frac{1}{2}$ an inch, is a serious defect, and one which if it were the fault of the makers they should be requested to make good; but I am bound to say that great care was taken to secure the best material, which not only had every appearance of being properly seasoned but was also fairly tested—the carriages having had the panels fixed during the cold weather of the spring, and remaining in the shops till completion, throughout the hottest part of the summer, without showing any signs of shrinkage. To all appearance they seemed made of the proper and fit material to send abroad.

Nails.

It is the usual practice to cover a joint with beadings, in fact I do not think it would be possible to make the joint water-tight without some cover, and pins (mentioned in the report as nails) are required to keep the panels to their places. An alternative plan of grooving the panels as suggested could have been adopted, but would have necessitated a framing still heavier than the present, which has already been thickened to the utmost limit, to allow the double sashes and balance weights to be used.

Painting of first class carriages.

Referring to the remark "We are of opinion that the painting has not been done according to the specification,"—the bodies of carriages received two coats of filling, two of lead colour, and two of varnish, *beyond* the specified number.

Outer roof.

Though the outer roof is reported too slight, it is a part of the carriage which is so easily strengthened, and which if it had shown signs of weakness would have been stiffened before it was sent out, that I can hardly think it will cause an inconvenience, and I beg to remark that there was no deviation from the drawing in the mode of fixing the outer roof to the scrolls.

Under-frames.

"We have also examined the iron under-frames of Nos. 5 and 6 first-class saloon carriages not yet put together, and find some of the riveting badly done, many of the rivets not drawn up, particularly where the cross beams are riveted to the frames." Referring to the above, I have no doubt the riveting complained of is at the corners where the cross beams and diagonals meet, and where from the confined space it is very difficult to give the rivets the neat appearance they have in the other parts of the frame, and to a person unacquainted with this reason it may have appeared bad workmanship, but which practically is no defect. As regards the plates for the radial bars being badly fitted and riveted, I am not aware of any deficiency in the construction, nor do I think that there can possibly be any serious defect in this part, as the fitting of these plates is one of the simplest pieces of work about the frame.

Springs.

"We also find that the springs in all the first class carriages are set too low, the buckles pressing up against the brackets cutting into both; the buffers do not stand the height specified, being 3 inches below the other carriages on the line."

In answer to the above complaints, I beg to state the greatest care was taken to make the carriages to the specified heights, and which they stood at in a satisfactory manner when in England. If the carriages were carefully put together, and the instructions for arranging the springs made use of, I cannot see any reason why they should not stand at the same height when put together in the Colony.

Blinds.

The Venetians were not considered to require the bar mentioned in the report, and which was not fitted to the blinds in England. A pattern blind was made and sent up to London, and it was considered to be quite strong enough, and was therefore adopted.

Second class carriages.

The mode of arrangement of windows in the second class was carried out in accordance with the specification; but I beg to mention that if the fixed windows are found objectionable, the window-frames may easily be entirely removed and replaced again when required, being held to their places by fillets of wood fixed by brass screws.

Respecting the breakage of a buffer rod, it is one of the failures to which any work is liable; but as this carriage was run up to London, it received a fair trial before being forwarded to its destination, without showing any flaws in the buffer rods; but I beg to remark that none of the shanks were welded on the plates, as these buffer faces and rods were all forged in the *solid* for some length from the disc.

I remain, &c.,
E. M. WOOD.

Mr. A. Driver to John Fowler, Esq.

Midland Wagon Company,
Birmingham, 6 July, 1868.

Dear Sir,

We beg leave to acknowledge the receipt of your communication of the 20th ult., enclosing copy of report which you have received from the Government of New South Wales, complaining of some defects in the six first class carriages we lately built for that Government, under your specification.

We have carefully examined into the questions raised, and greatly regret that there should be any cause of complaint, as we were most anxious to carry out your specification in a workmanlike and efficient manner in every respect, both as regards quality of materials used in their construction and accuracy of workmanship generally.

We observe that shrinkage of some of the panels is complained of. Our reply to this is that we were careful to use nothing but thoroughly seasoned and especially selected panel board for this purpose; and we feel confident that had we to build further carriages, we could not obtain better seasoned or more suitable mahogany panel board than we have used.

As regards some of the panels having split, this is also not an unusual occurrence, and is what all carriages are liable to; and in all cases where mouldings are used to cover the joints, it is the practice of the trade to pin the panel board in its place.

The

The painting is also complained of as being not equal to specification. Our reply to this is that several extra coats of both paint and varnish were used by us, as we were most desirous to finish the carriages in this respect in every way as perfect as possible, regardless of expense.

As regards the present appearance of the carriages, we are not surprised at their not looking so fresh and new after a long sea voyage as they did before they left our works, but we suggest that if they are properly washed off and one coat of varnish applied, they will be perfectly satisfactory in this respect.

As regards the construction of the outer roof and its mode of fixing to the body, we trust that in course of wear the complaint of its being too light and improperly fixed will prove to be groundless.

The louvre blinds complained of as being too light are made as heavy as the framework would admit of, and are in this respect fully as strong as we have been used to make them in numerous similar cases. The batten referred to as having been placed on the centre of the louvres must have been added in the Colony, as we know nothing of this arrangement, and were of opinion that it was entirely unnecessary.

We regret the complaint of a portion of the riveting in the under-frames not being properly executed; this only refers to a small portion of the work which was very difficult to get at, and in which in any future contract we will endeavour to adopt a different mode of riveting, but we do not think it detracts from the strength.

The bearing springs, which are complained of as being too light, were in each case properly placed under their respective carriage and the body loaded with upwards of forty men to try the springs—being a far greater weight than they will ever have to carry in work. The result was that they performed this duty entirely to the satisfaction of your inspector as well as of ourselves, admitting as they did of the buffers being of the specified height when empty, and carrying the loaded carriage in a most efficient manner; we cannot therefore understand that they are now 3 inches below the specified height when empty, and think there must be some error in this part of the report. We suggest whether it is possible that in putting the carriages together in New South Wales the wood cushions between top of axle-box and bottom of spring have been fixed in their places or omitted altogether.

In conclusion, we beg to remark that after an experience of more than twenty years in the manufacture of rolling stock of all descriptions both for home railways and also abroad, we are convinced that it would be impossible to turn out carriages having less cause of complaint than these; that there may be some slight defects we readily admit—such things always occur with the most rigid care and supervision possible, and small defects are of course more prejudicial to the manufacturer after a long sea voyage; but we would beg to submit that the greatest care was taken during their construction as we should always feel it our duty to take in carrying out any order entrusted to us, and we rely on the wear of the carriages as the best test of the excellence of their manufacture.

Yours faithfully,
ALFRED DRIVER, Manager.

Captain Mayne to the Commissioner.

Agency of the Government of New South Wales,
118, Cannon-street, London, E.C.,
11 September, 1868.

(No. 188.)

Sir,

I have the honor to acknowledge receipt (on the 7th instant) of your letter 68/485, dated July 15th, 1868.

Damage to carriages per "Landsborough."

1. I think it would be very desirable to forward me full certificates of the damage to these carriages, in order that I may come to a proper decision as to who is responsible for the same.

2. If the damage is caused by sea-water a claim would be against the Insurance Company, provided they cannot successfully resist such claim in consequence of the clause being on the bill of lading "No. 55—1 case, water running out when taken on board," in reference to any damage to the case therein specified.

3. In such event the loss would in my opinion clearly fall on the manufacturers, and it is my intention to retain the sum of £89 from them until this question is decided.

4. The policy states that the goods are insured to pay average on each package as if separately insured, which covers any damage over 3 per cent. upon the value of *each separate package*, not as you seem to infer of 3 per cent. upon the whole value of the shipment.

5. In making a claim on the Insurance Company it will therefore be necessary to have certificates of the sound value of each package upon which any claim for damage is made, and these I have to request you will furnish me with, together with the certificates of damage above referred to.

I have, &c.,

W. C. MAYNE,
Agent for the Colony of New South Wales.

Seen. Forward information required. J.S.—5/4/68.
Wrote, 6/11/68, 68/2924.

Captain Mayne to The Colonial Secretary.

Agency of the Government of New South Wales,
118, Cannon-street, London, E.C.,
3 December, 1868.

(No. 89.)

Sir,

I do myself the honor to acknowledge the receipt of your letter (No. 158) of the 9th of October last, enclosing a copy of the communication from the Under Secretary for Public Works, with reference to the inferior construction of certain 8 Oct. 1868. railway carriages, and instructing me, on behalf of the Government of New South Wales, to call upon the manufacturers of 68/2887. the carriages in question to pay the actual cost of putting them in repair, estimated by the Railway authorities at £280 7s.

2. In pursuance of those instructions, I have lost no time in communicating with the consulting engineer, in order that the manufacturers may be at once called on to make good the expense caused to the Colony by the defective material and work in the carriages supplied by them respectively.

3. The short period intervening between the receipt of your letter and the despatch of the mail precludes my being in possession of the result of this call upon the manufacturers; but by the next Suez mail I shall, I have no doubt, be able to report it to you.

I have, &c.,

W. C. MAYNE,
Agent for the Colony of New South Wales.

The Secretary, Public Works. JOHN R.—28 January, 1869.
The Under Secretary, Public Works. B.C., 28 January, 1869.—H.H.
Noted, 28/1/69. 68/2924.
Railways. B.C., 29/1/69.—J.R.
Seen. J.S.—6/2/69.

Captain Mayne to The Colonial Secretary.

Agency of the Government of New South Wales,
118, Cannon-street, London, E.C.,
31 December, 1868.

(No. 93.)

Sir,

Having reference to my letter (No. 89) of the 3rd instant, I have now the honor to enclose for your information copies of the communications addressed to Mr. Fowler by the Railway Carriage Company, and by the Midland Wagon Company, in reply to his call upon them to repay to the Government of New South Wales the charges incurred through defective work in the railway carriages respectively supplied by them under their contracts with the Colony.

2. By next mail I hope to transmit the further communications promised; and as both Companies expressly state that they have no desire to evade any proper responsibility, I shall, I trust, be able then to report to you a satisfactory settlement of the matter.

3. Drawing your attention to that part of the letter from the Railway Carriage Company in which reference is made to the £89 (already deducted from them by me) for damage to case 55, per "Landsborough," I have to request to be informed whether the cost of repairing the damage to the contents of that case is included in the £280 7s. set forth in the statement forwarded to me in your letter of the 9th October last (No. 158), as, if included, the claim on that Company will to that extent have been satisfied.

I have, &c.,

W. C. MAYNE,

The Secretary for Public Works. JOHN R.—23 February, 1869.

Agent for the Colony of New South Wales.

The Under Secretary for Public Works. B.C., 23 February, 1869.—H.H.

Noted.—24/2/69.

Forwarded to Railways, to be placed with previous papers sent to that branch on the 30th ultimo. B.C., 25/2/69.—J.R.

John Fowler, Esq., to Captain Mayne.

2, Queen's Square Place, Westminster,
30 December, 1868.

Sir,

Referring to your letter of December 1, enclosing copies of letters from the Colony of 8th and 9th October, on the subject of carriages made by the Midland Company and by the Oldbury Company, I beg leave to enclose the replies made by those firms on the subject.

So soon as I receive the further communications referred to I will forward them; in meantime can I say anything in reply to the Oldbury Company as to the sum they have already paid?

I am, &c.,

JOHN FOWLER,

p. J. D. BALDREY.

Mr. W. Stableford to John Fowler, Esq.

Railway Carriage Company (Limited),
Oldbury, near Birmingham,
28 December, 1868.

Dear Sir,

We beg to acknowledge your letter of the 10th, containing a statement, and requesting payment of £97 8s. for making good the defects in second-class carriages made by us.

We need hardly say that it occasions us extreme regret that a complaint of that nature should have been made. We have no desire to evade the proper responsibility for the character of our work. We have entered into a close investigation as to the missing paints, &c., and we would call your attention to our having already paid the sum of £89 to Captain Mayne, for partial damage to case No. 55 by sea; and as this amount must have far exceeded the damage done to that case, for which alone we were liable, we think that this payment has not been taken into consideration, or that the advice of it had not reached Sydney.

I am, &c.,

WM. STABLEFORD.

Mr. H. Bridges to John Fowler, Esq.

Midland Wagon Company,
Birmingham, 24 December, 1868.

Dear Sir,

Your communication of the 10th instant, respecting the New South Wales carriages, has been duly submitted to my Directors, and they have given to it their most earnest attention, so much so that they have gone into the matter in detail; but as some of the claims are of so peculiar a character they have desired the staff to look into them in *closer* detail, and our Manager Mr. Drum is, as soon as this is done, to see you and explain the result of such examination in detail—the spirit of which is that we desire not to evade any costly responsibility fairly chargeable to us.

Yours truly,

H. BRIDGES,

Secretary.

Mr. J. B. Goodlad to Mr. W. Stableford.

New South Wales second-class carriages.

Dear Sir,

The door lights are movable, according to drawings. The buffers were made out of blooms forged under steam hammers, and I am at a loss to know how the head could come off, as we never made our buffers with plates for heads.

Yours obediently,

J. B. GOODLAD.

Mr. W. Stableford to John Fowler, Esq.

Railway Carriage Company (Limited),
Oldbury, near Birmingham,
24 June, 1868.

Dear Sir,

Your favour of 23rd, with report on New South Wales Railway Company's carriages, to hand. On the other side I send copy of my assistant's reply to the questions, regretting anything should be found fault with.

I am, &c.,

WM. STABLEFORD.

13

No. 16.

CAPTAIN MAYNE to THE UNDER SECRETARY OF THE GOVERNMENT.

(No. 78 a.)

Agency of the Government of New South Wales,
118, Cannon-street, London, E.C.,
1 August, 1868.

Sir,

I have the honor to acknowledge the receipt (on the 29th ultimo), by the Panama mail, of your letter of the 1st June last (No. 82), enclosing the duplicate copy of Mr. Byrnes' letter of the 22nd April, with a copy of report on railway carriages.

2. My letter of 17th ultimo (No. 180) to the Honorable the Commissioner for Railways, enclosing Mr. Fowler's report, will have placed the Government in possession of the steps I had taken with reference to the complaints as to the defects in the railway carriages.

3. The Government of the Colony, in ordering from English manufacturers, had unquestionably the right to expect to be supplied with carriages in all respects of the best class, and to look to me, as its Agent, for the adoption of all due and usual steps to secure their being so supplied.

Reference to the notices calling for tenders, to the specifications, and to the accepted tenders, will show that no one of the usual or proper preliminary steps was omitted. The repeated minute and detailed reports of Mr. Fowler's inspector—constantly at the works during the progress and up to the completion of the carriages—show that a most strict supervision of the work was exercised; and I can state, from repeated conversations with Mr. Baldry (Mr. Fowler's principal assistant), that he took a particular interest in these carriages being, in design and in construction, all that could be desired; and that after inspecting them in my presence, he felt (and expressed to me) the utmost confidence that they would not merely give satisfaction and merit approval, but that they would be highly commended and admired.

4. In my letter to Mr. Byrnes I stated my opinion that, for the defect of wood not sufficiently seasoned having been used in the construction of the carriages, the contractors, however misled and innocent, were justly responsible; and I shall, you may rest assured, do all that lies in my power to enforce that responsibility; but, under the usual and necessary conditions—making payment dependent on Mr. Fowler's certificate—the contractor's position is, I imagine, at law impregnable. I need not point out to Mr. Parkes that the certain effect of introducing into contracts any unusual condition as to payment, any terms involving doubt or delay with regard to that, would be to make contractors demand considerably advanced rates.

5. Mr. Parkes is doubtless aware that, as intimated in my letter of the 26th November, 1867 (No. 143), to Mr. Byrnes, I have retained in my hands from the contracts, to meet any damage that may be shown to have resulted, certain of the cases having admitted water previous to shipment, the sum of £250.

I have, &c.,
W. C. MAYNE,
Agent for the Colony of New South Wales.

For the Secretary for Public Works. J.D.—3/10/68.

The Under Secretary for Public Works. B.C., 3/10/68.—W.G.

No. 17.

THE COMMISSIONER to CAPTAIN MAYNE.

Department of Public Works,
Railway Branch,
Sydney, 7 September, 1868.

SIR,

With reference to your No. 180, enclosing reports, &c., in reply to complaints respecting railway carriages, I have the honor to inform you that I consider the excuses offered therein for such palpable carelessness are of such a nature as to compel me again to bring the subject under the notice of the Cabinet, before replying fully on the matter.

I have, &c.,
JAMES BYRNES,
Commissioner for Railways.

No. 18.

THE UNDER SECRETARY FOR PUBLIC WORKS to THE PRINCIPAL UNDER SECRETARY.

Department of Public Works,
Sydney, 9 October, 1868.

SIR,

In reference to the Honorable the Colonial Secretary's blank cover of the 3rd instant, forwarding to this department a letter with enclosures from the Agent of the Colony in London, in reply to our complaint of the inferior construction of a number of railway carriages imported from England through the Government Agent, I am directed by the Honorable the Secretary for Public Works to request that Captain Mayne may be informed that the explanation afforded in his communication and in the enclosures (which consist of explanatory letters from the manufacturers and from the inspecting engineer and his assistant) is most unsatisfactory.

2.

2. In the opinion of Mr. Secretary Byrnes, it is evident that Mr. Fowler has been deceived by his assistant, who could never have given the attention necessary to a proper inspection of the work.

3. The carriages are a disgrace to the manufacturers and to the inspector; and although we now make a charge only for the actual cost of putting the carriages in repair (as per accompanying specification and estimate), the Honorable the Secretary for Public Works is quite satisfied that the amount (£280 7s.) falls far short of what should be charged the manufacturers for repairing such discreditable and unworthy work, and for the delay and annoyance occasioned thereby; indeed, it would not be an extreme step, Mr. Byrnes considers, if the Government were to at once return the carriages to England.

Papers herewith to be returned.
Agent for the Colony, 9 Oct., 1868.

I have, &c.,
JOHN RAE.

[Enclosure.]

GOVERNMENT RAILWAYS.

Office of Engineer for Existing Lines,
Sydney Station, 8 October, 1868.

ESTIMATE of cost of repairing six first class and twelve second class carriages, built by the Midland Company's Works, Birmingham, for the Western Extensions, necessitated by the inferior materials and workmanship used in their construction.

	£	s.	d.
To repairing and painting panels in the side of bodies of first class	120	0	0
.. Completing 180 Venetian blinds, by screwing a batten down the centre of each and planing the fronts so as to allow the louvres to pass the glass frame fence	18	0	0
.. Fixing 48 new rollers for webbing the glass frames, in consequence of those supplied being broken	9	0	0
.. Setting and hardening 32 bearing springs	32	0	0
.. 12 new shackles to screw couplings, those supplied being unsuitable for working round the 8-chain curves	1	4	0
.. 24 new shackles to screw couplings for second class	2	8	0
.. 20 new spring clips	1	10	0
.. Repairing radial arm	3	10	0
.. " buffer head to rod, the one supplied having fallen off in fitting	2	10	0
.. Repairing panels and painting repairs in the side of bodies of second class	60	0	0
.. Materials specified to be supplied and never received, viz. :—			
6½ cwt. of white lead to paint roofs, 40s.	13	0	0
48 gallons linseed oil, 5s.	12	0	0
6 " turpentine, 5s.	1	10	0
240 bolts for fixing bodies to under-frames of second class carriages	2	10	0
120 do. do. do. for first class do.	1	5	0
	£280	7	0

JAS. HY. THOMAS,
Engineer.

No. 19.

THE COLONIAL SECRETARY to CAPTAIN MAYNE.

New South Wales,
Colonial Secretary's Office,
Sydney, 9 October, 1868.

SIR,

In acknowledging the receipt of your letter of the 1st August last, relative to the inferior construction of certain railway carriages obtained through you from England, I have the honor to enclose a copy of a communication from the Under Secretary for Public Works, by which you will perceive that the Secretary for Public Works considers that the explanation afforded in your communication to him, and the enclosures (which consist of explanatory letters from the manufacturers and from the inspector-engineer and his assistant) is most unsatisfactory.

2. In accordance with the wish of Mr. Secretary Byrnes, I have the honor to request that you will, on behalf of this Government, call upon the manufacturers of these railway carriages to pay the actual cost of putting them in repair, which is estimated by the Railway authorities at £280 7s.

I have, &c.,
JOSEPH DOCKER.

No. 20.

CAPTAIN MAYNE to THE COMMISSIONER.

Agency of the Government of New South Wales,
118, Cannon-street, London, E.C.,
11 September, 1868.

(No. 188.)

SIR,

I have the honor to acknowledge receipt (on the 7th instant) of your letter 68/485, dated July 15th, 1868.

Damage to carriages per "Landsborough."

1. I think it would be very desirable to forward me full certificates of the damage to these carriages, in order that I may come to a proper decision as to who is responsible for the same.

2. If the damage is caused by sea-water, a claim would be against the Insurance Company, provided they cannot successfully resist such claim in consequence of the clause being on the bill of lading—"No. 55, one case water running out when taken on board"—in reference to any damage to the case therein specified.

3. In such event the loss would, in my opinion, clearly fall on the manufacturers, and it is my intention to retain the sum of £89 from them until this question is decided.

15

4. The policy states that the goods are insured to pay average on each package, as if separately insured, which covers any damage over 3 per cent. upon the value of *each separate package*, not as you seem to infer of 3 per cent upon the whole value of the shipment.

5. In making a claim on the Insurance Company, it will therefore be necessary to have certificates of the sound value of each package upon which any claim for damage is made, and these I have to request you will furnish me with, together with the certificates of damage above referred to.

I have, &c.,

W. C. MAYNE,

Agent for the Colony of New South Wales.

Seen. Forward information required. J.S.—5/11/68.
Wrote. 6/11/68.

No. 21.

THE COMMISSIONER to CAPTAIN MAYNE.

Department of Public Works,

Railway Branch,

Sydney, 6 November, 1868.

SIR,

I have the honor to acknowledge the receipt of your Nos. 186, 7, and 8, with enclosures therein referred to. No. 188.—I note with satisfaction that you hope to recover some portion of the loss by damage to carriages per "Landsborough"; and to enable you to prosecute the claim, I enclose, as requested, certificate of particulars of damage, and the Engineer's estimate of cost of repairs.

I have, &c.,

JAMES BYRNES.

[Enclosure.]

Government Railways—Existing Lines.

Estimated cost of repairing the carriages ex "Landsborough," damaged by sea-water.

Damage done by sea-water to the twelve half-under-frames of carriages for Western Extension, while on the voyage out from England, in the ship "Landsborough," together with the estimated cost of repairing same.

1	J	much damaged	£12	0	0
2	I	do.	12	0	0
3	A	do.	12	0	0
4	A	slightly damaged	5	0	0
5	I	do.	3	0	0
6	G	very much damaged	15	0	0
7	J	slightly damaged	3	0	0
8	B	very slightly damaged	1	10	0
9	B	do.	1	10	0
10	H	slightly damaged	6	0	0
11	H	much damaged	9	0	0
12	G	do.	9	0	0
			£89	0	0

J. H. THOMAS.

No. 22.

THE ENGINEER-IN-CHIEF to THE COMMISSIONER.

Department of Public Works,

Railway Branch, Engineer's Office,

5 November, 1869.

Rolling stock, Existing Lines.

I SUGGEST, for the consideration of the Commissioner, the advisability of calling for a return of all wagon axles that have broken during transit, accompanied by the name of the maker of the wagon, and the date at which each wagon commenced running. This return to extend to the Northern, Western, and Southern lines.

It might also be desirable to inquire into the truth of the statement made in one of the daily papers, that "it is a fact that no less than eighteen carriages, lately imported at a cost of £1,250 each, are now in stock as lumber, being found, for some reason or other, entirely unfit for use." The carriages alluded to are no doubt those imported for the Western line—twelve second-class, and six first-class. As some of these are daily running on the Western line, it may be advisable to know how many, and why the other carriages are not in use.

I should not have noticed any statement contained in the *Empire* newspaper, had I not good reason to believe that the information was obtained from official sources.

JOHN WHITTON.

Mr. Thomas, for report. J.S.—6/11/68.

(Received 10/11/68.)

There are no records in this office by which it can be shown how many axles have broken since the lines have been opened for traffic. I only know of two; and these, as far as I can gather, were made by the Patent Shaft and Axletree Company.

With regard to anything that has appeared in the *Empire*, I of course cannot be held responsible, unless indeed it could be shown that the information was derived from me; and I can assure Mr. Whitton I should not hesitate a moment to say so, had such been the case.

The carriages referred to were found to be of such bad workmanship that I advised the late Commissioner to appoint a Board of practical men, totally unconnected with the department, to examine them; and their report, I have no doubt, is among the records of the Commissioner's Office.

Having

Having heard great complaints made by passengers as to the motion in these carriages, and knowing from experience that these complaints were well-grounded, I wrote the following Memo. (No. 1393) to the Traffic Manager:—"If there is sufficient rolling stock to work the traffic between Sydney and Penrith without necessitating the use of the long radial carriages imported for the Western Extension, I should by all means do so, as the lateral motion in these carriages, when running on a straight road, is very disagreeable, if not dangerous."

No. 1 second class is an exception, having radial axle-boxes in place of the bar arrangement, and I propose altering the others to this plan.

JAS. H. THOMAS.—11/11/68.

Mr. Thomas will have the whole of these carriages altered without delay. J.S.—13/11/68.

Engineer for Existing Lines. R.M.—13/11/68.

As I find it would take too long a time to get these alterations done in our workshops, I would recommend that tenders be called for the performance of the work. Draft advertisement herewith. J.H.T.—15/12/68.

Sydney, 15 December, 1868.

Tenders will be received at this office until Tuesday, the 5th January, 1869, at 11 o'clock, a.m., from persons willing to contract for making alterations to seventeen railway carriages. Specification and form of tender may be seen, and further particulars obtained, at the Office of Engineer for Existing Lines, Sydney Station. Tenders for which are to be indorsed "Tender for alterations to railway carriages."

JOHN SUTHERLAND,
Commissioner for Railways.

This must stand over for the present. J.S.—18/12/68.

No. 23.

THE ENGINEER FOR EXISTING LINES to THE COMMISSIONER.

Link of new carriage broken.

I HAVE to report that No. 4 first-class radial carriage came in yesterday morning with one of the suspending links of bearing spring broken.

The cause of fracture is evidently that of bad workmanship. A link of this description, upon which so much depends, should have been worked out of the solid, and not, as this appears to have been, made from a bar bent round and welded, thus depending on one shut, which, in this case, was a very bad one.

It is frightful to contemplate what might be the result in the event of one of these links giving, when running at any speed, seeing there is always such a very great lateral strain on them.

I forward herewith the link for your inspection.

JAS. H. THOMAS.—19/11/68.

This clearly shows gross, if not criminal carelessness, on the part of the inspectors of this work in England; and it appears to me that it will be necessary to test the whole of the imported work before any dependence can be had on goods so defective in workmanship. This matter must come before the Cabinet. J.S.—19/11/68.

Mr. Thomas to note and return at once. J.S.—19/11/68.

Noted. J.H.T.—23/11/68.

No. 24.

THE ENGINEER FOR EXISTING LINES to THE COMMISSIONER.

No. 4 saloon carriage—G.W.R.

Mr. Bingham, the foreman carriage-builder, reports that he has been compelled to take in No. 4 saloon carriage (one of those imported for the Western Extension) to be lifted in consequence of the flanges of tires being worn so thin as to render it unsafe to run.

As this carriage was erected on the 11th of April, 1868, it has been running *off and on but little over seven months*.

This will give some idea of the great wear and tear on the Western Extension, as, notwithstanding they are fitted with the radial axles to facilitate their going round the sharp curves, yet the flanges have worn away in half the time they would on any other portion of the lines.

JAS. H. THOMAS.—27/11/68.

Seen. J.S.—27/11/68.

No. 25.

THE ENGINEER FOR EXISTING LINES to THE COMMISSIONER.

Unsafe condition of radial carriages.

YESTERDAY the lateral motion in one of the long radial carriages attached to the 5 p.m. down train was to such an extent as to greatly alarm the passengers. I was in the carriage at the time, and I am certain that if the use of these radial carriages is not discontinued, they will sooner or later cause a most frightful accident. On this occasion, it being close to the engine, with a very heavy train behind descending towards Duck River, had it swung across the line, every carriage in the train must have gone over the one we were in.

Two months ago I wrote to say they should not be used until certain alterations had been made.

I have sent in a draft advertisement calling for tenders for performing the work, but as yet it has not appeared in either *Gazette* or daily papers.

I feel it is my duty, in order to clear myself of all responsibility, to warn the Commissioner against allowing these carriages to run, and (seeing that we are short of rolling stock) to urge the necessity of getting them altered without delay.

JAS. H. THOMAS.—29/12/68.

Can Mr. Whitton advise with me in this matter? It seems very clear something must be done.

Mr. Whitton.

J.S.—14/1/69.

These carriages were ordered specially for working the sharp curves on the Western line beyond Penrith, and were not intended to run at a higher speed than twenty miles an hour. I have protested ever since my return from England against the use of these carriages on the line between Penrith and Sydney, as frequently the speed is at the rate of forty miles an hour. I warned the late Commissioner, Mr. Byrnes, as to the danger of allowing these carriages to be run at so great a speed as forty miles an hour; also, the Traffic Manager (Mr. Owen), and the Inspector (Higgs) at Penrith. It is to me marvellous that the danger has not been previously apparent to Mr. Thomas. If any of these carriages be required for the traffic between Sydney and Penrith, I advise that the radial axle-box be supplied instead of the radial link, and that the alteration be made in the locomotive department. The alteration can readily be made, as there is one carriage, No. 18, supplied with the radial axle-box.

J.W.—16/1/69.

Commissioner. 16/1/69.

No. 26.

THE ENGINEER FOR EXISTING LINES to THE COMMISSIONER.

Government Railways—Existing Lines.

Steel tires.

In October, 1867, I indented for 72 best Krupp's steel engine tires, shut and blocked. These have just arrived, but I find that instead of the inner diameter of the tires for the 4 feet wheels being 3 feet 6½ inches, they are 3 feet 6¼ inches, while those for the bogie wheels are 2 feet 6½ inches in place of being 2 feet 6¾ inches. The difficulty of turning out these steel tires, as well as the waste of metal, induced us to attempt to stretch them, but on doing so broke the large centre screw of the blocking machine.

I think the Colonial Agent's attention should be called to this matter; as in this, as well as other cases of a similar kind, we have suffered great loss of time and money by the careless way that orders have been executed.

J. H. THOMAS.—24/8/68.

Inform Colonial Secretary it appears to me that the business of the Colony is performed in a manner by no means beneficial to the Government; all our indents are executed in a way which incurs unnecessary expense and loss to the Department of Works.

J.B.—27/8/68.

P. Works, 28/8/68.

P. Under Secretary, 28/8/68.—J.R.

Copy to Capt. Mayne, for information, 28/8/68.—R.M.

Capt. Mayne, 1 Sept., 1868.

No. 27.

THE COMMISSIONER to CAPTAIN MAYNE.

Department of Public Works,

Railway Branch,

Sydney, 28 August, 1868.

SIR,

I have the honor to enclose herewith for your information a copy of a report received from the Engineer for Existing Lines, complaining of insufficient inspection of 72 Krupp's steel engine tires, and of the very careless way in which the orders generally have been executed.

As the present mode of supplying orders appears to call for further action, I have laid the matter before the Government, from whom you will, I doubt not, receive a further communication.

I have, &c.,

JAMES BYRNES,

Commissioner for Railways.

No. 28.

CAPTAIN MAYNE to THE COMMISSIONER.

Agency of the Government of New South Wales,

118, Cannon-street, London, E.C.,

5 November, 1868.

(No. 193.)

SIR,

I have the honor to acknowledge the receipt, on the 28th ultimo, of your letter of the 28th of August last (68/561), enclosing a copy of a report received from the Engineer for Existing Lines, complaining of insufficient inspection of 72 Krupp's steel engine tires.

2. On receiving this letter, I at once placed myself in communication with Mr. Fowler on the subject, and I now enclose for your information a copy of his report, together with copies of its enclosures. The originals I retain, as I do also the gauging rods used in measuring the tires, which Mr. Fowler has forwarded to me.

3. I would beg your attention to the date of the report from Mr. Tulk, by whom the inspection was made, which will satisfy you that the document is a report at the time, and not one drawn forth now.

4. In this conflict of testimony, I can see but one course by which a conclusion satisfactory to all concerned can be arrived at, viz., that tires (say six or eight) be taken at random from among the tires

3.—6½.
2.—6½.

sent (of both the dimensions), and that these (being of course in the precise state in which they reached Sydney) be forwarded to me under seal, in order that I may, on receiving them, have them carefully measured in my own presence, and in that of Mr. Fowler, of Messrs. Krupp's representative here, and of some absolutely disinterested person to be named by you.

I have, &c.,
W. C. MAYNE,
Agent for the Colony of New South Wales.

6 November.

3. P.S.—I have this morning received from Mr. Fowler a further communication forwarding letters from Messrs. Krupp, and from the member of the firm in London; copies of these I also enclose.

W.C.M.

[Enclosures.]

John Fowler, Esq., to Captain Mayne.

2, Queen's Square Place,
Westminster, 5 November, 1868.

New South Wales Railways.

Sir,

I beg to acknowledge the receipt of your letter of October 28th, with enclosures, viz.: Minute of August 24th, complaining that the 72 Krupp's steel tires indented for in October, 1867 (and sent out from England, February, 1868) were respectively $\frac{1}{4}$ inch and $\frac{1}{8}$ inch too small in diameter; a letter from the Commissioner of Railways, of August 28th, and also a letter from the Colonial Secretary, of September 1st, reflecting on the manner in which the inspection of materials is made in this country.

I regret exceedingly that the Minister should have felt it to be his duty to write that letter; but I feel sure that the same feeling of duty and of fairness will prompt him to retract his reflection, when I explain the manner in which the inspection in this case has been carried out.

On the receipt of the indent in December, 1867, no one but Messrs. Krupp was or could be applied to, and a letter was accordingly forwarded in the usual terms, repeating the exact words of the indent and calling on Messrs. Krupp for a tender (copy of letter enclosed). On the receipt of the tender, and on its acceptance by yourself, the order was given.

In cases of this kind where a speciality is required, the mode of manufacture is not interfered with, but when the order is completed the materials are carefully examined as to size and compliance with requisition.

On the arrival of these tires in London, one of my inspectors, Mr. Tulk, the son of a locomotive engine manufacturer, and who has been for seven years my assistant, received orders to inspect them with rods prepared for the purpose, and which I have tested and can certify to be correct to within $\frac{1}{100}$ of an inch. After making his inspection he sent in his report, which I enclose, and I also forward the rods which were used.

I have since requested Mr. Tulk to report respecting the alleged discrepancies, and he reiterates his former report so emphatically that it leaves me no alternative but to say that I believe that a mistake has been made in the Colony, and that the tires were as he states, not differing more than $\frac{1}{32}$ inch from the required diameter.

Suppose, however, that the tires really were in one case $\frac{1}{4}$ inch, and in the other case $\frac{1}{8}$ inch smaller than ordered, it would merely be necessary to bore out in one case $\frac{1}{4}$ inch more, and in the other case $\frac{1}{8}$ inch more all round than intended by the indent, which would really be immaterial, as not affecting the fitting of the wheel and tire, and not involving any appreciable additional expense. I am therefore led to the conclusion that the men engaged upon the work, although no doubt first class mechanics, were not accustomed to manipulate steel tires, which are comparatively of recent introduction, and may have attempted to deal with them as they would have done with wrought iron tires, viz., by stretching them.

I may observe that stretching steel tires has been found to be at all times a hazardous operation—they should always be bored out before being fitted on; and that being so, even if they had been $\frac{1}{4}$ inch or $\frac{1}{8}$ inch too small, it would be an easy and inexpensive matter to bore them to the exact size.

I believe that I cannot add anything more to this report, except to say that I have taken the opinion of some of the most eminent manufacturers in the country, and that they entirely concur with me as to the necessity of boring out in all cases.

I am, &c.,
JOHN FOWLER.

John Fowler, Esq., to Messrs. Krupp.

2, Queen's Square Place, Westminster, S.W.,
17 December, 1867.

New South Wales Railways.

Dear Sirs,

I shall feel obliged by your sending a tender addressed to Captain Mayne, No. 118, Cannon-street, E.C., on or before 12 o'clock on Tuesday, December 24th, for the supply of the following materials:—

54 best Krupp's steel engine tires, shut and blocked—				18 best Krupp's steel engine tires, shut and blocked—			
			ft. in.				ft. in.
Inside diameter	..	..	3 6½	Inside diameter	..	..	2 6½
Width	..	..	0 6	Width	..	..	0 5½
Tread	..	..	0 2½	Tread	..	..	0 2½
(For wheels 3 ft. 6½ in. diameter.)				(For wheels 2 in. 6½ in. diameter.)			

The tender must include all cost of packing and protection from injury, and delivery free on board in London or Liverpool, and must state the time at which delivery will be guaranteed.

The work to be carried out under my inspection, and to my entire satisfaction as to quality of materials and workmanship, and also as to mode of packing and the general completion of the order.

Payment will be made by Captain Mayne, the Representative Agent to the Government of New South Wales, one month after the production of the bill of lading accompanied by my certificate.

I am, &c.,
JOHN FOWLER,
per J. D. BALDRY.

P.S.—Time being of great importance, I have to draw your attention to the part underlined [*Italic*] above.

Mr. E. J. Tulk to John Fowler, Esq.

2, Queen's Square Place, Westminster,
14 February, 1868.

New South Wales Railways.

Contract for Krupp's best steel engine tires, let to Messrs. Krupp, December, 1867.

Sir,

In accordance with your instructions, I made an inspection of the above, in the barge "Cavour," for shipment in the export ship "Strathdon."

The order is as enumerated below:—

54 best steel engine tires, shut and blocked—				18 best steel engine tires, shut and blocked—			
			ft. in.				ft. in.
Inside diameter	..	..	3 6½	Inside diameter	..	..	2 6½
Width	..	..	0 6	Width	..	..	0 5½
Tread	..	..	0 2½	Tread	..	..	0 2½
(For wheels 3 ft. 6½ in. diameter.)				(For wheels 2 ft. 6½ in. diameter.)			

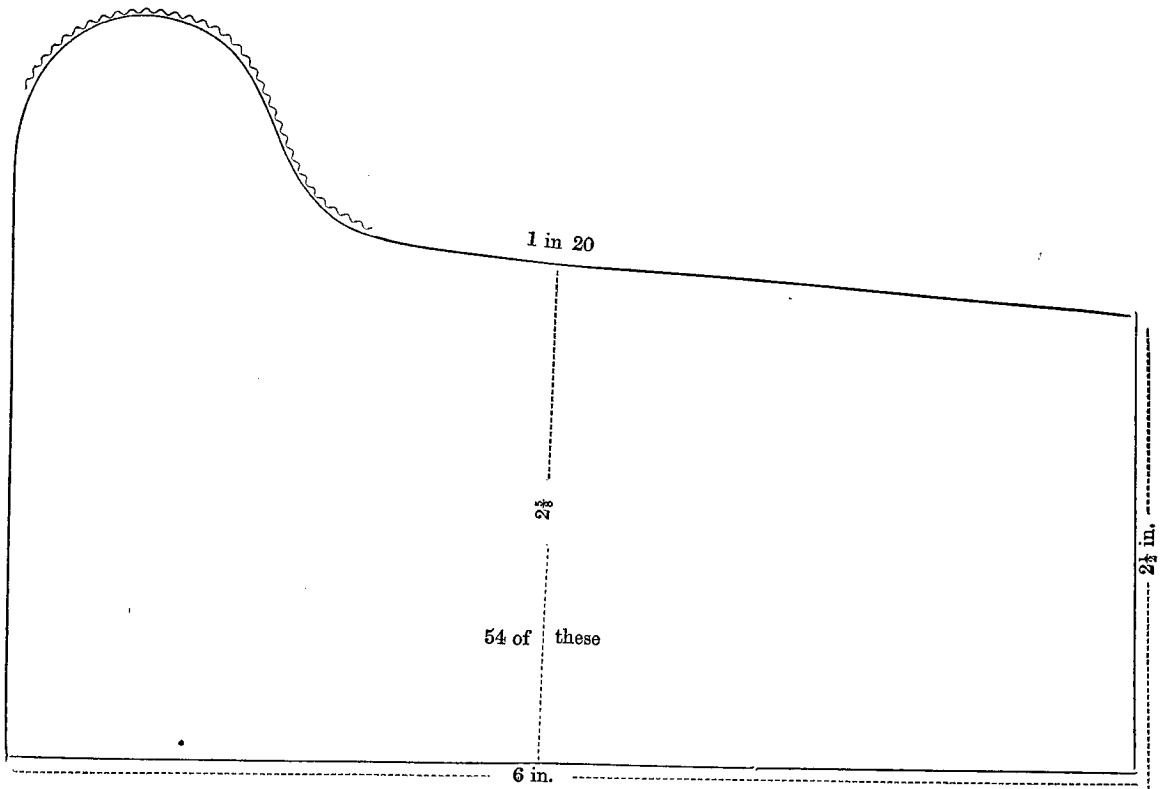
I gauged the internal diameter of each tire as it was being slung up; this I was able to do with considerable exactness with gauge rods prepared for the purpose. I found the diameter uniformly in accordance with that specified, being generally about $\frac{1}{32}$ less, in. and in no case in excess.

The width and tread of the tires are correct, and a proper allowance has been made for reduction of section in turning.

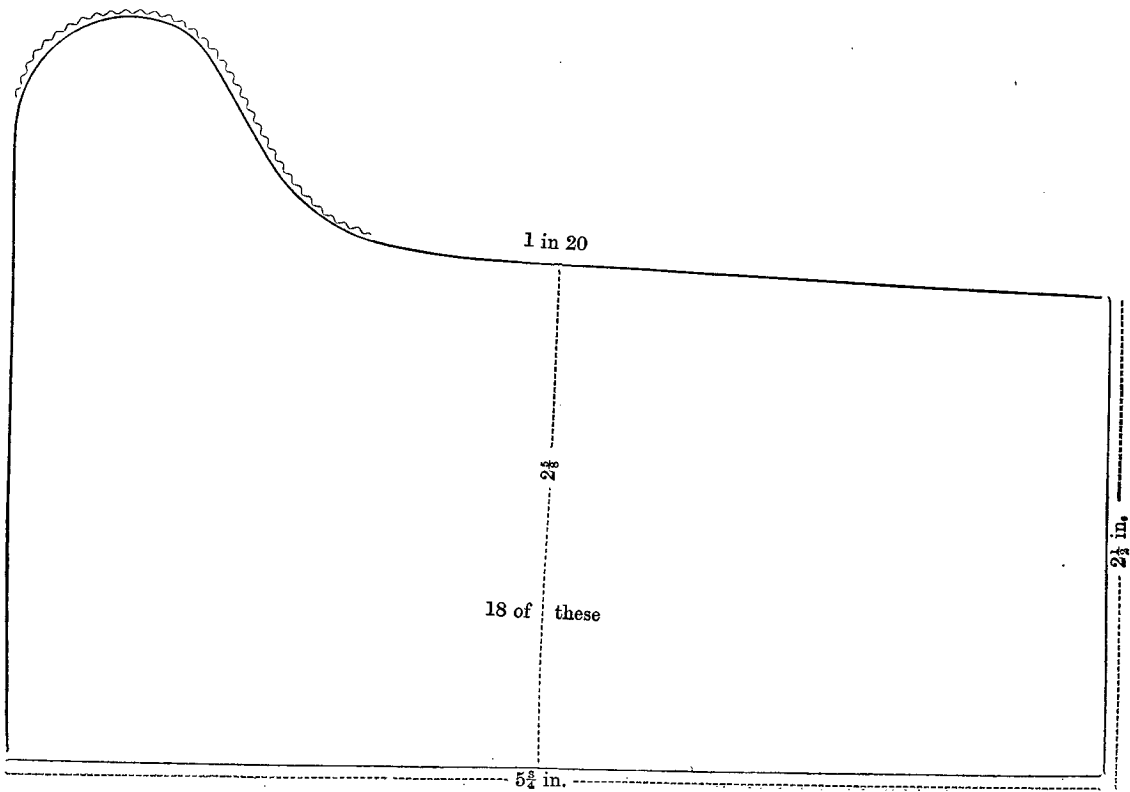
All the tires are without welds, and generally they appear to be round and carefully finished. They are stamped with the maker's name, and have been properly dipped in linseed oil.

I am, &c.,
EDWARD J. TULK.

KRUPP'S ENGINE TIRES.—SCALE FULL SIZE.



NOTE.—The wavy lines show the section of flange as manufactured.



John Fowler, Esq., to Captain Mayne.

2, Queen's Square, Place,
Westminster, S.W.,
6 November, 1868.*Krupp's tires.*

Dear Sir,

I am just in receipt of the enclosed letters from Krupp & Co., one from Essen, the other from the London member of the firm—Mr. Longsdon. I beg to draw your attention to the latter part of Mr. Longsdon's letter.

I am, &c.,
JOHN FOWLER,
p. J. D. BALDRY.

L. Wiegund to John Fowler, Esq.

Essen, 2 November, 1868.

Dear Sir,

By your favours of 29th and 30th ultimo, you give me notice about a complaint respecting the 72 tires ordered for the New South Wales Railways, December 17th, 1867, and supplied to my invoice of February 1st. I have examined with greatest accuracy all particulars about this order, from which it is evident that there have been supplied from these works—

54 tires of 3 feet 6½ inches inside diameter	} In the rolled state.
18 " " 2 " 6¾ " " " "	

which is throughout in accordance with the dimensions ordered.

I am, &c.,
p. pro FRIED KRUPP,
L. WIEGAND.

Mr. A. Longsdon to John Fowler, Esq.

Fried Krupp's Cast Steel Works,
Essen Rhenish, Prussia.
London, 11, New Broad Street, E.C.,
5 November, 1868.

New South Wales railway tires.

Dear Sir,

In reference to the order we had the pleasure of receiving from you for 72 tires for the New South Wales Railway, I was sorry to hear that certain complaints had been made in Australia as to their want of accuracy in the inside diameter. I directly wrote my firm at Essen upon the subject, and requested that a searching inquiry might be made; and my firm has replied to me with the enclosed letter stating that the tires have been delivered in strict accordance with the dimensions given on the order. I feel certain that the tires have been supplied to the size ordered, viz., 3 feet 6½ inches and 2 feet 6¾ inches inside diameter; and to test this I shall be very happy that six tires or more should be returned to London for re-measurement, and to abide this ordeal of the accuracy of our work, or any other means that you may consider best.

I am, &c.,
p. pro FRIED KRUPP,
ALFRED LONGSDON.

No. 29.

THE PRINCIPAL UNDER SECRETARY to CAPTAIN MAYNE.

Colonial Secretary's Office,
Sydney, New South Wales,
1 September, 1868.

SIR,

In reference to the letter which I had the honor, by the direction of the Colonial Secretary, to address to you on the 10th June last (No. 68.82), on the subject of the defective manufacture of railway carriages supplied to the Colony, I am now desired to forward to you the enclosed copy of a report submitted by the Commissioner of Railways as to a supply of Krupp's best shut engine tires, shut and blocked, indented for in October, 1867, and to observe that the business performed for the Colony appears to be executed in a manner by no means beneficial to its interests; and to call your especial attention to the serious loss which the Colony sustains in these transactions, and to the indispensable necessity for your watching unremittingly over its interests therein.

I have, &c.,
HENRY HALLORAN.
(For Colonial Secretary.)

No. 30.

CAPTAIN MAYNE to THE COLONIAL SECRETARY.

Agency of the Government of New South Wales,
118, Cannon-street, London,
5 November, 1868.

(No. 85.)

SIR,

I do myself the honor to acknowledge the receipt, on the 28th ultimo, of your letter, No. 68-4757, 137, of the 1st of September last, enclosing a copy of the report submitted by the Commissioner of Railways as to a supply of Krupp's best steel engine tires, shut and blocked, indented for in October, 1867, calling my special attention to the serious loss which the Colony sustains in this and in the matter of defective manufacture of carriages referred to in your letter, No. 68-82, of the 10th June last, and to the indispensable necessity for my watching unremittingly over its interests in these transactions.

2. With regard to the particular matter of the steel engine tires supplied by Krupp, I beg to enclose for your information a copy of a letter I have addressed to the Honorable the Commissioner of Railways, in reply to his communication on the subject, with copies of the enclosures in that letter; and I

would

would ask your attention to the suggestion I have made in paragraph 4; it appearing to me that in the conflict of testimony in this matter, by the course indicated alone can a conclusion satisfactory to all interested be arrived at.

3. With regard to the general question as to the way in which the supply of railway material for the Colony is constructed, I beg to assure you that I give to every order I receive my most prompt, earnest, and anxious consideration and attention; consulting, and being in every case, as regards scientific material and mechanical detail, guided by the Consulting Engineer, who is, I consider, responsible to the Government for the faithful and efficient discharge of the duties of his office.

4. The Colony retains, and it is indispensable that it shall do so, the services of such an officer; and at the very commencement of my duties as its Resident Agent here I gave this point the very best and most careful consideration in my power; and that consideration led me to the absolute conclusion that any interference whatever on my part with the mode of conducting the duties strictly attaching to the Consulting Engineer would have but one result, and that one most mischievous and dangerous to the interests of the Colony, namely, to relieve him from his proper and full responsibility. I have, therefore, once I have accepted a tender, guardedly abstained from such interference, and have, as in the case of the railway carriages (when, at Mr. Fowler's request, I visited the works and saw these carriages), in distinct terms beforehand impressed that my doing so was not to be regarded as in any—the very slightest degree—removing from him any of the responsibility attaching to him for securing the full and faithful execution of the contract.

5. The terms of our contracts, as you are aware, provide that payment shall be made on Mr. Fowler's certificate, and without it it never is made. Mr. Fowler stands in the very foremost rank in his profession; he maintains a staff of highly trained, thoroughly competent, and, I have every reason to believe, trustworthy assistants: his professional credit, his pecuniary interest, impose upon him the necessity of doing so; and while I have no grounds for supposing that any of these are lax in the discharge of the duties entrusted to them, or inclined to leaning in favour of contractors executing the work for the Colony, I have repeated testimony, in their constant and minute reports to Mr. Fowler during the progress of work, to the highly stringent supervision they exercise, the severe tests they apply, and the promptness with which they check any deviation from the precise terms of a specification. In Mr. Tulk's report on Krupp's springs (a report I would point out made at the time—not a document now drawn forth) you will observe that he states that he measured *each tire* with gauge-rods prepared for the purpose. These rods have been forwarded to me by Mr. Fowler, and I retain them in view of the suggestion I have made being acted on, that I may compare them with a standard measure and test the tires as being in accordance with them or otherwise.

I have, &c.,

W. C. MAYNE,

Agent for the Colony of New South Wales.

Submitted, 28 December, 1868.

Secretary for Public Works, 30/12/68.—J.R.

The Under Secretary for Public Works. H.H. To be returned.

Noted, 31/12/68. Receipt acknowledged, 31/12/68.

No. 31.

THE PRINCIPAL UNDER SECRETARY to CAPTAIN MAYNE.

Colonial Secretary's Office,

Sydney, New South Wales,

31 December, 1868.

(207.)

SIR,

I am directed by the Colonial Secretary to acknowledge the receipt of your letter of the 5th ultimo, respecting steel engine tires supplied to this Colony by Messrs. Krupp.

I have, &c.,

HENRY HALLORAN.

No. 32.

CAPTAIN MAYNE to THE COLONIAL SECRETARY.

Agency of the Government of New South Wales,

118, Cannon-street, London,

3 December, 1868.

(No. 89.)

SIR,

I do myself the honor to acknowledge the receipt of your letter, No. 158, of the 9th of October last, enclosing a copy of the communication from the Under Secretary for Public Works, with reference to the inferior construction of certain railway carriages; and instructing me, on behalf of the Government of New South Wales, to call upon the manufacturers of the carriages in question to pay the actual cost of putting them in repair, estimated by the railway authorities at £280 7s.

In pursuance of those instructions, I have lost no time in communicating with the Consulting Engineer, in order that the manufacturers may be at once called on to make good the expense caused to the Colony by the defective material and work in the carriages supplied by them respectively.

The short period intervening between the receipt of your letter and the dispatch of the mail precludes my being in possession of the result of this call upon the manufacturers, but by the next Suez mail I shall, I have no doubt, be able to report it to you.

I have, &c.,

W. C. MAYNE,

Agent for the Colony of New South Wales.

Under Secretary for Public Works. B.C., 28/1/69.—J.R.

Under Secretary for Public Works. B.C., 28/1/69.—H.H.

Noted, 28/1/69.

No. 33.

No. 33.

CAPTAIN MAYNE to THE COLONIAL SECRETARY.

Agency of the Government of New South Wales,
118, Cannon-street, London,
31 December, 1868.

(No. 93.)

SIR,

Having reference to my letter of 3rd instant, No. 89, I have now the honor to enclose for your information copies of the communications addressed to Mr. Fowler by the Railway Carriage Company and by the Midland Wagon Company, in reply to his call upon them to repay to the Government of New South Wales the charges incurred through defective work in the railway carriages respectively supplied by them under their contracts with the Colony.

2. By next mail I hope to transmit the further communications promised; and as both Companies expressly state they have no desire to evade any proper responsibility, I shall I trust be able then to report to you a satisfactory settlement of the matter.

3. Drawing your attention to that part of the letter from the Railway Carriage Company in which reference is made to the £89 (already deducted from them by me) for damage to case 55 per "Landsborough," I have to request to be informed whether the cost of repairing the damage to the contents of that case is included in the £280 7s. set forth in the statement forwarded to me in your letter of the 9th of October last, No. 158, as if included the claim on that Company will to that extent have been satisfied.

I have, &c.,

W. C. MAYNE,

Agent for the Colony of New South Wales.

The Secretary for Public Works, 23 February, 1869.—J.R.

The Under Secretary for Public Works, 23 February, 1869.—H.H.

Noted, 24/2/69.

[Enclosures.]

John Fowler, Esq., to Captain Mayne.

2, Queen Square Place, Westminster,
30 December, 1868.

Sir,

Referring to your letter of 1st December, enclosing copies of letters from the Colony of 8th and 9th October, on the subject of carriages made by the Midland Company and by the Oldbury Company, I beg leave to enclose the replies made by those firms on the subject.

So soon as I receive the further communications referred to I will forward them. In meantime can I say anything in reply to the Oldbury Company as to the sum they have already paid?

I am, &c.,

JOHN FOWLER,

p. J. D. BALDREY.

Mr. W. Stableford to John Fowler, Esq.

Railway Carriage Company (Limited),
Oldbury, near Birmingham,
28 December, 1868.

Dear Sir,

We beg to acknowledge your letter of the 10th, containing a statement, and requesting payment of £97 8s. for making good the defects in second-class carriages made by us.

We need hardly say that it occasions us extreme regret that a complaint of that nature should have been made. We have no desire to evade the proper responsibility for the character of our work. We have entered into a close investigation as to the missing paints, &c., and we would call your attention to our having already paid the sum of £89 to Captain Mayne for partial damage to case No. 55 by sea; and as this amount must have far exceeded the damage done to that case, for which alone we were liable, we think that this payment has not been taken into consideration, or that the advice of it had not reached Sydney.

I am, &c.,

WM. STABLEFORD.

Mr. H. Bridges to John Fowler, Esq.

Midland Wagon Company, Birmingham,
24 December, 1868.

Dear Sir,

Your communication of the 10th inst., respecting the New South Wales carriages, has been duly submitted to my Directors, and they have given to it their most earnest attention, so much so that they have gone into the matter in detail; but as some of the claims are of so peculiar a character, they have desired the staff to look into them in closer detail; and our Manager, Mr. Drinn, is, as soon as this is done, to see you and explain the result of such examination in detail, the spirit of which is that we desire not to evade any costly responsibility fairly chargeable to us.

Yours truly,

H. BRIDGES,

Secretary.

No. 34.

CAPTAIN MAYNE to THE COLONIAL SECRETARY.

Agency of the Government of New South Wales,
118, Cannon-street,
London, 29 January, 1869.

(No. 98.)

SIR,

Having reference to my letter No. 89, of the 3rd of December last, I do myself the honor to enclose for your information copies of the letters received from the Railway Carriage Company and the Midland Wagon Company respectively, in reply to the call made on each by the Inspecting Engineer, to make good the expense caused to the Colony by the defective material and work in the carriages severally supplied by them.

2. Those letters have reached me only yesterday and to-day.

3. I have informed Mr. Baldry (Mr. Fowler is at present in Egypt, to meet H.R.H. the Prince of Wales) that I shall transmit copies of them to you by this mail; and I have pointed out that the Midland Wagon Company, in estimating the extra cost of material and workmanship in the Colony at 50 per cent. only over English rates, have under-estimated that considerably.

4. Having regard to all the circumstances, I beg to recommend to your consideration, in order to avoid any litigation—certain to be costly and doubtful in result—that the reference proposed by the Midland Wagon Company for the settlement of the claim on them be adopted.

5. The information required as to the carriage springs, I have to request that I may have furnished to me.

I have, &c.,
W. C. MAYNE,
Agent for the Colony of New South Wales.

[Enclosures.]

Mr. H. Bridges to John Fowler, Esq.

Midland Wagon Company,
Birmingham, 27 January, 1869.

New South Wales carriages.

Dear Sir,

In further reply to your communications enclosing copies of reports and charges for repairs to the six 1st class carriages which we built for the Government of New South Wales, and in continuation of our replies to the same, dated 6th July and 24th December last respectively, we have to inform you that we have carefully investigated the statement of charges for work done in the Colony, which you forwarded to us on the 10th December last.

In answer to the above, we can only again express our great regret that any necessity for these complaints should have arisen, as every endeavour was made by us to build carriages that would be entirely satisfactory to yourself personally, and that should be approved in the Colony; and in fact when they left these works we were sanguine that they would prove so satisfactory in work that we should have the pleasure of building further carriages for that Government.

We have, however, now to deal with the complaints as reported from the Colony, and we cannot help protesting in the strongest manner at the large amount charged in remedying these enumerated defects thus:—

Panels as charged £120:—The total value of (say at the outside) one-fourth of the entire number of panels in the six carriages (if it were possible that so many should fail, including labour for taking out old and refixing new, repainting, varnishing, and heraldry, in this country, should be £40; say we allow 50 per cent. for extra costs in the Colony, this would equal £60.

On the subject of the cracked panels, you will pardon us for saying that we attribute it entirely to exposing the carriages too soon after being taken out of the ship.

180 Venetian blinds as charged £18.—This is a charge that does not belong to us at all, as we faithfully worked to drawings, and first made a sample door with louvre blind complete, which was sent up to London and approved, and to which all the remainder of the blinds were constructed, and the whole of them when tried in these works were found to be quite satisfactory.

48 new rollers for glass frames charged £9.—We cannot understand this, as we completed the carriages in every respect, of course including the above; but under any circumstances the charge is excessive; they would not cost in this country more than 1s. 6d. each; allow 50 per cent. for extra value in the Colony, would be 2s. 3d. each, which on 48 rollers would amount to £5 8s.

Setting and hardening 32 bearing springs, charged £32.—The springs used in the 1st class carriages were made by Chas. Cammell & Co., Cyclops Works, Sheffield; and as this is a matter for them to deal with, we must be quite certain that the springs are all or any part of them of their make. Our reason for asking this information is, that the springs for the 2nd class carriages, supplied by the Oldbury Company, were manufactured by J. Brown and Co., Atlas Works, Sheffield. This information can be obtained by examining the springs themselves, which all bear the name of the manufacturer on the top plate, and will thus show to which firm this charge has to be referred.

12 new shackles to screw couplings to suit 8-chain curves, charged £1 4s.—This, we think, is not a claim on us.

20 new spring clips, £1 10s.—This, as before, has reference to the manufacturer of the springs.

120 bolts for fixing bodies to under-frames, £1 5s.—These we are quite certain were sent out.

In justice to ourselves, we have thus given a truthful explanation in a manner which we think is fair and reasonable. Our reputation and good name are of far greater value to us than the amount in question now; and if we felt ourselves to be in the wrong, or not to have executed the work in the *bonâ fide* spirit of good faith and honesty, we should be but too glad at once to pay the amount claimed; but if after what we have said the Government still think we are liable for what took place beyond our own control, we are quite prepared to leave the settlement of the claim made unreservedly to the decision of the Engineer-in-Chief of the Government of New South Wales, and by which we will be bound.

We trust that this proposed arrangement will meet with the approval of the Colonial Government, and that we may thus retain their confidence in future requirements.

Yours truly,
H. BRIDGES,
Secretary.

Mr. H. Wheeler to John Fowler, Esq.

Railway Carriage Company (Limited),
Oldbury, near Birmingham,
27 January, 1869.

Dear Sir,

Our Manager has been called away to Russia on an important contract. I regret that his absence prevents my replying on the subject of the 2nd class carriages supplied to the Government at Sydney in time for this mail, but I trust his return will so enable me to reply in time for the next mail.

I am, &c.,
H. WHEELER,
Secretary.

No. 35.

THE ENGINEER FOR EXISTING LINES to THE COMMISSIONER.

Government Railway—Existing Lines.

Radial carriages.

If there was anything wanted to convince the Government of the shameful treatment they receive at the hands of contractors and others in England, this correspondence will supply it.

The Colonial Secretary, moved by the Secretary for Works, addresses a letter to the Colonial Agent, animadverting in strong terms upon the discreditable and unworthy workmanship in these carriages. The Colonial Agent writes to the inspecting engineer, conveying the remonstrances from the Government, and calling for an explanation, and demanding amount of claim. The inspecting engineer writes to his inspector, who is supposed to have inspected the work as it progressed. The

The contractors are also written to regarding the matter and the particulars of the claim; and their reply is a mass of quibbles, such as might be expected. Take, for instance, their remarks on the item of bearing springs. They coolly tell us they were manufactured by Chas. Cammell & Co., who are responsible for them, and not themselves, leaving the Government, I presume, to deal with their subs. on the contract.

Then, again, the bolts, which we never received, they state they are certain were sent out. The failure of the shackles, they assert, is not fairly chargeable against them. If not, who is it against, I would ask?

There are several other letters from foremen and others employed by the contractors, the result of all of which is, that, the Colonial Agent informs us we have no legal claim, and that the mode proposed by the contractors for settling it be adopted! Would any one in their senses expect the contractors and their foremen to say they had sent out a lot of rubbish; or would they expect the inspectors to say they had not done their duty?

Here we have the articles before us: and although it is evident to any practical man that the workmanship and materials are disgraceful, yet, upon an appeal being made on the contractors for the actual cost of putting them in running order, they coolly assure us that we are mistaken in our judgment of what is good or bad; and in this they are backed up by the officers appointed by the Government to protect their interests.

At the present time we are expending upwards of £800 on the under-frames alone of these very carriages; besides which, they must all be newly panelled and painted, at a cost of another £1,000.

I have, in previous papers, pointed out what the result of appeals such as this would be, as it is hardly to be expected that parties blamed would acknowledge their own shortcomings; and it is only a sample of what the Government may expect, if they continue to submit to such treatment.

It will be seen, by a recent article in the *Herald*, that the Government of South Australia are in a similar position.

There is a minute in this correspondence, written by Mr. Whitton on 16/1/69, which has not previously come under my notice, where he says he has protested against their use, &c.; and goes on to say,—“It is to me marvellous that the danger has not been previously apparent to Mr. Thomas.” Now, notwithstanding his statement that he had protested against the use of these carriages on any portion except the mountain line, I do not, nor have I ever seen a single word in *writing* from him on the subject, except in his minute of 5/11/68 (a copy of which is with these papers), wherein he wished to be informed, with reference to an article which had appeared in the *Empire* about these carriages being entirely unfit for use, why others than those required for the mountain line *were not in use*; which, in my opinion, is anything but a protest against their being employed, as two (at the most) are ample for working the Western Line.

Now, the course pursued by me in the matter was, that no sooner had they been tested by running, than I wrote *first* to the Traffic Manager, *then* to the acting Traffic Manager, and *finally* to the Commissioner, warning them of the danger incurred by their use, all of which correspondence is on record.

J. H. THOMAS.
29/4/69.

No. 36.

CAPTAIN MAYNE to THE COLONIAL SECRETARY.

(No. 103.) Agency of the Government of New South Wales,
118, Cannon-street, London,
25 March, 1869.

SIR,

Referring to my letter, No. 98, dated January 29th, on the subject of inferior construction of railway carriages, I have now the honor to forward you copy of a letter I have received through Mr. Baldry, Mr. Fowler's principal assistant, from the Oldbury Company, in which they promise attention to the matter on return of their Manager from Russia, probably in two or three weeks.

I have, &c.,

W. C. MAYNE,
Agent for the Colony of New South Wales.

For the Secretary for Public Works.

Under Secretary for Public Works, 18 May, 1869.—H.H.

Railways, with reference to previous papers sent to that Branch on 1st April last. B.C., 20/5/69. J.R.

[Enclosure.]

Mr. H. Wheeler to Mr. J. D. Baldry.

Railway Carriage Company (Limited),
Oldbury, near Birmingham,
5 March, 1869.

Dear Sir,

Mr. Stapleford is still in Russia. I should think from his letters that he will not be here for the next two or three weeks. The matter to which you refer shall have attention immediately he returns.

Yours faithfully,

H. WHEELER,
Secretary.

No. 37.

25

No. 37.

CAPTAIN MAYNE to THE COLONIAL SECRETARY.

(No. 107.)

Agency of the Government of New South Wales,
118 Cannon-street,
London, 16 April, 1869.

SIR,

Referring to my letter, No. 103, dated 25th March, on the subject of claim on the Railway Carriage Company, Oldbury, I have now the honor to enclose copy of a further communication from that Company, dated the 14th instant, in reply to a further reference advising that their Manager is not yet returned from Russia, but is expected very shortly.

I have, &c.,

W. C. MAYNE,

Agent for the Colony of New South Wales.

The Under Secretary for Public Works with reference to previous papers. B.C., 10 June, 1869.—H.H.
Railways. 12/6/69.—J.R.

[Enclosure.]

Mr. T. P. Stableford to Mr. J. D. Baldry.

Railway Carriage Company (Limited),
Oldbury, near Birmingham,
14 April, 1869.

Dear Sir,

Mr. Stableford has not yet returned from Russia, and I don't think will be home in time to give explanation to Captain Mayne by the 20th instant, though he is expected very shortly. On his return you shall immediately hear from him.

Yours faithfully,

THOMAS P. STABLEFORD.

No. 38.

CAPTAIN MAYNE to THE COLONIAL SECRETARY.

(No. 110.)

Agency of the Government of New South Wales,
118, Cannon-street, London,
14 May, 1869.

SIR,

Referring to my letter, No. 107, dated 16 April, 1869, on the subject of claim on the Railway Carriage Company, Oldbury, I have now the honor to enclose copy of further communication from that Company, dated the 7th instant (in reply to a further inquiry), advising that their Manager is not yet returned from Russia, but is expected in two or three weeks from that date.

I have, &c.,

W. C. MAYNE,

Agent for the Colony of New South Wales.

The Under Secretary for Public Works, with reference to previous papers. B.C., 10 July, 1869.—H.H.

This may be forwarded to Railways, for the purpose of being placed with other papers on the subject. B.C., 14/7/69.—J.R.

[Enclosure.]

Mr. H. Wheeler to Mr. J. D. Baldry.

Railway Carriage Company (Limited),
Oldbury, near Birmingham,
7 May, 1869.

Dear Sir,

Mr. Stableford has not yet returned. He talks of returning in a fortnight or three weeks' time.

Yours faithfully,

H. WHEELER,

Secretary.

No. 39.

CAPTAIN MAYNE to THE COLONIAL SECRETARY.

(No. 119.)

Agency of the Government of New South Wales,
8, Adam-street, Adelphi, London,
16 July, 1869.

SIR,

Having reference to previous correspondence on the subject of inferior construction of railway carriages, I have now the honor to enclose a copy of the letter addressed to Mr. Fowler by the Manager of the Oldbury Carriage Company, in answer to the call made on that Company for explanation. This has reached me too late to admit, ere the mail *via* Marseilles closes, of my commenting on it, but I shall by next mail forward my observations in connection with it.

I have, &c.,

W. C. MAYNE,

Agent General for New South Wales.

The Secretary for Public Works. J.R.—2 Sept., 1869.

The Under Secretary for Public Works. B.C., 2 Sept., 1869.—H.H.

Railway. B.C., 6/9/69.

[Enclosure.]

Mr. W. Stableford to John Fowler, Esq.

Railway Carriage Company (Limited),
Oldbury, near Birmingham,

14 July, 1869.

New South Wales carriages.

Dear Sir,

We beg to refer to your letter of the 10th of December last, containing a statement of complaints received from the Government of Sydney. We need not say that it is with extreme surprise and regret that so serious a complaint should have been made, but we feel assured that when the circumstances are more fully investigated it will be seen the complaint is entirely unfounded.

As you are aware, we have already paid to Captain Mayne a large sum (£89), for making good the second class carriages in the Colony, in consequence of alleged damage caused during the voyage. We think that possibly this may not have been taken into consideration, or that the advices of this payment had not reached the Colony. Some of the charges now made direct from the Colony are repetitions of those made by Captain Mayne, and for which we have paid. It is therefore only just to ourselves that the account now furnished, which contains ascertained damages, should be taken as the one to be considered; and as we can clear ourselves on some of the charges, a balance will remain to our credit, although we do not admit our liability for any of them, as in the first instance the screw couplings were made in accordance with drawings supplied to us. The radial arm and buffer rod we have paid for, although the buffer certainly was not one of ours, if made as reported, as we never make our buffers with plates for heads, but forge them out of the solid bloom. As to the charge of cracked panels and repainting sides of bodies, this we are at a loss to understand, as during shipment, we received a report that one of the cases leaked water; consequently we had it taken from the ship, landed, and opened in the presence of your inspector and the shipping agents. The case was found perfectly dry, and contents uninjured in the slightest degree. Complaints against case 55 were not made until it was in the ship's hold, and when we applied for permission to examine it, were refused. Under these circumstances we consider it very unfair to make us responsible, as there was no more reason for complaint against this case, so far as could be seen when shipped, than there was against the one complained of opened and found perfect; and we feel sure that if the vehicles have received damage, such as panels cracked, paint scratched, it was after arrival in Sydney, either in unloading, during erection, or being allowed to remain exposed to the extreme heat of the sun. The paint was sent direct to the ship from the makers, whose receipt we hold.

I am, &c.,

WILLIAM STABLEFORD,
Manager.

No. 40.

ABSTRACT of Invoices of Railway Carriages, with costs, &c.

Midland Wagon Company.		£	s.	d.	£	s.	d.
1867.							
6 Aug.	4 first-class saloon carriages, @ £850				3,400	0	0
	Freight and $\frac{1}{2}$ primage	412	8	2			
	Insurance	90	10	6			
	Shipping charges						
	Inspector's commission	85	0	0			
	Package duty	3	9	0			
	Cartage	32	17	0			
					624	4	8
					£	4,024	4 8

EDWD. FIELDING.—1/4/69.

ABSTRACT of Invoices of Railway Carriages, with costs, &c.—continued.

Railway Carriage Company.		£	s.	d.	£	s.	d.
1867.							
2 Nov.	6 second-class carriages, @ £635	3,810	0	0			
	Deduct for damage through bad packing	89	0	0			
					3,721	0	0
	Freight and $\frac{1}{2}$ primage	497	19	9			
	Insurance	112	5	8			
	Shipping charges						
	Inspector's commission	89	0	0			
	Cartage	40	17	2			
					740	2	7
					£	4,461	2 7

EDWD. FIELDING.—1/4/69.

ABSTRACT of Invoices of Railway Carriages, with costs, &c.—continued.

Midland Wagon Company.		£	s.	d.	£	s.	d.
1867.							
30 Aug.	2 first-class saloon carriages, @ £850				1,700	0	0
	Freight and $\frac{1}{2}$ primage	206	5	8			
	Insurance	45	7	6			
	Shipping charges						
	Inspector's commission	42	10	0			
	Cartage	16	19	9			
					311	2	11
					£	2,011	2 11

EDWD. FIELDING.—1/4/69.

ABSTRACT

ABSTRACT of Invoices of Railway Carriages, with costs, &c.—*continued.*

Railway Carriage Company.		£	s.	d.	£	s.	d.
1867. 17 Oct.	4 second-class carriages, @ £635				2,540	0	0
	Freight and $\frac{1}{2}$ primage	332	4	4			
	Insurance	68	3	2			
	Shipping charges						
	Inspector's commission.....	63	10	0			
	Cartage	27	4	9			
					491	2	3
					£3,031	2	3

EDWD. FIELDING.
1/4/69.

ABSTRACT of Invoices of Railway Carriages, with costs, &c.—*continued.*

Railway Carriage Company.		£	s.	d.	£	s.	d.
1867. 2 Nov.	2 second-class carriages, @ £630				1,260	0	0
	Freight and $\frac{1}{2}$ primage	165	16	9			
	Insurance	34	1	7			
	Shipping charges						
	Inspector's commission.....	31	10	0			
	Cartage	13	13	0			
					245	1	4
					£1,505	1	4

EDWD. FIELDING.
1/4/69.

STORES, G. W. R.

SCHEDULE B.—Foreign Imports. Carriages for Western Line.

Date of Receipt.	Name of Ship.	Particulars.	Foreign Charges.					Colonial Charges.		Gross Total.	
			Invoice.	Freight.	Insurance.	Shipping Charges, &c.	Inspector's Commission.	Total.	Cartage.		Sundries.
1868.			£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	
20 Jan.	Globe	4 first-class carriages	3,400 0 0	412 8 2	90 10 6	.....	85 0 0	3,987 18 8	32 17 0	3 9 0	4,024 4 8
4 Apr.	Earl Dalhousie.	2 " "	1,700 0 0	206 5 8	45 7 6	.....	42 10 0	1,994 3 2	16 19 9	.....	2,011 2 11
12 Mar.	Landsborough.	6 second-class "	3,721 0 0	497 19 9	112 5 8	.....	89 0 0	4,420 5 5	40 17 2	.....	4,461 2 7
6 "	Canaan	4 " "	2,540 0 0	332 4 4	68 3 2	.....	63 10 0	3,003 17 6	27 4 9	.....	3,031 2 3
4 Apr.	Esmeralda	2 " "	1,260 0 0	165 16 9	34 1 7	.....	31 10 0	1,491 8 4	13 13 0	.....	1,505 1 4
			12,621 0 0	1,614 14 8	350 8 5	.....	311 10 0	14,897 13 1	131 11 8	3 9 0	15,032 13 9

EDWD. FIELDING,
Storekeeper.

II.

Correspondence respecting relaying Line to Parramatta.

No. 1.

THE SUPERINTENDENT OF WAY AND WORKS to THE ENGINEER-IN-CHIEF FOR RAILWAYS.

Redfern Station,
31 October, 1865.

SIR,

I had the honor, in my report on the state of the lines, dated September 16th,* and again on the 18th instant,* when I forwarded you a statement of the quantity of permanent way material required for renewals and repairs, to draw you attention to the urgent necessity existing for procuring a supply of Barlow rails, sufficient to enable me to keep the line from Sydney to Parramatta in tolerable repair for the present. I recommended that a mile of the line should be relaid with double-headed rails, and that the supply of Barlow's, thus obtained, would probably be sufficient to maintain the line until the projected relaying could be done. I beg respectfully that you will furnish me at once with the necessary rails, chairs,

*General report on lines.
*Do. do.

chairs, &c., to do this work, as the line is daily getting worse, and I have no rails left to replace those now requiring renewal. The sleepers also, for which I forwarded specification a few days since, ought to be procured as soon as possible and put in. I feel the responsibility of maintaining this piece of line without a proper stock of rails for renewals to be very heavy, and I am in constant dread of an accident.

I have, &c.,

DURANT TROTTER.

Something should be at once done towards the reconstruction of the line between Sydney and Parramatta Junction. Originally the length was badly ballasted, the sleepers deficient in number and those used bad, being only saplings of small size, and the rails of a defective description. The cost of maintenance is consequently heavy, and the rails are being rapidly worn out. £20,000 has been placed on the Estimates for 1866 towards relaying a portion of this length, and I propose to lend from the stock received for the Extensions* one mile of single way of rails, &c., so that the relaying may commence at once.

* Order No. 574.
4 May, 1866.
W.H.Q.

These rails to be returned when the vote has passed the Assembly and the rails imported.

Fourteen thousand sleepers are required immediately, and I suggest that tenders be at once called for them, to be delivered at the rate of 2,000 per month, and charged for this year to Revenue or until the vote asked for is passed. J.W.—1/11/65.

To Commissioner. Submitted, 2/11/65.—J.R.

Submitted. This matter is very urgent, and I recommend that Mr. Whitton's suggestions be adopted. J.R.—3/11/65.

Approved, and I hope the recommendations will be carried out without any delay. T.W.S.—3/11/65.

Mr. Whitton, for form of advertisement. B.C., 3/11/65.—J.R.

Advertisement herewith. W.H.Q.—4/11/65.

Mr. Trotter. J.W., *pro* W.H.Q.—6/11/65.

£20,000 to be reserved for the purchase of permanent way materials and sleepers only. Ballast and labour to be charged to Revenue. J.W.—6 Nov.,/65.

Seen. D.T.—6/11/65.

The sum of £20,000 has been voted under Loans on the Estimates for 1866, towards relaying the railway line from Sydney to Parramatta Junction. Mr. Whitton, for information. B.C., 9/4/65.—J.R.

I recommend that an indent be sent home by this mail for nine miles of rails, &c., for single way. (Estimated cost, £13,500.) J.W.—16/4/66.

Submitted, 17/4/66.—J.R.

Approved. J.B.—19/4/66.

Indent enclosed. W.H.Q.—19/4/66.

No. 2.

THE SUPERINTENDENT OF WAY AND WORKS to THE ENGINEER-IN-CHIEF.

G.S.R.

THE additional length of relaying to complete the double-headed rail from Newtown to Sydney on the down line is half a mile, and the additional permanent way material required will be

Order No. 578, 29 May, 1866.	}	1,760 yards rail.
		1,760 chairs.
		3,520 spikes.
		2,000 keys = 4 casks.
		250 pairs fish-plates.
		1,000 fish-bolts.

As ballast has been ordered for one mile only, perhaps the extra quantity now required should be supplied by the same contractor, and at the same rate. The quantity that should be ordered to make a good job of the work is 880 cubic yards.

DURANT TROTTER,

18/5/66.

The use of one mile of rails for this purpose has been sanctioned by the Minister, but whilst relaying I think it would be better to complete the down road as far as Newtown. This I suggested to Mr. Trotter. The sanction of the Minister is now asked for the additional half-mile of rails and the requisite ballast. J.W.—22/5/66.

Submitted, 23/5/66.—J.R.

Approved, 23/5/66.—J.B.

Mr. Whitton. B.C., 29/5/66.—J.R.

J.W.—29/5/66.

Order No. 578. W.H.Q.—29/5/66.

Mr. Trotter to order 880 cubic yards of ballast from the contractor. J.W.—29/5/66.

To be returned. Seen. D.T.—30/5/66.

Memo. No. 2,545. 8 June, 1866. The up-line from Sydney to Newtown to be re-laid with the D.H. rail, by order of the Minister for Public Works. (Order No. 581, of 8th June, /66. W.H.Q.—11 June, /66.

No. 3.

THE SUPERINTENDENT OF WAY AND WORKS to THE ENGINEER-IN-CHIEF.

G.S.R.

THE relaying of the down-line between Sydney and Newtown was commenced on Monday the 28th; and on Saturday evening, the whole being a length of a little more than $1\frac{1}{2}$ mile, was packed and ready for traffic. Owing to instructions received, however, on Friday afternoon, directing me to relay the up-line between the before-mentioned stations, and also to relay that portion of the down-line between Sydney yard and a few chains beyond the southern end of the Botany-street tunnel as soon as possible, the portion of the down-line already relaid will not now be opened for traffic till the close of the present week.

The

The relaying of the up-line will be commenced immediately that the down-line is opened. I have, in addition to those men I could spare from the regular staff on other parts of the lines, employed fifty-three extra men and six boys to do this work; they are now all at work, and will continue so till the up-line is relaid.

DURANT TROTTER.
11/6/66.

Authority of the Minister required for the purchase of 3,600 cubic yards of ballast for relaying the up-line from Newtown to Sydney.

J.W.—12/6/66.

Submitted, 12/6/66.—J.R.

Approved, 12/6/66.—J.B.

Mr. Whitton, B.C., 13/6/66.

Mr. Trotter to get the ballast from present contractor at accepted rates. J.W.—13/6/66.

Mr. Trotter. To be returned. W.H.Q.—14 June, /66.

Seen. D.T.—15/6/66.

No. 4.

THE ENGINEER FOR EXISTING LINES to THE COMMISSIONER.
Government Railways—Existing Lines.

Rails for relaying.

THE number of double-headed rails in course of being discharged from the "Dartmouth" and "Sir John Lawrence" I find are only equal to one and a half miles of single way; and as I am most desirous, now that we have commenced relaying, to continue it up to the Petersham Viaduct at least, which will require nearly four miles of rails, I should be glad if the deficiency (two and a half miles of single way) could be lent from the stock now on hand for the Extensions until the arrival of the remainder of the nine miles ordered for this purpose.

The additional traffic during the last three months between Sydney and Burwood (32 trains daily as against 23 formerly) has told very materially upon the old Barlow rails on the length at present proposed to be relaid—to such an extent indeed as to cause me great anxiety, and I do not consider it would be safe to delay their removal a single day beyond what is absolutely necessary.

I believe that the whole nine miles of permanent way materials ordered for relaying the Parramatta line were received some time ago, but being required on the Extensions, were used, and a similar quantity again indented for from England.

JAS. H. THOMAS.—19/6/67.

Engineer-in-Chief for Railways will say whether this suggestion can be carried out. J.B.—19/6/67.

Mr. Whitton, 19/6/67.

Previous papers required. W.H.Q.—20/6/67.

67/1441 and papers herewith. R.M.—24/6/67. Mr. Whitton.

Yes. Six miles of rails, including the length now asked for, have been taken from rails for Extensions; therefore three miles only out of the nine miles ordered for renewals will be available for that purpose.

J.W.—1/7/67.

Order No. 639 herewith. W.H.Q.—5 June, 1867.

Mr. Thomas, 5/7/67.

Seen. J.H.T.—15/7/67.

No. 5.

THE ENGINEER FOR EXISTING LINES to THE COMMISSIONER.
Government Railways—Existing Lines.

Indent for rails, stores, &c.

I FORWARD herewith, for transmission by the next mail, an indent for rails, stores, &c., to be obtained from England.

The mile of rails for the Richmond Railway are required for renewals, as I find there were only the exact quantity required to lay the line imported, and the consequence is we have not more than a dozen rails at present available.

The rails, eight miles of 75-lb. (four miles of single way) are required for replacing the old Barlow metals between Ashfield and Burwood, and chargeable to the special vote of £20,000 for relaying line between Sydney and Parramatta, of which I find there is a balance of £6,686.

As the work is urgently required, I would recommend that some of the rails now lying in the yard for the Extensions be used for it, and replaced with these.

The estimated cost is—

	£	s.	d.
Patent packing	560	0	0
Hose pipe	60	0	0
55-lb. rails	418	0	0
75-lb. rails	5,280	0	0
	<u>£6,318</u>	<u>0</u>	<u>0</u>

JAS. H. THOMAS.—21/12/68.

Withdraw portion for permanent way Sydney to Parramatta, and forward remainder by this mail.

J.S.—29/1/69.

Indent sent, 29/1/69.

Government Railways,
Office of Engineer for Existing Lines,
Sydney Station, 21 December, 1868.

Indent for rails, stores, &c., to be ordered through the Colonial Agent, London.

Patent packing for locomotive purposes—the same as indented for 15/2/67.

10 cwt. $\frac{3}{4}$ inch diameter.

15 " $\frac{5}{8}$ " "

15 " $\frac{1}{2}$ " "

NOTE.—This is very urgently required.

Hose-pipe for locomotive purposes—the same as indented for in 15/2/67.

200 feet India-rubber hose-pipe, 2 inches inside diameter, 3-ply canvas, and capable of withstanding a pressure of 200 lbs. to the square inch.

Rails for renewals, Richmond Line:—

1,760 yards of Ω rails, 55 lbs. to the yard. The same as indented for the Richmond Railway, 17/9/62, with the necessary fish-plates and bolts.

NOTE.—Ebbor Vale Company were the contractors for the last rails of this description.

Rails for relaying Sydney to Parramatta:—

14,080 yards of double-headed rails, 75 lbs. to the yard, with the necessary fish-plates, bolts, chairs, spikes, and keys. The same pattern as imported for the Extensions.

JAS. H. THOMAS.
21/12/68.

No. 6.

THE ENGINEER FOR EXISTING LINES to THE COMMISSIONER.

Government Railways—Existing Lines.

Relaying line, Sydney to Parramatta.

On the 21st December, 1868, I forwarded indent for rails for relaying line between Ashfield and Burwood, and suggested that as the work was urgently required, some of the rails which have been so long lying in the Sydney yard should be used in the meantime, and replaced by those ordered from England.

On the 12th January, 1869, I again drew attention to the matter, pointing out that as we had no more Barlow rails for renewals, the work of relaying was still more urgently required to be proceeded with.

On the 25th January, I forwarded draft advertisement calling for tenders for ballast and sleepers, which I recommended should be inserted at once.

Up to the present time no steps whatever have been taken; and as the rails on this portion of the line are rapidly getting worse, I feel it my duty to call the Commissioner's most serious attention to the matter, as if the traffic should be interrupted through my recommendations not being carried out, I cannot be held responsible.

JAS. H. THOMAS.
12/2/69.

Mr. Whitton to supply P. W. materials.

Minute.—69/568. 18/2/69.

Advertisement for tenders may now go to *Gazette*. As I understand from Mr. Whitton, this should be done at once. J.S.—15/2/69.

Gazette, 15/2/69.

No. 7.

Government Railways—Existing Lines.

Relaying Sydney to Parramatta.

As we shall require some 3,000 yards of ballast, and 4,500 sleepers, for relaying between Ashfield and Burwood, it will be as well to call for tenders at once. I enclose draft advertisement.

JAS. H. THOMAS.
25/1/69.

This must stand over until I receive Mr. Whitton's report on the condition of this line. J.S.—6/2/69.

No. 8.

THE ENGINEER-IN-CHIEF to THE COMMISSIONER.

Department of Public Works,
Railway Branch, Engineer's Office,
Sydney, 15 February, 1869.

Great Southern Railway—Sydney to Parramatta Junction.

SIR,

In attention to your verbal instructions, I have examined the condition of the permanent way on the Southern Railway, between Sydney and Parramatta Junction, and have the honor to submit the following report:—

From

From Sydney to the Parramatta Junction, Barlow rails were originally laid down for a double line of way, and this length was opened for public traffic in September, 1855.

These rails being of a peculiar pattern (and the form of course patented), it was assumed by the inventor that sleepers would be unnecessary, and consequently only one sleeper was placed at the joints, and one sleeper under the middle of the rails.

Shortly after the opening it was found that more sleepers were necessary, and as the line was being worked by the contractor for the construction of the railway, under a lease for twelve months, saplings only were used for sleepers, being split down the middle, and laid with the round side down, to avoid, I presume, the expense of adzing a bed for the rails.

These in the course of a few years began to decay, and other sleepers were substituted of larger dimensions, and more in number, but still without being able to maintain with the patent rails anything approaching to a satisfactory permanent way.

It was therefore deemed advisable as these rails began to wear, to relay the line with rails and chairs similar to the other portions of the Railway beyond the Parramatta Junction; and during the years 1866 and 1867, the double-headed rail with chairs was laid from Sydney to Ashfield, a distance of five miles of double line.

Although this length has been relaid within the last three years, with rails and chairs of the most approved description, so completely has the maintenance been neglected, that some portions of it are more like a contractor's temporary road than the main line of a Government Railway.

There is scarcely a quarter of a mile on any part of this length in a satisfactory state—the whole requires lifting, straightening, and ballasting.

It is of little use relaying unless more attention is paid to the maintenance, as nothing but the greatest carelessness could have allowed a road composed of such good materials to fall into such a disgraceful state.

There was not one man on the line between Newtown and Sydney on the day of my inspection (the 9th instant); and as this is the worst part of the whole length, it was a gross neglect of duty to take off (as I ascertained had been the case) men to attend to works in connection with the proposed new carriage-shed south of the Sydney Tunnel.

From Ashfield to near the 12-mile post the line is still laid with the original Barlow rails, but in such a condition from defective rails and rotten sleepers, that I consider it unsafe for the trains to run over at the present rate, and I strongly advise the Commissioner to limit the speed of all trains over this portion (between Ashfield and the 12-mile post) to twenty miles an hour.

There is literally no ballast on this length but sand and a little burnt clay; the few stones that have been thrown in various places on the top of the sleepers are of little use, being much too large for packing. In fact the whole of this length should be relaid at once; but in doing so proper stone ballast should be laid for at least six inches under the sleepers, and after the rails are laid the road should be properly boxed up to within two inches of the level of the rails between, and within one inch of the level on the outside of the rails, and in the space between the two lines of way.

In several instances the embankments on this length are too narrow to receive the full width of ballast, and some of the cuttings to allow of the proper width of ballast being used with the open side drains now existing.

These, however, are defects which can be easily remedied, and should be attended to at once.

From near the 12-mile post to the Parramatta Junction, a distance of about a mile, the road is in much better condition. It was relaid in 1863 with a single-headed rail, fish-pointed, and fastened to cross sleepers with wrought iron spikes, but even this length requires additional ballast before its condition can be considered satisfactory.

The bad state into which the road has been allowed to fall can be attributed only to ignorance of what constitutes a good permanent way, or to negligence in its maintenance.

True economy is shown in the management of a railway when the whole of the works are maintained in the best possible condition; and there is no more certain sign of incompetence on the one hand and extravagance on the other, than to allow the permanent way to fall into the lowest stage of disrepair before any expenditure is considered desirable.

New Carriage-shed.

I wish to draw attention to the position selected for a new carriage-shed, which is being erected about a quarter of a mile on the Newtown side of the Sydney Tunnel, adjoining the main (up) line.

Whenever carriages are taken into or removed from this shed, both the main lines must be blocked, or the engine must run on the wrong line. In either case it will be extremely inconvenient, if not absolutely dangerous. This shed should have been erected in the station-yard, where easy access could have been had to it at all times, without in any way interfering with the main line beyond the immediate station-yard.

To provide a convenient space for the additional shops and sheds, the whole station-ground should be excavated to the level of that portion of the yard on which the new goods shed is being erected, and I recommend that this be done at once.

Signals.

I feel it an imperative duty again to call attention to the defective signal arrangements in the station-yard at Sydney, which are totally inadequate for the protection of the public travelling on the railway.

To protect the station-yard as it ought to have been protected long ago, proper junction signals should be erected near to the tunnel, at the junction of the goods lines with the main lines.

These signals should be above the tunnel, so as to be seen a considerable distance from the station-yard. The pointsman's box should also be above the tunnel, so as to give him a clear view of the whole yard, and of trains approaching the station from the south.

Distance signals should also be erected for the various branch lines, as well as for the main line, and the whole should be worked and controlled by one man.

Junction

Junction for goods lines.

I may remark that the goods lines have only what is termed a single junction, and this is formed with the down line; consequently, all up-trains will have to run (with a long train) down to the passenger station, shunt back through a crossover road on to the down-line before being able to place the trucks into the goods sidings. A proper double line junction must be formed before the goods traffic can be satisfactorily worked.

I have, &c.,
JOHN WHITTON.

No. 9.

THE COMMISSIONER to THE ENGINEER-IN-CHIEF.
Government Railways.

Permanent way materials required for relaying line Parramatta to Sydney.

WITH reference to my verbal request, I now direct that the Engineer-in-Chief will give the necessary instructions to supply from stocks on hand the requisite permanent way materials for relaying the Sydney and Parramatta Line—the materials to be replaced by indent.

JOHN SUTHERLAND.

Mr. Whitton. 19/2/69.—R.M.

18/2/69.

Order No. 825.—17 Feb., 1869. Eight miles of rails = four miles of road, with the necessary chairs, fish-plates, bolts, nuts, spikes, and keys. W.H.Q.—19/2/69.

No. 10.

THE ENGINEER FOR EXISTING LINES to THE COMMISSIONER.
Government Railways—Existing Lines.

Relaying line between Ashfield and Burwood.

HAVING observed that the sleepers and ballast have been advertised for, and also informed that the storekeeper has had a requisition sent to him to deliver the necessary quantity of rails, I should be glad to have the papers forwarded to me for my information, that no time may be lost in commencing this important work.

J. H. THOMAS,
p. ROBT. SHERIDAN.

This work should be commenced and carried out as quickly as possible. The papers in question are with the Cabinet.

J.S.—24/2/69.

Mr. Thomas, B.C.

Seen. As I understand that Mr. Whitton has made a report on the state of the Parramatta line, I respectfully request that in justice I may have at least an opportunity afforded me of seeing it; and this, I submit, is not an unreasonable request, seeing that I alone am responsible for this as well as all other portions of the existing lines of railway.

J.H.T.—25/2/69.

Mr. Thomas will perceive, in reference to my Minute of 24/2/69, the papers in question are with the Cabinet.

J.S.—26/2/69.

Mr. Thomas, 26/2/69.

Seen. J.H.T.—2/3/69.

No. 11.

THE ENGINEER FOR EXISTING LINES to THE COMMISSIONER.
Government Railways—Existing Lines.

I GATHER from the discussion (as reported in the papers) on the Estimates for this branch of the department, that there were some charges against me now under the consideration of the Government. If such is the case it has never been intimated to me, and I certainly feel that I have been unfairly dealt with.

I am aware that an officer of the department, who both the present and late Minister have remarked the animus he has ever displayed in any matters touching my management, had been appointed by the Government to report on the rolling-stock and the Parramatta line, and have heard various rumours regarding these reports, but I have not seen them; and if they contain charges questioning my management, I think that in justice I ought to have been called upon to make any remarks before being considered by the Cabinet, for as it is they have but an *ex parte* statement before them, and that from a personal enemy, and one also interested in proving that my management is a failure, as I felt bound to alter the system adopted by him when he had charge of the same department, more especially with regard to my efforts to have the rolling-stock made in the Colony.

It may be unusual for officers to notice any discussion that takes place in the Assembly, but this being one in which my personal and professional reputation is questioned, I feel I am perfectly justified in asking that an opportunity at least may be given me of rebutting such charges.

JAS. H. THOMAS.—4/3/69.

Mr. Thomas' impressions as to the discussions referred to are not quite correct: no charges have been preferred against him, but Mr. Whitton has been requested to and has reported on the condition of the rolling-stock and on the condition of the Parramatta line, which reports are now under the consideration of the Cabinet. Mr. Thomas may rest assured that if any charges arise from the reports in question, he shall have every opportunity of meeting them at the proper time.

Mr. Thomas.

J.S.—9/3/69.

Seen. J.H.T.—11/3/69.

No. 12.

33

No. 12.

Government Railways.—Minute Paper.

Relaying line, Sydney to Parramatta.

WITH reference to previous papers in this case, I shall be glad to be informed what portion of the line Mr. Thomas proposes to relay.

I also require an estimate of cost—

Permanent way materials
Laying
Sleepers
Ballasting

as I desire to obtain the sanction of the Government for the expenditure, which will far exceed the available balance on the vote.

Mr. Thomas.

J.S.—9/3/69.

I only propose relaying with the double-headed rail from Ashfield to half a mile beyond Burwood at the present time, as there is more running between Sydney and Burwood than upon any other portion of our lines; keeping the best of the Barlow rails taken up to renew when required on the remaining distance to the Junction.

The following is the estimate of cost, viz. :—

Permanent way materials	£5,280	0	0
Laying	1,200	0	0
Sleepers	1,162	10	0
Ballasting	1,150	0	0
	£8,792	10	0

I give the estimate as asked for; but as the ballast and laying is not paid from capital, but working expenses, no sanction of the Government is required for these items.

J.H.T.—11/3/69.

No. 13.

THE ENGINEER-IN-CHIEF to THE COMMISSIONER.

Department of Public Works,
Railway Branch, Engineer's Office,
Sydney, 29 June, 1869.

Relaying Parramatta Line.

I ENCLOSE for the information of the Commissioner a memorandum from Mr. Mason relative to the condition of that portion of the Southern Railway between the Burwood Station and the 12th mile post from Sydney. I reported in February last that no time should be lost in relaying this portion of the line, and I take this opportunity of again drawing the Commissioner's attention to the matter, and advise that it be immediately relaid.

A sufficient number of permanent way rails &c., can be spared from the stock ordered for the Extensions to relay as far as the 12th mile post, but not up to the Parramatta Junction; and I therefore recommend that the relaying from the 12th mile post to the Junction be postponed until rails &c., can be obtained from England.

The cost of relaying, taking up the old road, and ballasting, is charged to revenue, but the permanent way materials and sleepers are charged to capital. The vote however of £20,000 obtained for this service is nearly exhausted, and I advise that executive authority be requested to anticipate a vote of £25,000 to be afterwards obtained from Parliament.

Twenty-five
thousand pounds

I consider it absolutely necessary that this work be at once carried out, in order to provide for the public safety.

JOHN WHITTON.

Mr. Whitton's attention should be invited to previous papers, especially 69/883. J.S.—12/7/69.

Mr. Whitton.

See memo. 69/326 herewith. H.H.Q.—15/7/69.

Cabinet, 3/8/69.—J.S.

[Enclosure.]

Department of Public Works,
Railway Branch, Engineer's Office,
Sydney, 28 June, 1869.

Memorandum to Engineer-in-chief.

On inspecting the permanent way and works on the 26th instant, between Burwood Station and Parramatta Junction, I found the permanent way from Burwood to about 10 chains beyond the 12th mile post in very bad condition; the sleepers are nearly all rotten, and the rails cannot be properly secured to them. There is very little ballast on the line of a suitable character; the rails in some instances are down to formation level. The whole of this length is laid with the Barlow rails, which are nearly worn out; in fact the whole of the materials forming the permanent way on this portion are so bad that it is impossible to keep the line in proper repair, and I therefore strongly recommend for the public safety that no time be lost in relaying this portion of the line.

From a little beyond the 12th mile post to Parramatta Junction this line is tolerably well ballasted with broken stone, and laid with the T rails; but as these rails are very much worn and will very soon require to be renewed, I think it would be advisable and most economical to relay this at the same time.

From Homebush Station to the 9½ mile post I found the permanent way so exceptionally bad that I consider it unsafe to run trains over that portion at a greater speed than 15 miles an hour.

It is my intention to report fully upon the condition of the works on all the lines, as soon as I shall have finished their inspection; but I deemed it prudent that no time should be lost in reporting upon this portion, owing to its very defective state and requiring immediate attention.

WILLIAM MASON.

See memo. 69/278. W.H.Q.—29/6/69.

No. 14.

MINUTE FOR CABINET.

Department of Public Works,
Sydney, 3 August, 1869.

THERE are submitted herewith papers on the subject of relaying the Parramatta Line.

Mr. Whitton reports that this work is an urgent one, and proposes that executive authority should be obtained for anticipating a sum of £25,000 to be voted by Parliament for this service.

Minute of Ex. Council, 27 August, 1869.

Submit Executive Minute. J.S.—29 8/69.

Cabinet approve.—JOHN R.

No. 15.

MINUTE FOR THE EXECUTIVE COUNCIL.

Department of Public Works,
Sydney, 29 August, 1869.

I HAVE the honor to request the authority of His Excellency the Governor and the Executive Council for the anticipation of a sum of £25,000 which it is intended to provide for on the Supplementary Estimates of this year for relaying the Railway Line to Parramatta.

JOHN SUTHERLAND.

THE Executive Council advise that authority be granted in anticipation of the sanction of the Legislature for the appropriation of the sum of twenty-five thousand pounds (£25,000) to the service herein referred to.

ALEX. C. BUDGE,
Clerk of the Council.

Minute 69/35, 30 August, 1869.

Confirmed, 3 September, 1869.

Appd. B.—6/9/69.

Mr. Whitton, for information. To be returned.

B.C., 11/9/69.—J.R.

III & IV.

Number and Condition of Engines, &c.

No. of Engine.	Number of Years running.	Condition.	If in Steam.
1	Since May, 1855	In fair working condition	Yes.
2	„ Sept., 1855	Do. tires getting thin	„
3	„ „	Do.	„
4	„ „	Do. tires getting thin	„
5	„ Nov., 1856	Do.	„
6	„ Mar., 1856	Laid up for extensive repairs, having new cylinders fixed, and getting a thorough overhaul.	No.
7	„ April, 1856	In fair working condition	Yes.
8	„ Jan., 1859	In working condition	„
9	„ Dec., 1858	Do. will shortly require new cylinders	„
11	„ Oct., 1861	Do.	„
12	„ Nov., 1861	Do. requires to come in for repairs	„
13	„ June, 1863	Shunting in Sydney yard, but requires to come in for repairs	„
14	„ Nov., 1865	In fair working condition	„
15	„ Jan., 1866	In working condition, requires the wheels to be turned up, &c.	„
16	„ Sept., 1865	In first rate condition (just turned out)	„
17	„ May, 1865	In for repairs, tubes leaking through bad weather	No.
18	„ Sept., 1866	In fair working condition	Yes.
19	„ Sept., 1865	In for repairs	No.
20	„ „	In fair working condition	Yes.
21	„ „	Do.	„
22	„ „	In for repairs	No.
23	„ „	In fair working condition	Yes.
24	„ „	In for repairs	No.
25	„ „	Do. of fire-box	„
26	„ „	In good working condition	Yes.
27	„ „	In running order	„
28	„ „	In good running order	„
29	„ Aug., 1864	In fair working condition	„
30	„ Mar., 1864	Do.	„
31	„ Aug., 1864	Do.	„

Total Number of Engines 30
 Number of Engines in steam daily 24
 Average number of miles run by each daily 90

Number

Number and Condition of Carriages, Wagons, &c., &c.

Numbers.	Total Number	Description.	Number of Years in use.	Condition.	Remarks.
1, 2, 3	3	First-class	13 years...	Good running order and condition...	1, 2, 3, were thoroughly repaired in 1868.
4	1	Do.	13 ,, ...	Under repairs and painting	
5	1	Do.	13 ,, ...	In good running order, but requires painting.	Traffic Department can only spare one at a time.
6, 7, 8	3	Do.	13 ,, ...	In good running order and condition	6, 7, 8, thoroughly repaired in 1868.
1, 2, 3, 4, 5, 6	6	Western (Mountain) first class.	1 year ...	In running order ; new panels are required in the sides of body, and painted all over, besides which the under-frames require to be altered before they can be run with safety on any of our lines except the Mountain.	
1, 2, 4, 5	4	Composite.....	10 years...	In good running order and condition	
3	1	Do.	13 ,, ...	Under repairs and painting.....	
6, 7, 15	3	Do.	7 ,, ...	Good running order, but requires painting.	
8, 9, 10, 11, 12, 13, 14	7	Do.	7 ,, ...	Good running order and condition...	One converted into a carriage for Prince Alfred.
16	1	Do.	13 ,, ...	Do. do.	
17	1	Do.	1 year ...	Do. do.	Built by P. N. Russell, Sydney.
2, 3, 4, 5, 6, 7, 9 ...	7	Second-class	13 years...	Do. do.	
1, 8	2	Do.	13 ,, ...	Good running order, but requires painting.	
11, 12, 13, 14, 39, 40, 42, 43, 44, 45, 46, & 47.	12	Do.	13 ,, ...	In good running order and condition	
10, 41	2	Do.	13 ,, ...	Under repairs	
15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 30, 31, 32, 33, 34, 35, 36, & 38.	22	Do.	7 ,, ...	In good running order and condition	
29 & 37	2	Do.	7 ,, ...	Do. do. but require painting.	
7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, & 18.	12	Western Mountain, second-class.	1 year ...	In running order, require alterations and panels repaired, and under-frames also (with the exception of No. 18) require altering same as with the First class.	
1 & 2	2	Funeral biers	4 years...	In good running order and repair.	
1	1	Prison-van	2 ,, ...	Do. do.	In use five years as a break-van, No. 6.
1, 2	2	Carriage-trucks.....	4 ,, ...	Do. do.	
3, 4	2	Do.	11 years...	Do. do. but require to be painted.	
5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18.	14	Do.	7 ,, ...	In good running order and repair.	
1, 4	2	Passengers' break-vans.	13 ,, ...	Do. do. but require painting, for which they cannot be spared by the Traffic Department.	
2, 3	2	Do.	10 ,, ...	In good running order and repair.	
5, 7, 8, 9	4	Do.	7 ,, ...	Do. do.	No. 6 was altered to a prison-van.
10, 11, 12, 13, 14, 15, 16, 17, 18, & 19	10	Do.	2 ,, ...	Do. do.	Built by Vale and Lacy, of Sydney.
1	1	Horse-box	13 ,, ...	In workshops, being renewed.	
2, 3, 4	3	Do.	12 ,, ...	In good running order, but require painting.	
5, 6, 7, 8, 9	5	Do.	10 ,, ...	In good running order and condition	
10, 11, 12, 13, 15, 16, 17, 18, 22.	9	Do.	7 ,, ...	Do. do.	
14, 19, 20, 21, 23, 24	6	Do.	7 ,, ...	Do. do. but require slight repairs and painting.	
1, 2	2	Meat-vans.....	12 ,, ...	In good running order and condition	
3, 4, 5, 6, 7, 8	6	Do.	8 ,, ...	Do. do.	
1, 2, 3, 4, 5, 6, 7 ...	7	Sheep-vans	7 ,, ...	Do. do.	
8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21.	14	Cattle-wagons	7 ,, ...	Do. do. some require slight repairs.	
1, 2, 3, 4, 5, 6	6	Powder-vans.....	1 year ...	In good running order and condition	
7, 8, 9, 10, 11, 12, 13	7	Goods-vans	12 years...	Do. do.	
14, 15, 16, 17, 18, 19, 20, 21.	8	Do.	6 ,, ...	Do. do. but require to be painted.	
2, 3	2	Goods break-vans...	13 ,, ...	In good running order and condition	
4	1	Do.	10 ,, ...	Do. do.	

Number and Condition of Carriages, &c.—*continued.*

Numbers.	Total Number	Description.	Number of Years in use.	Condition.	Remarks.
1, 2, 3, 4, 5, 6, 7, 8	8	Low-sided wagons..	13 years...	In good running order and condition	
21, 22, 23, 24.....	4	Do.	11 " ...	Do. do.	
25, 26, 27, 28	4	Do.	8 " ...	Do. do.	
29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56.	28	Do.	7 " ...	Do. do. but several require repairs through timber being bad when imported.	
1, 2, 4, 6, 10, 11, 12, 15, 19, 20, 25, 27, & 28.	13	High-sided wagons..	2 ,, ...	In good running order and condition	Renewed in 1867 & 8, when wood-work and iron-work were cleaned and painted.
3, 5, 7, 8, 9, 21, 22, 23, 24, 13, 14, 16, 17, & 18.	14	Do.	13 ,, ...	Do. do. but require slight repairs.	
29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44.	16	Do.	6 months	In good running order and condition	Built by Vale and Lacey, of Sydney.
45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, & 56.	12	Do.	7 days ...	Do. do. ...	Do. do.
1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12.	12	Ballast-wagons	4 years...	Do. do.	
13, 14, 15, 16	4	Do.	1 year ...	Under repairs.	
2, 4, 8, 9, 10, 12, 14, 15, 17, 18, 19, 20.	12	Middle-sided wagons	11 years...	In good running order, but require some slight repairs.	
1, 3, 5, 6, 7, 11, 13, 16.	8	Do.	2 ,, ...	In good running order and condition	The wood-work was re- newed and iron-work cleaned in 1867 & 8. Do. do. in 1868.
34, 49, 57, 59, 60, 65, 67, 71, 74, 77, 92, 93, 89, 172, 177	15	Do.	1 year ...	Do. do.	
21, 22, 23, & 24	4	Do.	8 years...	Do. do.	
25, 26, 27, 28, 29, 30, 31, 32, 33, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 50, 51, 52, 53, 54, 55, 56.	30	Do.	4 ,, ...	Do. do. ...	Built by P. N. Russell & Co., Sydney.
58, 61, 62, 63, 64, 65, 68, 69, 70, 72, 73, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 90.	26	Do.	7 ,, ...	Do. do.	
91 to 126	36	Do.	4 ,, ...	Do. do. ...	Built by W. Vaughan, of Sydney.
127 to 150.....	24	Do.	3 ,, ...	Do. do. ...	Built by P. N. Russell & Co., of Sydney.
151 to 180.....	30	Do.	1½ ,, ...	Do. do. ...	Do. do.
181 to 220.....	40	Do.	1 year ...	Do. do. ...	Do. do.
221 to 270.....	50	Do.	6 months	Do. do. ...	Built by Robertson, of Sydney.
271 to 280.....	10	Do.	1 ,, ...	Do. do. ...	Do. do.
1 to 8	8	Timber-wagons.....	10 years...	In good running order and fair con- dition.	

JAS. H. THOMAS.
23/3/69.

Number of Carriages, Vans, Trucks, &c., ordered to be constructed in the Colony during the tenure of office of the late Government:—

1 first-class carriage.
40 B wagons.
190 D ,,
12 break-vans.

Copies of form of tender, specifications, and conditions herewith.

JAS. H. THOMAS.
23/3/69.

GOVERNMENT RAILWAYS, NEW SOUTH WALES—EXISTING LINES BRANCH.

*Specification for Locomotive Engines.**Class 1.*

Tender engine, with inside cylinders, 16 in. diameter and 24 in. stroke; leading and driving wheels 5 ft. 6 in. (coupled), and trailing wheels 3 ft. 9 in.

To be constructed in every respect the same as Nos. 1, 2, 3 and 4 engines, built by Messrs. Stephenson & Co., and now employed on the Southern and Western Railways.

Class 2.

Tender engine, with inside cylinders, 14 in. diameter and 22 in. stroke; leading and driving wheels 4 ft. 6 in. diameter (coupled), and trailing wheels 3 ft. 6 in. in diameter, to be constructed in every respect the same as No. 5 engine, built by Messrs. Hawthorn & Co., and now employed on the Southern and Western Railways.

Class 3.

Tender engine, with outside cylinders, 14 in. diameter and 22 in. stroke; driving wheels, 5 ft. 6 in. diameter, and leading and trailing wheels 3 ft. 6 in. diameter.

To be constructed in every respect the same as No. 6 engine, built by Messrs. Fairbairn & Co., and now on the Great Southern and Western Lines.

Class 4.

Tender engine, with outside cylinders, 15 in. diameter and 22 in. stroke; driving wheels, 5 ft. 6 in. diameter, and leading and trailing wheels, 3 ft. 6 in. diameter.

To be constructed in every respect the same as No. 7 engine, built by Messrs. Manning, Wardle & Co., and now on the Great Southern and Western Railways.

Class 5.

Tank engine, with outside cylinders, 15 in. diameter and 22 in. stroke; driving wheels 5 ft. 6 in. diameter, and leading and trailing wheels 3 ft. 6 in. diameter.

To be constructed in every respect the same as Nos. 8 and 12 engines, built by Messrs. Manning, Wardle & Co., and now on the Southern and Western Lines.

Class 6.

Tender engine, with outside cylinders, 15 in. diameter and 20 in. stroke; driving wheels 5 ft. 9 in. diameter, and leading and trailing wheels 3 ft. 6 in. diameter.

To be constructed in every respect the same as Nos. 9 and 11 engines, built by Messrs. Manning, Wardle & Co., and now on the Southern and Western Lines.

Class 7.

Tender engines, with outside cylinders, 16 in. diameter and 22 in. stroke; driving and leading wheels (coupled) 5 ft. diameter, and trailing wheels 3 ft. 6 in. diameter.

To be constructed in every respect the same as No. 13 engine, built by Messrs. Manning, Wardle & Co., and now on the Great Southern and Western Lines.

Class 8.

Tender engine, with inside cylinder, 16 in. diameter and 20 in. stroke; driving wheels 6 ft. diameter, and leading and trailing wheels 3 ft. 6 in. diameter.

To be constructed in every respect the same as Nos. 14, 15, and 16 engines, built by Messrs. Beyer, Peacock & Co., and now on the Southern and Western Lines.

Class 9.

Tender engine, with inside cylinders, 18 in. diameter and 24 in. stroke; leading, driving, and trailing wheels, 4 ft. in diameter, and all coupled.

To be constructed in every respect the same as Nos. 17 to 22 inclusive, built by Messrs. R. Stephenson & Co., and now on the Great Southern and Western Lines.

Class 10.

Tender engine, with outside cylinders, 18 in. diameter and 24 in. stroke; leading wheels 3 ft. in diameter, with bogie arrangements: driving and trailing wheels 5 ft. 6 in. diameter, coupled.

To be constructed in every respect the same (with the exception of the diameter of driving and trailing wheels being 5 ft. 6 in., in place of 5 ft. 9 in.) as Nos. 23 to 28 inclusive, built by Messrs. Beyer, Peacock & Co., and now on the Great Southern and Western Railways.

Class 11.

Tank engines, with inside cylinders, 11 in. diameter, and 18 in. stroke; leading, driving, and trailing wheels, 3 ft. in diameter, and all coupled.

To be constructed in every respect the same as Nos. 29, 30, and 31 engines, built by Messrs. Manning, Wardle & Co., and now on the Windsor and Richmond Railway.

Class 12.

Tank engines, for working steep gradients, see detailed specification.

J. H. THOMAS,
Engineer.

NEW SOUTH WALES RAILWAYS—EXISTING LINES BRANCH.

Specification of Goods Tank Engines for the Great Railway.

The work to be executed under this contract comprises the supplying and delivering of engines that class known as six-wheeled coupled tank engines, having the following general dimensions:—

	ft.	in.
Diameter of cylinder	0	17
Length of stroke	0	24
Diameter (outside) of boiler	4	4
Number of tubes, 196 (more or less).		
Length of do.	11	1
Diameter of do. (external)	0	2
Distance from centre to centre of cylinders	2	5½
From head of frame to centre of leading wheels	5	8½
Distance between centres of leading, driving, and trailing wheels	5	9
Wheel base	11	6
From centre of trailing wheel to end of foot plate	7	3
Total length of frame	24	0½
Width between frames (inside measurement)	4	1
Thickness of frames	0	1½
Diameter of wheels	3	9
Length of fire-box (casing)	5	9
Do. do. inside	5	3
Area of fire-grate	19	3
Diameter of axle bearings	0	7½
Length of do. do.	0	6½
Ports (cylinder)	14 in. × 0	1½
Exhaust... ..	14 in. × 0	3½
From centre to centre of buffers	5	9
Height of buffers above rail	3	4

BOILER.

The boiler is to be constructed of the form and dimensions shown on the drawings, lap-jointed, and all the plates used in manufacture must be $\frac{3}{8}$ inch thick; and both these and the angle irons must be of the very best Low Moor iron, or such other as may be approved of by the Engineer for Existing Lines of Railway. Plates and angle iron.

The rivets to be $\frac{3}{4}$ in. diameter, of the best Yorkshire iron; the lap of plates to be $2\frac{3}{4}$ inches, and the pitch or distance between centres of rivets to be $1\frac{1}{4}$ inch. Great care must be observed that all the plates and angle irons are brought together before any rivets are put in, and that all the holes perfectly correspond with each other. Should any of them not do so exactly, they must be rimmed out until perfectly fair one with another, and a rivet made expressly to fit the enlarged opening thus caused. The heads of all the rivets must be properly set up, and all the joints perfectly caulked on both sides, care being taken in so doing that the plates are not injured. Rivets and riveting.

The fire-box casing is to be 5 ft. 9 in. long, and made of half-inch plates of the same quality of iron as that on the barrel of the boiler, and bent on the edges to a curve of 4 in. radius. The rivets and riveting to be performed in the same careful manner, and with the best material as that specified for the other portions of the boiler. Fire-box casing.

The fire-box is to be of copper, 5 ft. 3 in. long, and to have a tube plate 1 in. in thickness; the crown to be $\frac{5}{8}$ in. and the other plates $\frac{1}{2}$ in. The tube plate is to be pierced to receive 196 tubes (more or less), of 2 in. diameter, and the holes must be so set out as to insure a uniform distance between them; and no more chamfer is to be taken off their edges than is necessary to prevent them cutting the tubes. The fire-box stays to be made of copper, $\frac{7}{8}$ in. diameter; those for securing the fire-box to the casing to be placed 4 in. from centre to centre. They are to be screwed with a good sharp clean thread, with that portion in the water space turned off. Each stay must fit perfectly tight, with a full thread in the hole as well as on the stay. The holes in casing and fire-box must be true to each other, so that the stay through both may be perfectly square. Each stay must be well riveted over on both ends. Fire-box.

The boilers to be stayed by gussets and double angle iron at smoke-box end, most carefully fixed; crown of the fire-box must be secured as shown on the drawings.

Four mud-plugs and doors must be placed on the sides of the fire-box casing, level with the top of the fire-box, two being on each side, and placed alternately with each other. Four at the corners of the casing, immediately above the water space, bosses of which to be forged on, and two in the smoke-box, fair with the inside of the bottom of the barrel. In this latter case the plug must be secured directly into the plate without a brass seating. There must also be two lead safety plugs in the top of the fire-box. Mud-plugs and doors.

The tubes to be brass, of the best description of metal, 196 (more or less) in number, and No. 12 gauge; they are to be 2 inches outside diameter, secured by approved steel ferrules. Tubes.

The ordinary working pressure will be 120 lbs., and the boiler must be tested by hydraulic pressure; hot water being employed to 240 lbs. on the square inch, and afterwards in steam to 120 lbs. Testing.

The smoke-box top, front, and door to be $\frac{1}{2}$ inch thick; the two former to be made of good plate, with a smooth face, and the latter to be made of best Yorkshire iron; the rivets countersunk and filed flush on the outside. Door and fastenings to be made, and a tube plate of the best $\frac{7}{8}$ inch Low Moor plate. Smoke-box.

To be 16 inches diameter, and made of $\frac{1}{2}$ inch plate, flush-jointed outside, and welt inside, with the top standing 14 feet above the rails, having 3 inches taper. Chimney.

Frame-bolts of all kinds must be turned and accurately fitted and driven into their places, the holes being rimmed out perfectly fair and true to receive them. Frame-bolts.

The ash-pan to be constructed of $\frac{1}{4}$ inch plate and $1\frac{1}{2}$ inch angle iron; both the front and back ends must be provided with doors of $\frac{1}{4}$ inch plate, hinged by upper edge, and gear to work each from the foot-plate. A well is to be formed on bottom, by $1\frac{1}{4}$ inch angle iron, riveted all round. Ash-pan.

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- Spark-catcher.** The mouth of the blast pipe is to be covered by one of Moriarty's Spark-arresters, with $\frac{1}{8}$ inch spaces at top.
- Fire-bars.** The fire-bars must be made not only to change with each other, but with other engines of the same class.
- Wheels.** All the wheels are to be entirely made of wrought iron; they must be turned and bored, and have keyways cut strictly to a gauge, that they may all be precisely alike; and each wheel must be drawn on to its respective axle by hydraulic power, hot water being used to expand the boss; all the rims must be correctly turned to one gauge to receive the tires, so that the tires bored for one will fit any of the wheels equally as well on either of the engines.
- Gauge of Railway.** The gauge of Railway is 4 feet $8\frac{1}{2}$ inches.
- Tires.** The best steel rolled weldless tires are to be provided from Monk Bridge, Leeds, those on the driving wheels being without flanges; they must be bored out to the exact shape of the rims of the wheels, into which they are to be shrunk, and properly secured; they are to be turned or ground to a template.
- Axles.** The axles to be of the very best manufacture, having journals 7 inches diameter and 9 inches long.
- Gear.** Eccentrics to be of cast iron, $5\frac{1}{4}$ inches throw, and to be keyed fast on their places, the greatest possible care being taken before this is done that their correct positions upon the shaft have been ascertained. The eccentric straps and other portions of the gearing to be of the best Low Moor iron, case-hardened, and re-cleaned up. The wrought iron-work to be all composed of Low Moor, or of equally approved iron, and got up with the best finish. All the pins must be of shear steel, and hardened.
- Frames.** Longitudinal frames to be of the best iron in one plate, 2 feet 10 inches extreme depth, and $1\frac{1}{2}$ inch thick, planed inside. All the holes must be marked and drilled to one template, and rimmed out to the exact size given; and every bolt securing the cylinders, stays, &c., &c., to be turned to gauge, fitted and driven tight into its place. All the bolts must be carefully made, and turned up to the exact size. When the frames, cylinders, &c., are all bolted and riveted together, and before the boiler and wheels and axles are put into their places, the correctness of all the dimensions, and the truth and accuracy of all the work, must be carefully checked by diagonal as well as longitudinal and transverse measurement. The frames must be strictly square and free from cross windings, and the guard-plate perfectly square with the engine in all directions.
- Cross stays.** The feet and angle irons on every stay, and of every kind, where they bed upon the frames, must be planed perfectly true, and to the exact length required, so that they fit perfectly to their places without setting or twisting; and every hole must be rimmed out that it may be perfectly fair throughout, as specified for the frames. No liners or filling pieces will be allowed to make up imperfect work for dimensions.
- Axle-boxes.** The axle-boxes to be of best cast iron, fitted carefully to template both inside for the steps and outside for the rubbing pieces. The steps to be of best hard gun-metal, and to be confined by iron boxes underneath the journals. Care must be taken in fixing the oil pipes in the top of the axle-boxes, that they be so placed as to convey all the oil directly on the top of the journals, and that it is not wasted by running away between the side of the brass and the inside of the box. The axle-box bottoms, or oil cellars, are kept up in their places by bolts as shown. All the steps must be perfectly bedded into their respective axle-boxes, and well fitted on the journals. The leading and trailing wheel boxes are to have half-inch lateral play, but the driving wheel boxes must have no more space allowed between the boxes and rubbing pieces than just sufficient to allow each axle-box to slip readily and freely into its place.
- Rubbing pieces on horn plates.** The rubbing pieces on horn plates to be of hard and strong cold blast cast iron, correctly fitted.
- Springs.** All the springs must be made of the very best spring steel. Each spring must be tested before being put in its place, by being weighted until the camber has been taken off, and on the removal of the weight the spring is found to resume its original form.
- Cylinders.** The cylinders to be 17 inches diameter, and 24 inches stroke, placed inside the framing, and inclined as shown, made of the very best iron, perfectly free from honeycomb or any defects whatever; they must be truly bored out, the front and end being bell-mouthed $\frac{1}{8}$ of an inch, so that the pistons may be easily put in their places. All the joints to be planed, turned, or scraped to a true surface, so that perfect joints can be made with a coat of very thin linseed oil laid on with a brush. Each cylinder to be bolted to the frames with $1\frac{1}{2}$ -inch bolts. It is most essential that those as well as all the other bolts should be carefully turned, fit perfectly tight in good true holes. Steam ports, 14 x $1\frac{3}{8}$. Exhaust port, 14 x $3\frac{1}{2}$. Lap of valve, $1\frac{1}{4}$ inch outside, $\frac{1}{8}$ inside, lead bare $\frac{1}{4}$ inch, full travel 5 inches.
- Pistons.** The body and plate of the pistons to be of the best toughened cast iron, and the rings of gun-metal; the latter must be turned $\frac{1}{8}$ inch larger than the diameter of the cylinders with a $\frac{1}{4}$ inch cut out of them, and then the two ends brought close together, and returned to the exact diameter of cylinder, and properly fitted with a stop. The weight of the piston must be carried upon the packing rings, and not upon the body of the piston. All the flat surfaces must be well and perfectly scraped, and made steam-tight.
- Piston rod.** The piston rods to be $2\frac{3}{8}$ inches diameter, and made of steel.
- Slide valves.** The slide valves to be set with a lead of $\frac{3}{16}$ of an inch, and to be made of the best gun-metal.
- Regulator.** The regulators to be made of gun-metal in joints, scraped up to a perfect surface, and the lever that works the valve must fit on without shaking, and work smoothly throughout the whole stroke of the valve.
- Slide bars.** The slide bars to be of steel.
- Slide blocks.** The slide blocks to be of cast iron, and to have lubricating boxes.
- Connecting rod.** The connecting rod to be of the best fagoted iron, and to be bright all over.
- Injectors.** The boiler is to be fed by a pair of No. 10 Giffard's Injectors.
- Feed pipes.** The feed pipes to be of copper, No. 8 wire gauge, and must be brazed on the inside with hard solder; care to be taken that the pipes are so set that the flanges of the joints come fairly to their places without any spring upon the pipes.
- Steam pipes.** The steam pipes to be of copper, No. 14 gauge, and all the flanges must have scraped surfaces.
- Hand rails.** The hand rails to be of iron, $1\frac{1}{2}$ inch diameter, and secured to saddle tank with brass studs.

The whole of the boiler and fire-box to be covered with white pine, well-seasoned, in strips of not more than $2\frac{1}{2}$ inches wide by 1 inch thick, tongued into each other by hoop iron $\frac{7}{8}$ inch wide, and the whole well and neatly covered by sheet iron, No. 18 wire gauge, and well secured by brass hoops. Cleaving.

Two $3\frac{1}{2}$ -inch safety-valves, of Naylor's or Ramsbottom's arrangement, to be placed over the fire-box. Safety-valves.

One glass gauge, and three gauge-cocks, from pattern to be supplied. Gauges.

The whistle to be made of hard brass, to pattern. Whistle.

All bolts and nuts must in every instance be to Whitworth's standard thread. Bolts and nuts.

The saddle tank, placed over the barrel of boiler, is to be made of $\frac{1}{8}$ -inch best sheet iron, stiffened with ties inside, to be well riveted together, and the points of the rivets neatly snapped. The heads of all the rivets must be properly set up; all joints properly caulked. The plates to be riveted together with $\frac{1}{2}$ -inch rivets. Tank.

Buffer beams, $1\frac{1}{4}$ inch rolled iron, well gusseted, to be fitted with draw-hooks and chains at both ends of the engines. The buffers to be Corlett's patent. Buffer beams and buffers.

Four sand-boxes to be provided, with copper pipes, &c., complete. Sand-boxes.

All the working parts to be furnished with perfect means of lubricating. General fittings.

The glass water-gauge must be so placed that the lowest visible part of the glass is 3 inches above the highest part of crown of the fire-box. Lamp-holders to pattern to be fixed as instructed.

Cocks to be supplied and fitted for cylinders, blow-off, scum-water, &c. (of which patterns will be supplied); to be of gun-metal.

The boiler and fire-box casing to have two coats of red oxide paint, previous to having the lagging put on, and the wood with two coats of lead colour. Painting.

The frames, wheels, tank, and all other necessary parts of the engine, to have two good coats of lead colour previous to the filling, which must be done with three coats rubbed to a perfectly smooth surface, and with another coat of lead colour previous to the finishing, which is to be done in the usual way adopted at the Redfern Railway Works.

GENERAL STIPULATIONS.

Throughout the whole the very best materials and workmanship is to be used in every way equal to the best class of locomotive engines; and the manufacturer will be held responsible for their safe delivery at Material and workmanship.

and for all defects of whatever kind which may arise from imperfect workmanship or material, until they shall have run a distance of (1,000) one thousand miles with proper loads upon some portion of the Railway for which they are intended.

The whole of the engines are to be completed, delivered, and set to work entirely to the satisfaction of the Engineer for Existing Lines of Railway, within Time.

The Engineer, or any officer appointed by him, shall have full liberty, at all reasonable times during the construction, to examine all material or work which may be intended for them, and to reject the whole or any portion that may be thought necessary; and any so rejected shall immediately be replaced in a satisfactory manner by the contractor, and at his cost. Inspection.

The dimensions figured upon the drawings to be preferred in all cases to measurement by scale. Dimensions on drawings.

While the foregoing specification sets forth the general detail of the engines, the Engineer reserves the option of such modifications as he may find necessary as the work proceeds, so long as the general dimensions are not interfered with, without any claim of extra payment being allowed. The drawings and specification must be taken to explain each other; but should there be any work and materials which may be reasonably and obviously considered necessary for the proper completion of the engines, but which has not been shown on the drawings or described in the specification, or that may be mentioned or implied in one only, the same must be considered as in the contract, and the contractor must find whatever may be necessary to complete the engines according to the true intent and meaning of the specification and drawings; and in all cases of defective description or any ambiguity, the explanation given by the Engineer shall be binding upon the contractor. Right of altering details.

The Engineer reserves to himself the power of making any deviation from or additions to the engines, without invalidating the contract; the value of such deviations, alterations, or additions to be ascertained and allowed for by the Engineer, at such rates as he shall consider to bear a due proportion to the other work of the engines, and the value thereof added to or deducted from the amount to be paid to the contractor, as the case may be.

In the event of the construction of the engines not proceeding with that despatch which the Engineer may consider necessary, or the contractor fails from any cause to proceed in the execution of his contract, the Commissioner shall have full power and authority to cancel the contract, as far as relates to the work remaining to be done; and in such case the moneys which shall have been previously paid to the contractor on account of the work executed shall be taken by him as full payment for all the work done and materials supplied under the contract; and upon notice in writing, under the hand of the Commissioner, that he, under the authority of this condition, cancels the contract, being served upon the contractor, or left at his last known place of abode, the contract shall be cancelled; and thereupon all sums of money that may be due or unpaid to the contractor, together with the portions of the engines left unfinished, and all sums of money named as penalties for the non-fulfilment of the contract, shall be forfeited and become payable to the Commissioner, and the said portions of the engines shall become and be the absolute property of the Commissioner, and with the moneys so forfeited and payable as aforesaid, shall be considered as ascertained damages for breach of contract. Cancellation of contract.

The Commissioner will afford every facility to parties undertaking this contract, so far as the selling of any stores, for which cost price, with 10 per cent. added, is to be paid, or the loan of any tools he may possess, and which can be conveniently spared at the time, to be charged for as may be arranged. Facilities afforded.

The contractor will have to satisfy himself of the accuracy of the drawings, and lay down a full-size working drawing of the engine, showing all the details.

The tender is to include all expenses of removing, delivery, and trials, as well as all the necessary working plans, tracings, &c.

If the contractor become insolvent, have his estate placed under sequestration, or shall make an assignment of his estate for the benefit of his creditors, it shall be lawful for the Commissioner, without previous notice to the contractor, or to the Official or other Assignee, or Assignees of his insolvent estate, Bankruptcy or insolvency.

or to the Trustee or Trustees under the assignment, to take such of, and all portions of the engines, whether completed or not, from the contractor and of the Assignees or Trustees of his estate, and re-contract with any other person or persons to proceed with and complete the said engines, upon such terms, stipulations, and conditions as shall be deemed expedient.

Security.

The contractor will be required to provide two approved persons as sureties, to enter with him into a bond to the Commissioner for Railways, in the penal sum of for the proper performance and completion of the contract. The names of the persons proposed by him as sureties must be stated in the tender, the Commissioner for Railways reserving to himself the power of rejecting such proposed sureties, should he deem it advisable to do so.

Should the contractor fail to procure such persons as may be deemed by the Commissioner to be eligible sureties, within days from the acceptance of the tender, or should the contractor fail to execute the contract for the due performance of the work, or to execute and to procure the due execution, by the persons so approved of, as sureties of the bond required for securing the due completion of the work to be done under the said contract, within days after the acceptance of such persons as sureties has been notified to him, the Commissioner will have the option of, and full power and authority to declare such acceptance to be annulled.

Payment.

Payment will be made on the Engineer's certificate as the engines progress, unless same shall become not payable by reason of anything contained in these conditions up to the date specified for the completion of the contract, in the proportion of of the value of the work satisfactorily executed, and the remaining will be paid after the Engineer has certified that the whole of the engines have been completed to his entire satisfaction.

Interpretation clause.

The words "or any officer appointed by him," in these general conditions, shall mean any person who may from time to time be appointed by the Engineer for Existing Lines of Railway, to supervise the work; and the words "Engineer for Existing Lines" or "Engineer" shall mean the Engineer for Existing Lines of Railways for the time being of the Commissioner for Railways.

J. H. THOMAS,
Engineer for Existing Lines of Railways.

GOVERNMENT RAILWAYS, NEW SOUTH WALES.—EXISTING LINES BRANCH.

Specification for 1st and 2nd class Radial Carriages for Western Extension.

1st class.

These are to be saloon carriages with first class compartments at each end, to have wrought-iron under-frames running on eight wheels, the end pairs working in radial axle-boxes, same as No. 18 second class, and not with the bar, as in the imported cars of this class. The length to be 35 ft.; width, 7 ft. 9 in.; and height, 7 ft.

They are to be fitted with spring seats and backs, covered with morocco leather.

The panelling and painting is to be performed as specified for the other first class carriages. In all other respects they are to be the same as the imported carriages.

Composite.

These are to be divided into three compartments, the centre being fitted up as first class, and the two ends as second class. To have wrought-iron under-frames, running on eight wheels, the end pairs working in radial axle-boxes, the same as No. 18 second class. The length to be 35 ft.; width, 7 ft. 9 in.; and height 7 ft.

The painting and panelling to be executed in the same manner as specified for the other first class carriages.

In all other respects they are to be the same as the imported carriages.

2nd class.

The second class are to be divided into five compartments, that in the centre being used as a break and luggage van.

They are to have wrought-iron under-frames, running on eight wheels, the end pairs working in radial axle-boxes, as in No. 18 of the same class.

Panelling and painting as specified for other second class carriages.

In all other respects they are to be the same as the imported carriages.

J. H. THOMAS,
Engineer.

GOVERNMENT RAILWAYS, NEW SOUTH WALES.—EXISTING LINES BRANCH.

Specification of First-class Carriage.

General arrangement to be the same as No. , now on the Great Southern and Western Railways.

The first class carriages are to be 18 ft. long, 7 ft. 4 in. wide, and 6 ft. 4 in. high, divided into three compartments, fitted with spring seats, and in all other respects the same as that specified for the composite carriages.

The panels must be of well-seasoned cedar, or other approved timber; no nails, or wood screws being used in their fixture, but they are to be grooved into bottom, sides, rails, and pillars, with canvas glued on to them previous to fixing, and when fixed to receive a second lining of canvas and glue, then painted with two coats of oil colour.

Cloth, lace, and trimmings for the interior to be of the best quality.

Inside fittings to be of well-seasoned cedar and receive three coats of varnish.

All the glass in the windows to be of the best plate, and not less than $\frac{1}{4}$ inch thick.

J. H. THOMAS,
Engineer.

GOVERNMENT

GOVERNMENT RAILWAYS, NEW SOUTH WALES—EXISTING LINES BRANCH.

Specification of Composite Carriage.

The carriages required under this specification are known as "Composite Carriages," the general arrangement being the same as No. 17 built by Messrs. P. N. Russell, and are to consist of three compartments, the centre being a first-class saloon, and the ends second-class compartments with single row of seats.

The 1st class or saloon compartments to be 12 ft. 6 in., and the 2nd class compartments 3 ft. 9 in. each, making the extreme length of the body 20 ft. out to out; the extreme width to be 7 ft. 9 in. over elbow with turn under of $2\frac{1}{2}$ inches on each side, making width of bottom 7 ft. 4 in.; the height from under part of bottom side to roof to be 6 ft. 3 in., exclusive of the outer roof, with a rise in centre of 5 in., making the total height in clear inside 6 ft. 4 in.

The whole of the framing of body and carriage to be of blue-gum or other approved timber, inside partitions Baltic deal, panels and inside fittings of cedar, and inside and outside roof to be of the best Baltic deals, and the floor boards the best Baltic deals in two thicknesses of $\frac{3}{4}$ in. each laid diagonally.

The 1st class quarter lights and the doors to be provided with sliding Venetian blinds inside and glass frames outside, the latter being fitted with balance weight and spring arrangements; the glazing to windows and doors throughout to be of the best British plate not less than $\frac{1}{4}$ in. thick.

The inside to be fitted up with seats all round 2 ft. deep, having elbow partitions at each end, the seats and backs to be spring-stuffed in the best manner, lined and canvased, and covered with superfine cloth of an approved colour; the side elbows and rests to be covered with morocco of same colour as seats, and properly finished and trimmed; the whole of the stuffing to be the best steel springs and curled horsehair. Silk cord hat-lines to be fixed over seats, and nets carried by brass brackets extending the width of the compartments at each end. The whole of the body above the backs and inside roof to be lined with fancy oil-cloth of pattern to be approved, and the floor covered with floor-cloth and carpets.

The 2nd class compartments to be provided with cushions and backs stuffed with best horsehair and covered with American leather-cloth. The sashes of the doors to have the balance weight and spring arrangements same as centre compartment, but not Venetian blinds.

The extreme length of under carriage to be 19 ft. 11 in., and extreme width 6 ft. 10 in. outside dimensions; the sides to be 11 ft. x 4 ft., beaded top and bottom. Two bearers framed in the sides 11" x $3\frac{1}{2}$ ", 4 ft. 4 in. apart in centre of sides, and secured by a $\frac{5}{8}$ -in. strap-bolt at each end, 9 ft. long and $2\frac{1}{4}$ " x $\frac{1}{2}$ "; the strap fixed with two $\frac{1}{2}$ -in. bolts through the bearers and along through $\frac{5}{8}$ -in. bolt; at each bar on the top side two bearers $9\frac{1}{2}$ in. x 3 in. framed into carriage sides and secured in same manner as those in centre, 22 in. from inside of head-stock, which is to be 11 in. x 4 in., framed on the sides, and secured with two corner plates inside at each corner, $\frac{5}{8}$ -in. thick, bolted to carriage sides and diagonals; the head-stock on outside to be secured to carriage sides with $\frac{3}{4}$ -in. corner plates, 14 in. on side, and head-stock by 11 in. deep. Two spring bearers, 6 in. x 3 in., let into the centre of middle bearers and supported by an iron plate at each end, 2 in. x $\frac{5}{8}$ -in., fixed to the middle bearers, with two $\frac{5}{8}$ in. bolts to each. Two iron plates on top, 2 in. x $\frac{1}{4}$ in., for buffer springs to slide on, and two plates above buffer springs, 2 in. x $\frac{1}{2}$ -in., with lugs at ends bolted to the bearers. Four diagonals, 11 x 3, framed into the head-stocks, and middle bearers let into the narrow bearers, and fixed with $\frac{1}{2}$ -in. bolts through them, and secured to the head-stocks with the inside corner plates mentioned above. Two longitudinal pieces, 4 x 3, framed into the head-stock and middle bearers, and lapped into the narrow bearers, fixed with a five-inch $\frac{5}{8}$ nut-headed screw through the lap, secured at the head-stock with a T plate, $2\frac{1}{2}$ x $\frac{3}{8}$, fixed with three $\frac{3}{8}$ -in. coach screws and to the middle teams with iron plate, $2\frac{1}{2}$ by $\frac{3}{8}$; 1 ft. 10" along the bearers secured with $4\frac{1}{2}$ bolts, and 5 in. along the longitudines and diagonals secured with four $\frac{1}{2}$ bolts.

The draw rods are to be $1\frac{1}{2}$ round iron, to pass through the head-stocks, where a strong hook is attached to receive the coupling screw. Couplings to be provided for each end.

The buffer rods are to be made with solid W. I. discs, with kauri facings, and to work through cast iron blocks at each end of the under-carriage frame, and in the framing, through best gun-metal sockets, bolted to the bearers and carriage sides. The rods are to be turned and squared, and the bushes bored and squared to fit them.

The buffer springs to be of 18 plates, 3 by $\frac{5}{16}$, and a back plate of $\frac{3}{8}$, with solid forged ends, and a compass of 15 inches.

The bearing springs are to be made of the best quality of spring steel, each spring 5 ft. 6 in. long from centre to centre of tension bars, when weighted. To have 9 plates spear-pointed, 3 by $\frac{5}{16}$, and a short plate, which is to be $\frac{3}{8}$. The buffer and bearing springs to be of Turton's, Cammell's, or Brown's make. The tension bar to be of the best scrap iron, 3 by $\frac{1}{2}$, solid eyes and links.

The scroll irons to be of form shown in No. 17, of best scrap iron, made with solid eyes, and to be bolted up to the sole bars in the usual way.

The wheels are to be 3 ft. 6 in. diameter, on running surface; 8 double spokes (Losh's pattern) of wrought iron, 3 by $\frac{3}{8}$ at run and 3 by $\frac{3}{4}$ at nave, formed in segments, welded together with glut pieces at the rim, and turned on the circumference to receive the tires. Rim to be $3\frac{3}{8}$ by $1\frac{1}{8}$. The nave to be of wrought iron, 8 in. diameter, 7 in. through, to be bored out to fit the axle. Tires to be 5 in. broad, bored and turned to 2 in. thick at the tread, and properly shrunk on the wheel. They are to be fastened to the wheel by 4 taper rivets. Each wheel is to be balanced separately on its axle.

The axles to be 4 in. diameter in middle for space of 2 ft. 6 in., and tapering to $4\frac{3}{4}$ at back of nave, and through nave $4\frac{1}{2}$; the journals to be 3 in. diameter, and 8 in. long, and 6' 5" from centre to centre (turnplate to be supplied); the wheels to be forced on the axle by hydraulic pressure, and secured each by one steel key. The wheels and axles are to be Bowling's "Low Moor" or "Taylor's" (Leeds) make.

The axle-boxes to be as shown, and the bearings to be of Stirling's patent metal, or best gun-metal; the grooves of the guides in axle-box, and the joint between the two halves, to be planed.

The axle-guards to be $\frac{3}{4}$ thick, to be properly fitted and bolted to the inside of sole bars exactly square and at right angles to the frame, with washer plates on outside; the surface against which the axle-box works to be made perfectly true; the ends of each guard are to be bound by a short strap, and connected together by a $1\frac{1}{2}$ rod, and to be properly fitted and bolted together.

An additional external roof to be provided, with the proper hoop-sticks, and to be attached to the inner roof, with ornamental cast-iron brackets to project 6 inches at sides and 3 inches at ends, and to have bearers underneath at intervals, and both roofs to be covered with prepared canvas.

One roof lamp, of the best construction, to be placed in centre of saloon, and one at each partition, so as to throw light into 2nd class compartments, and also into saloon.

The general dimensions of framing are as follows:—

		<i>Body.</i>					
		in.	in.			in.	in.
Bottom sides	...	8½	x 3	Cant rails	...	3	x 3
End bars	...	7	x 3	Side framing rails	...	2½	x 2½
Partition do.	...	6	x 3	Bottom light rails	...	3½	x 2¾
Doorway do.	...	6	x 1½	Light uprights	...	3¼	x 2
Corner pillars	...	3½	x 3	Cornices	...	2	x 2
Standing do.	...	3½	x 2¾	Hoop-sticks	...	2½	x 2
Partitions do.	...	2½	x 2	Door pillars	...	3½	x 2½
End battens and rails	...	2½	x 2	Front seat rails	...	6	x 2½
End compass rails in centre	...	7½	x 2	Back do. do.	...	3	x 2

		<i>Under-frame.</i>					
		in.	in.			in.	in.
Soles	...	11	x 4	Cradles for buffer springs	...	6	x 3
Head-stocks	...	11	x 4	Stepboards	...	8	x 1½
Middle bearers	...	11	x 3½	Do. ledges	...	3	x 1¼
Front do.	...	9½	x 3	Centre buffer back piece	...	10	x 3
Diagonals	...	11	x 3	Buffer spring stop blocks	...	3½	x 2½
Longitudinals	...	4	x 3				

J. H. THOMAS,
Engineer.

GOVERNMENT RAILWAYS, NEW SOUTH WALES—EXISTING LINES BRANCH.

Specification of Open and Enclosed Second-Class Carriage.

These carriages are to have four compartments, the partition in centre extending to roof, and the other two partitions to height of top of door as shown in No. 25 second-class carriage now on Southern and Western Lines, with double row of seats in each compartment.

The extreme length of body to be 20 ft. out to out, extreme width at elbows, 7 ft. 9 in. straight on sides, height from underpart of bottom sides to be 6 ft. 3 in. with a rise in centre of roof of 5 in., making total height in clear inside 6 ft. 4 in. There is to be no outer roof.

The whole of the under and upper frame-work to be of blue-gum, or other approved timber, roof of Baltic deal, partition, lining boards, panels, &c., to be of cedar, sound and free from defects. The floor to be of the best Baltic deals, in two thicknesses of ¾" each laid diagonally.

The seats are to be slightly raised in front, the edges round, and to have ½-inch bent boarding at the lower part of the back.

The under-frame, wheels, axles, springs, buffing apparatus, and coupling, to be in all respects similar to the composite carriages.

The dimensions of framing to be as follows:—

		<i>Body.</i>					
		in.	in.			in.	in.
Bottom sides	...	10½	x 3	Partition pillars	...	2¾	x 2½
End bars	...	7	x 3	Cant rails	...	3	x 3
Partition do.	...	6	x 3	Hoop sticks	...	2½	x 2
Intermediate do.	...	6	x 1½	Centre do. (in centre)	...	7¼	x 2½
Bottom longitudinals	...	6	x 1½	End compass rails do.	...	7¼	x 2½
Corner pillars	...	3	x 3	End battens and rails	...	2½	x 2
Standing do.	...	3	x 3	Door pillars	...	3	x 2½
Top light do.	...	2½	x 1½	Top partition rails	...	4	x 2
Light uprights	...	2½	x 1½	Cornices	...	2	x 2
Short standing pillars	...	3	x 3				

Under-frames.

		<i>Under-frames.</i>					
		in.	in.			in.	in.
Soles	...	11	x 4	Cradles for buffer springs	...	6	x 3
Head-stocks	...	11	x 4	Step boards	...	8	x 1½
Middle bearers	...	11	x 3½	Do. ledges	...	3	x 1¼
Front do.	...	9½	x 3	Centre buffer back piece	...	10	x 3
Diagonals	...	11	x 3	Buffer spring top blocks	...	3½	x 2½
Longitudinals	...	4	x 3				

There is to be a roof lamp of best construction provided, to be placed in centre of carriage.

The handles, hinges, and other mountings to be of brass; the patterns to be submitted to the Engineer for Existing Lines.

Enclosed

Enclosed Second Class.

The enclosed Second-class will be in every respect the same, with the exception that all the standing, intermediate, and door pillars are to be continued to the roof, and the doors to be fitted with sliding window frames, glazed with the best plate glass not less than $\frac{1}{4}$ -inch thick, two intermediate quarters on each side to be fitted with sliding Venetian blinds, the whole being in general arrangement the same as No. 15.

J. H. THOMAS,
Engineer.

GOVERNMENT RAILWAYS, NEW SOUTH WALES—EXISTING LINES BRANCH.

Specification for Horse-boxes.

To consist of one compartment, having two divisions, and a dog-box at each end.

The whole of the framing of under carriage and body to be of the best blue-gum; bottom, roof, and inside board of best Baltic deals; roof and outside board of pitch pine; and the panels of dog-box doors of blue gum.

The outside length of upper portion of body, including head stalls, to be 10 ft. 3 in.; lower portion, 8 ft. 10 $\frac{1}{2}$ in.; the height from top of under carriage to under side of roof-boards in centre, 7 ft. 6 in.; and the extreme width 7 ft. 9 in.

The extreme length of under carriage to be 14 ft. 6 in., and the extreme width 6 ft. 10 in.

The general dimensions of under and upper framing, &c., are as follows:—

	in.	in.		in.	in.
Carriage sides	11	x 4	Breast-piece for manger ...	6	x 1 $\frac{1}{2}$
Headstocks	11	x 4	Hoopsticks	2 $\frac{1}{2}$	x 2
Middle bearers	12 $\frac{1}{2}$	x 3 $\frac{1}{2}$	End compass rails	7	x 3 in centre.
Diagonals	11	x 3	Do. do.	7	x 2 $\frac{3}{4}$ do.
Longitudinals	4	x 3	Top sockets for stall posts ...	3	x 1 $\frac{1}{2}$
Cradles	6	x 3	1 floor bearer	6	x 2
Bottom sides	5	x 3	Dog-box, bottom side	5	x 2
Corner pillars	4 $\frac{1}{4}$	x 4	Do. end bars	5	x 2
Cant rails	3 $\frac{1}{2}$	x 3	Do. corner pillars	3	x 3
2 pillars	3 $\frac{1}{2}$	x 3	Do. cross rails	3 $\frac{1}{4}$	x 1 $\frac{1}{2}$
2 do.	4	x 3	Do. upright battens	3	x 1 $\frac{1}{2}$
2 do.	3 $\frac{1}{2}$	x 2 $\frac{1}{2}$	Do. shutting pillars	2 $\frac{1}{2}$	x 1 $\frac{1}{4}$
Cross rails	3	x 3	Do. side uprights	2 $\frac{1}{4}$	x 1
End uprights	3 $\frac{1}{2}$	x 3	Do. intermediate side rails ...	2 $\frac{1}{2}$	x 2
Stall posts	3	x 3	Do. top rails	2 $\frac{1}{4}$	x 1 $\frac{1}{2}$
Flap pieces	3 $\frac{1}{2}$	x 1	Do. roof batten rails	4 $\frac{3}{4}$	x 1 $\frac{1}{2}$
Do. uprights	3 $\frac{1}{4}$	x 1 $\frac{1}{2}$	Do. 8 door pieces	5 $\frac{1}{4}$	x 1 $\frac{1}{4}$
2 short rails for ends	4 $\frac{1}{2}$	x 3 $\frac{1}{2}$	Do. 8 do.	8 $\frac{1}{4}$	x 1 $\frac{1}{4}$
2 do. do.	3 $\frac{1}{2}$	x 3 $\frac{1}{2}$	Cornices	2	x 2

The body to be provided with stall flaps, fitted to carry three horses, and the dog-boxes at each end extending the width of under carriage.

The roof of horse-box and dog-boxes to be covered with prepared canvas.

The interior to be properly stuffed with horsehair and covered with best ox-hides, in the usual manner, to protect the horses, and the fittings similar to those used on the Great Southern and Western Railways.

The under-framing springs, axles, wheels, and buffing apparatus, &c., to be in all respects similar to the carriage trucks.

Each horse-box to have a lever break, as with D trucks.

The general arrangement to be the same as No. 10 on the Southern and Western Lines.

J. H. THOMAS,
Engineer.

GOVERNMENT RAILWAYS, NEW SOUTH WALES—EXISTING LINES BRANCH.

Specification for Carriage Trucks.

To consist of one open compartment, extreme length 14 ft. 6 in., and extreme width 7 ft. 9 in., and height from under bottom side to top of side-rail 17 in., including cap-plate.

The whole of the under and upper framing to be of the best blue-gum, and the floor-boards best Baltic deals.

The extreme length of under-carriage to be 14 ft. 6 in., and extreme width 6 ft. 10 in.

The general dimensions of under and upper framing as follow:—

	in.	in.		in.	in.
2 soles	11	x 4	2 top side rails	3	x 3
2 head-stocks	12 $\frac{1}{2}$	x 4	4 corner pillars	4	x 3
2 middle bearers	11	x 3 $\frac{1}{2}$	6 side pillars	4	x 3
4 diagonals	11	x 3	3 floor-bearers	6	x 2
2 longitudinalinals	4	x 3	1 centre buffer, back piece ...	10	x 3
2 cradles	6	x 3	4 buffer spring stop blocks ...	3 $\frac{1}{2}$	x 2 $\frac{1}{2}$
2 false-bottom sides	6	x 3	2 sliding bars	2 $\frac{1}{2}$	x 2 $\frac{1}{2}$

The draw-rods to be 1 $\frac{1}{2}$ in. round iron to pass through the head-stocks, where a strong hook is attached to receive the screw-coupling; one screw-coupling to be provided to each truck.

The

The buffer-rods are to be made with solid wrought iron discs with kauri facings, and to work through cast-iron blocks at each end of the under carriage frame, and through best gun metal sockets bolted to the bearers and carriage sides; the rods are to be turned and squared and the bushes bored and squared to fit them.

The buffer springs to be of 18 plates 3 in. x $\frac{1}{8}$ in., and a back plate of $\frac{3}{8}$ in. with solid forged ends and a compass of 15 in.; the bearing spring to be 4 ft. long from centre to centre of tension bars when weighted, to have 7 plates spear-pointed 3 in. x $\frac{5}{16}$ in., and a short one $\frac{3}{8}$ in., the buffer and bearing springs to be of "Turton's," "Cammell's," or "Brown's" make, the tension bar to be 3 in. x $\frac{1}{8}$ in.

The wheels are to be 3 ft. 6 in. diameter on running surface, 8 double spokes (Losh's pattern) of wrought iron 3 in. x $\frac{5}{8}$ in. at rim, and 3 in. x $\frac{3}{4}$ in. nave, the rim to be $3\frac{3}{8}$ in. x $\frac{1}{8}$ in., the nave to be of wrought iron 8 in. diameter, 7 in. through, to be bored out and to fit the axle; tires to be 5 in. broad, bored and turned to 2 in. thick at the tread, and properly shrunk on the wheel, and fastened to it by 4 taper rivets.

The axles to be 4 in. diameter in middle for space of 2 ft. 6 in., and tapering to $4\frac{1}{2}$ in. at back of nave, and through nave $4\frac{1}{2}$ in.; the journals to be 3 in. diameter, and 8 in. long, and 6 ft 5 in. centre to centre; wheels to be forced on by hydraulic pressure and secured by one steel key; the wheels and axles are to be of Low Moor or Taylor's (Leeds) make.

The axle-box bearings to be of Sterling's patent metal, or best gun-metal, the grooves of the guides of axle-boxes and the joint between the two halves to be planed; the lower half of the axle-boxes to be made so that Bricogne's method of lubrication can be applied to them.

The axle-guards to be $\frac{3}{4}$ in. thick, to be properly fitted and bolted to the inside of sole bars exactly square, and at right angles to the frame, with washer plates on outside, the surface in contact to be made perfectly true, the ends of the guard bound by a strap as shown.

Two sliding bars, with the necessary straps of leather, buckles, &c., to secure carriages, to be provided to each truck.

J. H. THOMAS,
Engineer.

GOVERNMENT RAILWAYS, NEW SOUTH WALES—EXISTING LINES BRANCH.

Specification for Passengers' Luggage and Break Van.

These vans are to consist of two compartments; the extreme length to be 18 ft.; the width of the luggage compartment 7 ft. 4 in. out to out, and clear height inside in centre 6 ft. 3 in., and width of the front or break compartment 7 ft. 9 in., with a clear height inside of 1 ft. 6 in. above the luggage compartment; the roof of both front and after part to rise 5 in.

The under-frame wheels, axles, buffers, and draw gear, ironwork, &c., will be the same as described for composite carriages, except that the length of the under-carriage will be 17 ft. 11 in., and that the wheels will be placed 10 ft. apart, centre to centre; all other dimensions remaining the same.

The framing, pillars, and rails to be of blue-gum or other approved timber, and panels to be of the best Baltic deal; the inside boarding, partition, and door of Baltic deal; and the floor-boards of Baltic deal, in two thicknesses of $\frac{3}{4}$ in. each, laid diagonally, with blue-gum battens properly screwed down at intervals of 15 in.

The dimensions of the framing to be as follows, measured full when finished:—

		in.		in.				in.		in.	
<i>Body.</i>											
Bottom sides	8	x	3	Front compass rails in centre	...	$7\frac{1}{2}$	x	$2\frac{3}{4}$	
Bottom bars	6	x	3	Partition do. do.	...	$7\frac{1}{2}$	x	2	
Intermediate do.	6	x	$1\frac{1}{2}$	Door pillars...	...	$2\frac{1}{2}$	x	$2\frac{1}{4}$	
Corner pillars	3	x	3	Do. do. ...	...	$2\frac{3}{4}$	x	$2\frac{1}{2}$	
Do. do.	4	x	3	Luggage door rails...	...	3	x	2	
Standing pillars	$2\frac{1}{2}$	x	$2\frac{1}{2}$	Do. do. ...	...	3	x	$2\frac{1}{4}$	
Intermediate do.	$2\frac{1}{4}$	x	$2\frac{1}{4}$	Do. do. ...	...	$2\frac{1}{2}$	x	2	
End battens...	3	x	2	Do. do. ...	...	4	x	$2\frac{1}{2}$	
Do. rails	3	x	2	Guard's door rails	...	3	x	2	
Do. centre rail	$2\frac{1}{2}$	x	$2\frac{1}{4}$	Do. do. ...	...	3	x	$1\frac{1}{4}$	
Side rail	$2\frac{1}{2}$	x	2	Cornices	...	2	x	2	
Fence do.	3	x	$2\frac{1}{4}$	Dog-box, framing all	...	$1\frac{1}{2}$	thick		
Hoop-sticks	$2\frac{1}{2}$	x	$2\frac{1}{4}$	Top dog-box rail	...	3	x	$1\frac{1}{2}$	
Cant rails	$3\frac{1}{2}$	x	$2\frac{1}{2}$	Bottom do.	...	3	x	$2\frac{1}{2}$	
End compass rails in centre	$7\frac{1}{2}$	x	$2\frac{3}{4}$						
<i>Under-frame.</i>											
Soles...	11	x	4	Longitudinals	...	4	x	3	
Head-stocks...	11	x	4	Step boards...	...	8	x	$1\frac{1}{2}$	
Middle bearers	11	x	$3\frac{1}{2}$	Do. ledges...	...	3	x	$1\frac{1}{4}$	
Front do.	7	x	3	Centre buffer back piece	...	10	x	3	
Cradles	6	x	3	Buffer spring stop blocks	...	$3\frac{1}{2}$	x	$2\frac{1}{2}$	
Diagonals	11	x	3						

The interior of the van to have a double door-way communicating from the guard's compartment to the luggage part. Side-doors of guard's compartment to have a sliding glass frame.

A roof lamp to be provided and fixed in the centre of luggage compartment.

Two strong shelves to be fixed at end of luggage compartment, $1\frac{1}{2}$ inch thick, with supporting brackets and ledge in front, and stout hooks for letter-bags, &c., one on each side, to be fixed, and also a letter-rack. A lock-up box, fixed to flooring, to form a step for getting to break; and a seat is also to be fitted in guard's compartment, so placed that he can see over and on one side of the train when sitting.

The windows at top of guard's compartment are to be fixed; the ventilation, as in No. 7, is to be carefully attended to, and is to be continued along part of the end of the van for the side of dog-box, and properly protected on the inside.

A powerful and efficient break apparatus of the best construction, as in No. 7, is to be fixed, having a wheel lever, and so arranged as to be under the most perfect control of the guard. The

The roof is not to be double; but the inside is to be set up and lined with $\frac{1}{2}$ -inch boarding, and spaces left in the hoop-sticks for ventilation.

The luggage doors are to slide outside on a projecting iron bar, the glazing in same to be fixed, the quality of the glass being British plate.

The mountings are to be of brass, lacquered patterns, to be submitted for approval; the projecting rail round the van to be of wrought iron.

J. H. THOMAS,
Engineer.

GOVERNMENT RAILWAYS, NEW SOUTH WALES—EXISTING LINES BRANCH.

Specification for Passenger, Luggage, and Break Vans.

General arrangement to be the same as No. 15.

These vans are to consist of two compartments, the extreme length to be 18 ft. 1 in., the width of the luggage compartment 7 ft. 4 in. out to out, and clear height inside in centre 6 ft. 3 in., and width of the front or break compartment 7 ft. 9 $\frac{1}{2}$ in., with a clear height inside of 1 ft. 6 in. above the luggage compartment; the roof of both front and after parts to rise 5 inches.

The dimensions of the framing to be as follows—measured full when finished.

		<i>Body.</i>					
		in.	in.			in.	in.
Bottom sides	...	8	x 3	End compass rails in centre	...	7 $\frac{1}{2}$	x 2 $\frac{1}{2}$
Do. bars	...	8	x 3	Front do. do.	...	7 $\frac{1}{2}$	x 2 $\frac{3}{4}$
Intermediate do.	...	8	x 3	Partition do. do.	...	7 $\frac{1}{2}$	x 2
Corner pillars	...	3 $\frac{1}{2}$	x 3 $\frac{1}{2}$	Door pillars	...	3	x 2 $\frac{1}{4}$
Do. do.	...	5 $\frac{3}{4}$	x 3	Do. do.	...	3	x 2 $\frac{1}{2}$
Standing pillars	...	3	x 3	Luggage door rails	...	3	x 2 $\frac{1}{4}$
Intermediate do.	...	3	x 2 $\frac{3}{8}$	Do. do.	...	3	x 2 $\frac{1}{4}$
End battens	...	3	x 2	Do. do.	...	3	x 1 $\frac{3}{8}$
Do. rails	...	3	x 2	Do. do.	...	3	x 2 $\frac{1}{4}$
Do. centre rails	...	3	x 2	Guard's door rails	...	3	x 3
Side rails	...	3	x 2 $\frac{1}{8}$	Do. do.	...	3	x 2 $\frac{1}{8}$
Fence do.	...	3	x 2 $\frac{1}{8}$	Cornices	...	2	x 2
Hoop sticks	...	2 $\frac{1}{2}$	x 2 $\frac{1}{4}$	Dog-box, framing all	...	1 $\frac{1}{2}$	thick
Cant rails	...	3 $\frac{1}{2}$	x 2 $\frac{1}{2}$	Top dog-box rail	...	4 $\frac{1}{2}$	wide
				Bottom do.	...	4 $\frac{1}{2}$	do.
<i>Under-frame.</i>							
Soles	...	11	x 4 $\frac{1}{2}$	Longitudinals	...	4	x 4
Head-stocks	...	11	x 4 $\frac{1}{2}$	Step-boards	...	8	x 1 $\frac{1}{2}$
Middle bearers	...	11	x 4	Do. ledges	...	3	x 1 $\frac{1}{4}$
Front do.	...	7	x 4	Centre buffer, back piece	...	10	x 3
Cradles	...	6	x 3 $\frac{1}{2}$	Buffer spring stop block	...	3 $\frac{1}{2}$	x 2 $\frac{1}{2}$
Diagonals	...	11	x 4				

The whole of the framing to be of the best description of blue-gum, well seasoned, and put together with the best white lead.

Roof boards to be of the best Baltic deal 7 in. x 1 in. grooved to receive an inch iron tongue, and put together with white lead. Roof boards to be secured with 2 $\frac{1}{4}$ in. screws to roof sticks, side rails, and ends.

Top of roof to be covered with No. 1 best navy canvas secured to the top with hard-wood battens across the roof, and on the sides and ends by cornice screwed on as shown in drawing. Roof to have two coats of paint previous to being covered with canvas, and three coats of white lead and oil afterwards. Sides and ends to be panelled with the best Baltic deal 1 in. thick, and not more than 5 in. wide, grooved to receive an inch iron tongue, and put together with white lead.

The interior of van to have two doors on hinges, each 13 in. clear of opening, communicating from the guard's compartment to the luggage part.

A hole, 8 $\frac{1}{2}$ in. x 4 $\frac{1}{4}$ in., to be cut in centre of roof of luggage compartment, with wrought iron cover for lamp.

The breakwork to be constructed as shown on No. 15 Van of the same class.

The glass windows at the top of the guard's compartment, and the glass hood over break wheel, shown in drawing, are to be fixtures. The luggage doors are to be run on brass pulleys outside, on a projecting iron bar 2 in. x $\frac{5}{8}$ in., as shown in drawing, the glass windows in which are to be fixed.

The whole of the glass used to be of the best British plate.

Two strong shelves to be fixed at the sides of luggage compartment 14 in. wide by 1 $\frac{1}{2}$ in. thick, with supporting brackets and ledge in front, also stout hooks for letter-bags, &c., one to be fixed on each side. A lock-up box to be fixed to the flooring to form a step for getting to a seat which will have to be fixed and placed so that the guard can see over the train when sitting. Two cast-iron sand-boxes 16 in. x 12 in., x 14 in. deep, one fixed at each end, inside the van.

The door handles and hinges are to be of brass—patterns to be submitted for approval. The projecting hand-rail to be of wrought iron, and fixed as in No. 15. Two lamp-irons to be fixed with bolts on corner pillars of guard's compartment, and one on each end for tail lamp, as shown.

The flooring of body to consist of ten cast-iron plates, as shown, the bottom sides and bars of body to be rebated 1 $\frac{1}{2}$ in. wide by 1 $\frac{3}{8}$ in. deep, to receive the plates, which are 2 $\frac{7}{8}$ in. thick, with flanges to fit into the rebates, to be bedded in rebates, and on the top of framing with the best roofing felt and white lead, and screwed down with No. 20 2 $\frac{3}{4}$ in. screws.

The under-frame to be of blue-gum, well seasoned, and perfectly sound, and square on all edges; the extreme length to be 18 ft., and width 6 ft. 10 in., the sides and ends to be beaded top and bottom.

The

The wheels to be placed 5 ft. 6 in. apart, 11 ft. over all from centre to centre of axles. Two spring bearers or cradles, 6 in. x $3\frac{1}{2}$ in., to be let into centre of middle bearers, and supported by an iron plate 2 in. x $\frac{5}{8}$ in. at each end, fixed to middle bearers with two $\frac{5}{8}$ bolts to each. Two iron plates 2 in. x $\frac{3}{8}$ in. on top, for buffer springs to slide on, and two plates 3 in. x $\frac{1}{2}$ in. above buffer springs, with lugs at ends, bolted to bearers; four diagonals 11 in. x 4 in., framed into the head-stocks and middle bearers, let into the narrow bearers, and fixed with $\frac{1}{2}$ in. bolts through them, and secured to head-stocks with inside corner plates, as shown in drawing. Two longitudinal pieces, framed into the head-stocks and middle bearers, and lapped into the narrow bearers, fixed with a $5\frac{5}{8}$ in. nut-headed screw through the lap, and secured at the head-stock with a T plate $2\frac{1}{2}$ in. x $\frac{3}{8}$ in. fixed with three $\frac{1}{2}$ -in. nut-headed coach screws, and to the middle bearers with an iron plate $2\frac{1}{2}$ in. x $\frac{3}{8}$ in. 1 foot 10 in. along the bearers, secured with $\frac{5}{8}$ -in. bolts, and 5 inches along the longitudinals and diagonals, also secured with $\frac{5}{8}$ -in. bolts.

The draw-rods to be of $1\frac{5}{8}$ in. round iron, to pass through the head-stocks, where a strong hook is attached to receive couplings. Two side chains also are required, which, with the draw rod, must be of the best iron. The buffer rods with solid wrought iron disc, with kauri facings, two to be convex and two flat, with $\frac{1}{4}$ wrought-iron plate, as in No. 15. Buffer rods to work through cast-iron blocks at each end, and across bars of carriage frame, are to be turned in the round parts, and squared to fit bushes through bearers, with cast-iron shoes for buffer springs.

The scroll irons to be of the form in No. 15, made of BBH or other iron of equal quality, with solid eyes, and to be bolted up to the sole bars, one end let $\frac{3}{4}$ into under-frame as shown in drawing.

The axle-boxes to be as in No. 15 and the bearings to be of the best gun-metal; the grooves in the sides of axle-boxes and the joints between the halves to be planed and jointed with leather. The axle guards to be $\frac{3}{4}$ inch thick, to be properly fitted and bolted to the inside of sole bars, exactly square, and at right angles with frame, with washer plates on outside; the surface against which the axle-box works to be made perfectly true; the end of each guard to be bound with a short strap, and connected together by $1\frac{1}{4}$ inch rod as shown, and to be properly bolted together.

The wheels, axles, springs, and all other materials not herein specified, must be the same as in pattern van No. 15.

Dimensions of
iron-work.

Plates on buffer heads, $\frac{1}{4}$ in. thick, 14 in. diameter.

Disc 13 in. x $\frac{1}{2}$ in. at edge, and $1\frac{1}{2}$ in. at root.

Rods—

Round part, 2 ft. 6 in. long by $2\frac{1}{2}$ in. diameter.

Square do., 6 ft. 4 in. do. do. $1\frac{1}{2}$ in. diameter.

Cast iron shoe, as per drawing.

Draw bar, &c.—

Draw bar rod, 2 in. square, for 12 in. from hook remainder, $1\frac{5}{8}$ in. round iron.

Do. do. plate, $6\frac{1}{2}$ in. x 1 in. thick at hook.

$4\frac{1}{2}$ in. x $\frac{1}{2}$ do. do. side.

18 in. long.

13 in. from centre to centre of eye bolts.

Side chains—

Side chain, 5 links of $\frac{7}{8}$ in. iron.

Eye bolt collar, 3 in. x $\frac{1}{4}$ in.

Eye, 1 in. thick.

Do. $2\frac{1}{2}$ in. from collar to centre of eye.

Eye bolt, $5\frac{1}{2}$ in. x 1 in. between collar and nut.

Do. do. washer, 4 in. x 4 in. x $\frac{1}{4}$ in.

Tie rods for under-frame, all $\frac{3}{4}$ in. diameter.

Nut bolts through spring bearers and plates, above springs $\frac{5}{8}$ in. diameter.

Bolts—

All bolts in under-frame not otherwise specified, $\frac{3}{4}$ in. diameter.

Corner plates—

3 in. x 1 in. and $\frac{3}{4}$ in. at ends, and 11 in. from angle, secured with $\frac{3}{4}$ in. nut bolts.

Outside corner plates of body, 6 in. each way, x $\frac{3}{8}$ in. thick.

Handrails, all $\frac{5}{8}$ in. diameter.

Break-work—

Bracket for carrying break hangers, $2\frac{1}{2}$ in. x 2.

$3\frac{1}{2}$ over collar, and $1\frac{1}{8}$ in. bolt.

Pins for break hangers, $1\frac{1}{4}$ in. diameter.

Hangers, 3 in. x 1 in.

Eyes of do., $2\frac{1}{2}$ in. diameter.

Tie rods for do., $\frac{3}{4}$ in. do.

Break block bolts, 4 in. x $\frac{5}{8}$ in. with nuts let into B. block.

Break connecting rod, $2\frac{1}{2}$ x $\frac{1}{2}$ and 1 through eye.

Ditto shaft, 3 in. diameter.

Nut lever of do. $2\frac{3}{4}$ in. x $1\frac{1}{4}$ x $5\frac{1}{2}$ over eye.

Nut, 3 in. diameter.

Break rod and screw.

2 in. under wheel, $1\frac{1}{2}$ in. in middle.

2 in. diameter of screw.

3 threads to the inch.

Screw, 16 in. long.

Hanging brackets, 3 x 1 x $4\frac{1}{2}$ over boss, and 3 in. through.

Do. levers, 1 in. thick.

Pillar bolts, $\frac{3}{4}$ diameter.

Break wheel and gearing wheels, to be the same as in No. 15.

Scroll irons—

3 in. wide, 1 in. thick, tapering to $\frac{3}{4}$ at ends.

Links, $2\frac{1}{4}$ in. x $\frac{3}{4}$ and $3\frac{1}{4}$ between centres of holes.

Pins for do., $\frac{3}{4}$ diameter.

Axle box bolts, $\frac{1}{2}$ in. square.

Horn plate, 3 in. x $\frac{3}{4}$ in.

Washer plate, $2\frac{3}{4}$ in. x $\frac{1}{2}$ in.

Horn plate connecting rod—

Flat part, $1\frac{3}{4}$ in. x $\frac{3}{4}$ in.

Round do., $1\frac{1}{4}$ in. diameter.

Secured to horn plate by $\frac{5}{8}$ in. bolts.

Step hangers—

Round part, $1\frac{1}{4}$ in. diameter.

Flat do., 2 in. wide.

J. H. THOMAS,
Engineer.

GOVERNMENT RAILWAYS, NEW SOUTH WALES—EXISTING LINES BRANCH.

Specification for Sheep-wagons.

To consist of four compartments, the extreme length being 18 ft., the extreme width 7 ft. 11 in., and the height from top of floor to underside of roof-boards at centre 6 ft. 4 in.

The under-framing wheels, axles, &c., to be in all respects the same as the cattle-wagons on the Southern and Western Railways.

The separate compartments to be 3 ft. 1 in. clear height in centre, and to have sliding doors 4 ft. wide framed as shown, and the sides to be strengthened with diagonals 4 x 4 properly tenoned into frame and fitted in with $\frac{3}{4}$ iron rods; the middle partition to be framed with diagonals 3 x 3.

The upper floor to be supported by joists 5 x 2 $\frac{1}{2}$ tapered at sides, and the flooring-boards of lower and upper compartment to be of Baltic deals 1 $\frac{1}{2}$ thick, grooved and tongued, and with kauri battens screwed down to them.

The roof to have the ventilator running along the whole length, as in No. 2.

In all respects, as to scantlings, corner posts, &c., the dimensions to be the same as the cattle-wagons in use on the existing lines.

J. H. THOMAS,
Engineer.

GOVERNMENT RAILWAYS, NEW SOUTH WALES—EXISTING LINES BRANCH.

Specification for Cattle-wagons.

To consist of one compartment; the extreme length being 18 ft., the extreme breadth 7 ft. 11 in., and the height from top of floor to underside of roof boards at centre, 6 ft. 8 in.

The whole of the under and upper framing to be of best blue-gum, and the boarding best Baltic deals or pitch-pine.

One flap, hung on hinges, to be provided on each side of wagon, 4 ft. wide and 3 ft. 6 in. high, the top rail ranging with side rails when closed; the boarding in flaps to be of kauri pine 1 $\frac{1}{4}$ thick, with blue-gum battens firmly screwed on the inside of each flap, $\frac{3}{4}$ round rods to be fixed in lower part as shown, and 1-in. rods round the upper part.

The roof to be covered with prepared canvas.

The extreme length of under-frame to be 18 ft., and extreme width 6 ft. 10 in.

The general dimensions of framing to be as follow:—

	in.	in.		in.	in.		
2 soles	11	x	4	2 compass end rails	7	x	3
2 head-stocks	12 $\frac{1}{2}$	x	4	(rounded to 3 $\frac{1}{2}$ at ends)			
2 middle beams	11	x	4	7 hoop-sticks	2 $\frac{1}{2}$	x	2
2 front beams	9	x	3 $\frac{1}{2}$	12 ventilator side rails	3	x	3 $\frac{1}{4}$
2 cradles	6	x	3	6 side braces	3 $\frac{1}{2}$	x	2 $\frac{1}{4}$
4 diagonals	11	x	3	10 door boards	7 $\frac{1}{2}$	x	1 $\frac{1}{4}$
2 longitudinals	4	x	3	4 end ventilator end rails	3	x	3 $\frac{1}{4}$
2 false sides	4	x	4	4 do. intermediate do.	4	x	2 $\frac{1}{4}$
4 corner pillars	4	x	4	4 do. uprights	4	x	2 $\frac{1}{4}$
6 side pillars	4	x	3 $\frac{1}{4}$	1 centre buffer spring piece	10 $\frac{1}{4}$	x	3 $\frac{1}{4}$
6 side rails	4	x	3 $\frac{1}{4}$	4 buffer spring stop blocks	3 $\frac{3}{4}$	x	2 $\frac{3}{4}$
2 cant rails	4	x	2 $\frac{1}{2}$	4 buffer backs	11	x	2 $\frac{1}{4}$
4 door rails	4	x	3 $\frac{1}{4}$	10 pedestals	4	x	3 $\frac{1}{4}$
4 door pillars	4	x	3 $\frac{1}{4}$	floor			2
4 door braces	3 $\frac{1}{2}$	x	2				

The draw-rods are to be 1 $\frac{5}{8}$ round iron, to pass through the head-stocks, where a strong hook is attached to receive the coupling. Coupling links to be provided at each end, and safety chains.

The buffer and buffer springs to be same as specified for D Trucks.

Wheels, axles, and axle-boxes to be the same as specified for D Trucks.

The axle-guards to be $\frac{3}{4}$ in. thick, properly fitted and bolted to inside of sole bars, perfectly true and square, and the parts in contact with axle-box to be planed.

The flooring to be laid (across the frame) $\frac{1}{4}$ in. apart, the sides of planks bevelled inward, and throated underneath for drainage, and to have stout kauri battens screwed down at intervals of 15 in.

In all other respects not herein specified, it must be the same as No. 20 on the Southern and Western Lines.

J. H. THOMAS,
Engineer.

GOVERNMENT RAILWAYS, NEW SOUTH WALES—EXISTING LINES BRANCH.

Specification of Covered Goods-vans and Powder-vans.

The general arrangement of these vans to be the same as No. 15 Van, at present on the Southern and Western Lines. General arrangement.

The frame to be 15 ft. long, and 7 ft. 6 in. wide over all.

Each sole to be in one piece, 14 in. by 4 in., framed into the head-stocks with two 1 $\frac{1}{2}$ in. tenons, and further secured by two knees at each corner of the sole, head-stock, and diagonal braces, and by 10 $\frac{3}{4}$ in. bolts in each, independent of the buffer bolts. Frames.

The nuts to screw on to washer-plates outside the head-stock, and soles 2 in. broad by $\frac{1}{4}$ in. thick.

The head-stocks to be 7 ft. 6 in. long by 12 $\frac{1}{2}$ in. deep, by 4 in. thick, and to be framed level with the bottom side of sole.

The two transverse bearers to be 11 in. by 4 in., and to be framed into the sole with two 1 $\frac{1}{2}$ in. tenons at each end, and housed $\frac{1}{4}$ in. into the sole; four $\frac{3}{4}$ in. bolts to pass through the soles across the frames with nuts at each end, and washer-plate 2 $\frac{1}{4}$ in. square by $\frac{1}{4}$ in. thick.

The four diagonal braces to be 11 in. by 3 in., framed fair with the upper side of the cross bearers and soles, and tenoned into the head stock and transverse bearer with two $1\frac{1}{2}$ in. tenons on each, housed into each $\frac{1}{4}$ of an inch, and further secured by a knee $4\frac{1}{2}$ in. deep by $\frac{3}{4}$ in. thick, in the root, and with eight $\frac{3}{4}$ in. bolts, independent of the two tie bolts.

The centre of this knee is to be placed in the centre line of draw bar, so that a hole $1\frac{1}{2}$ in. diameter must be punched in the knee to allow the draw bar to pass through it.

Two $\frac{3}{4}$ in. bolts screwed at each end, and with washers, $2\frac{1}{4}$ in. square and $\frac{1}{4}$ in. thick, draw the two transverse bearers on to the tenons of the two inside longitudinal short bearers, and two $\frac{3}{4}$ in. bolts at each end of the frame, screwed at one end, and with the nut and washer on the transverse cross bearer, bring the whole frame well together.

Two short longitudinal bearers, 9 in. by $3\frac{1}{2}$ in. are to be tenoned into the two transverse bearers, and also housed at $\frac{1}{4}$ in. in each end.

Horn plates.

To be bolted with $\frac{3}{4}$ in. bolts against the inside of sole, and to be 8 ft. 6 in. from centre to centre; the nuts to be placed on the outside, and screwed up securely against washer-plates, as shown in No. 15.

Great care must be taken that these plates are correctly fixed vertically, by transverse and longitudinal measurement. They must be of form shown in No. 15, and planed on the inside, where they pass over axle-boxes.

Buffers.

Cases and rams of cast iron, and fitted with vulcanized India-rubber springs, $8\frac{1}{2}$ in. long and 5 in. diameter, having a 2 in. hole through the centre.

The cases must be bored, and the rams turned to fit them well; and great care must be taken that the ram will touch the end of the casing before the compression is wholly taken off the spring. The cases are packed off from the frames with pieces of kauri pine, 1 in. thick.

The buffer-facings must be of good and well-seasoned kauri pine, free from knots and shakes, neatly turned, and securely bolted to the rams, care being taken that the bolt-heads fit well, and do not project at all beyond the buffer-facing.

By means of the pin at the back end of the casing, $\frac{1}{2}$ an in. of compression must be put upon the spring before the buffer is put in its place. It will be seen that the centre bolt is square under the head, and passes through the ram in a square hole to prevent its turning round.

Draw-bar.

To be made of the best cable-iron, and with a vulcanized India-rubber spring, 6 in. diameter and 8 in. long, with a 3 in. hole through it, to work in a cast-iron cylinder.

Wheels.

There are to be four 3 ft. diameter on the tread, wrought iron wheels, which must be turned and bored for the reception of the tire and axle, to the exact diameter and gauge.

Tires.

To be of the best Low Moor manufacture, 5 in. wide and 2 in. thick on the thin edge, turned and bored to gauge.

Great care must be taken that the tires are shrunk securely on the wheels, and that no undue strain is put on either.

The diameter of the tire after it is bored, and before it is heated for expanding, must be precisely that of the wheel; it must be riveted to the rim of the wheel with four $\frac{7}{8}$ in. rivets coned into the tire, and with the head of the rivet on the inside of the rim of the wheel.

Axles.

To have journals $3\frac{1}{4}$ in. diameter by $7\frac{1}{2}$ in. long; diameter of wheel seating, $4\frac{1}{2}$ in.; length of do., $8\frac{3}{8}$ in.; diameter behind wheel, 5 in.; diameter in middle of axle, 4 in.; length between centres of journal, 6 ft. $3\frac{1}{4}$ in.; length between bosses of wheel, 4 ft. 3 in.; total length of axle, 7 ft.; nose of journal to be 4 in. diameter, and $\frac{5}{8}$ in. wide.

Axle-boxes.

To be made in halves, and fitted with gun-metal steps.

Care must be taken that the steps are fitted and bedded securely in the box, and that they be bored so that they bear on the journal on the top only, for a space equal to one-third of the circumference of the journal. The cores for the grooves for the horn-plates must be carefully fixed in the mould, so that they be out of winding, and perfectly opposite to each other.

Springs.

To be of the best spring steel, and tested before put in by being twice weighted, until the whole camber has been taken off, and the spring found to resume its original form. Length between centres, when unweighted, to be 2 ft. $8\frac{1}{2}$ in., with holes in the ends 1 in. diameter, to be perfectly true, and at right angles to the spring.

Each spring is to be formed of ten plates of steel, nine being 3 in. by $\frac{3}{8}$ ths of an in., and one 3 in. by $\frac{1}{2}$ an in.; compass, 7 in. from top of eyes to top of back-plate.

Break.

Each van is to be fitted with a break, as in the D trucks.

Spring hangers.

Are to be of wrought iron, 3 in. wide and $\frac{3}{4}$ in. thick; they are to be blocked off from the bottom of the soles with cast-iron blocks, 3 in. wide, and secured to it by three $\frac{5}{8}$ in. bolts.

Great care must be taken that they are securely and correctly fixed, and out of winding in every direction.

Coupling and Safety chains.

To be as in D trucks.

Pillars.

To be of well-seasoned blue-gum.

Door pillars to be 4 in. by $3\frac{1}{2}$ in., rebated to receive the side plates; centre pillars, 4 in. by 3 in.; corner pillars, 4 in. by 4 in., rebated to receive side and end plates of iron.

Side-door pillars to be 4 in. by $2\frac{1}{4}$ in.; end pillars, $4\frac{1}{2}$ in. by 4 in., tenoned into head-stock and top end rail; and to have a plate of iron, $2\frac{1}{2}$ in. by $\frac{3}{8}$ in., bolted to them.

Plates for corner pillars to be $2\frac{1}{4}$ in. by $\frac{1}{2}$ in., and each arm 14 in. long, secured by $4\frac{5}{8}$ in. bolts in each plate.

Iron knees, 2 in. by $\frac{3}{4}$ in., are also to be fitted at the foot of doorway pillars, each arm being 9 in. long, secured to pillar and bottom side by four $\frac{5}{8}$ bolts.

Inside of doorway pillars and bottom side to have screwed on a plate $3\frac{1}{4}$ in. by $\frac{1}{4}$ in.

There are to be distance pieces, 3 in. by 3 in., between the feet of the side pillars; the tops to be tenoned into top rail with $\frac{5}{8}$ in. tenons.

The corner and doorway pillars are mortised into the head-stocks.

Sides, ends, and roof of body.

To be of galvanized sheet iron, No. 12 wire gauge, 5 ft. 3 in. high above the level of the top of the floor; and the ends rounded, so as to give a clear height in the middle of the van, underneath the covering plate of the roof, of 5 ft. 9 in.

The sheet iron, forming the sides to be screwed to the pillars, the top rail, and bottom side, with screws No. 18— $1\frac{3}{4}$ in. long, $3\frac{3}{4}$ in. between centres. Care must be taken that these and all other sheets composing the body, are perfectly straightened before they are fixed in their places; and that whenever they

they bed upon and are screwed to the framing or pillars, that strips of canvas, well covered with white lead underneath, and that when screwed up they are a sound, tight, and good job.

Two roof-sticks of well-seasoned English ash, 3 in. by $2\frac{1}{4}$ in., two ditto, $2\frac{1}{2}$ in. by $2\frac{1}{4}$ in.; two short roof-sticks, $2\frac{1}{2}$ in. by $2\frac{1}{4}$ in.

Longitudinal pieces on centre of roof, $4\frac{1}{2}$ in. by 3 in., to be lapped into end rail; bottom sides 5 in. by 4 in. rebated $\frac{1}{2}$ in. into the sole to stand up the thickness of bottom boards above the under-frame, and bolted to the sole with eight $\frac{5}{8}$ in. bolts on each side.

Top rails, $4\frac{1}{2}$ in. by $3\frac{1}{4}$ in., rebated to receive the iron plates, and bevelled to compass of roof.

There is to be a space of $\frac{1}{2}$ in. between the sheets on the roof, and they are to be screwed to the roof-sticks by wood screws, No. 20, $1\frac{1}{2}$ in. long, $3\frac{1}{4}$ in. between centres. The space of $\frac{1}{2}$ in. is to be covered by a piece of hoop iron, 2 in. wide, 16 wire gauge, screwed down on canvas and white lead with wood screws, No. 20, $1\frac{1}{4}$ in. long, 3 in. between centres.

There must be two doors, each 3 ft. 1 in. wide, on each side of the van, as in No. 15, moving in ^{Doors.} slides on two rollers, let into bottom of doors; the bottom slide is to be a bar of $2\frac{1}{2}$ in. iron upon the bottom, secured with wood screws, No. 20, $1\frac{1}{2}$ in. long, not more than 6 in. apart.

The frame of each door is to be of blue gum, $4\frac{1}{2}$ in. by $2\frac{1}{4}$ in., chamfered on the inside edges, and rebated on the outside of the bottom side, to secure the bar on which it slides, which must be 2 in. wide, and $\frac{3}{8}$ in. thick.

Great care must be taken that all these parts are made and fixed perfectly true, and with the necessary play, so that they may move easily backward and forward.

The bar for securing the door to be $\frac{7}{8}$ in. diameter, and to be fastened as in No. 15.

To be the same width in the clear as the doors, but open on one side only, so that on the other ^{Roof slides.} side the roof runs the entire length of the body, and forms a stay for the ends; the slide to be framed as in No. 15, of well-seasoned wood, covered with sheet iron, No. 12 wire gauge, which is secured to the frame by wood screws, No. 20, $1\frac{1}{2}$ in. long, $3\frac{1}{4}$ in. between centres. Strips of iron, $1\frac{1}{4}$ in. by $\frac{3}{8}$ in., must be screwed to the sides of the door by wood screws, No. 20, $1\frac{1}{2}$ in. long, and not more than 6 in. between centres on which it slides; other strips, $2\frac{3}{4}$ in. by $\frac{3}{8}$ in., must be screwed on the sides of the two centre roof-sticks, with wood screws, No. 20, $1\frac{1}{2}$ in. long, and not more than 6 in. between centres, on which the roof slide moves.

A strip of wood is to be laid upon the outside of the roof, bedded in canvas and white lead, and screwed to the sheet iron by wood screws, No. 20, $1\frac{1}{4}$ in. long, to serve as a guide, and on the top of which, a strip of hoop iron, $3\frac{1}{2}$ in. wide, 14 wire gauge, is screwed with wood screws, No. 20, $1\frac{1}{4}$ inch long.

This sliding door must be well and truly put together, to insure its perfect working.

Handles are to be fixed on the top slide and on the door.

To be of the best blue-gum, well-seasoned, and free from all defects, 2 in. thick and about 7 in. ^{Floor-boards.} wide, laid longitudinally, and each plank well secured on the head-stocks. Cross bearers and diagonal braces, with $3\frac{1}{2}$ in. wrought iron rose-headed nails.

Powder-vans.

The powder-vans are to be the same as the covered or C vans, with the exception, that they are to be without sliding roof doors; and in all other respects like No. 1 Powder-van on the Great Southern and Western Railways.

J. H. THOMAS,
Engineer.

GOVERNMENT RAILWAYS, NEW SOUTH WALES—EXISTING LINES BRANCH.

Specification for Meat-van.

These vans are to be 17 ft. long, 8 ft. wide, and 6 ft. 10 in. high; and the same, in general arrangement, as No. 7 Meat-van on the Southern and Western Lines.

The under-framing, wheels, axles, buffers, springs, &c., to be the same as specified for D Trucks.

J. H. THOMAS,
Engineer.

GOVERNMENT RAILWAYS, NEW SOUTH WALES—EXISTING LINES BRANCH.

Specification for A Trucks.

The under-frame (15 ft. long and 7 ft. 6 in. wide), wheels, axles, buffers, and all iron-work, to be the same as specified for D trucks.

Height of body outside to be 11 in., and inside, above flooring, $6\frac{5}{8}$ in.

Round the top edge of body is to be fixed a plate of iron, 2 in. by $\frac{3}{8}$ in., secured by wooden screws, and six $\frac{1}{2}$ -in. bolts on the sides, and four do. at each end.

The top sides to be of kauri pine, $6\frac{5}{8} \times 3$, bevelled on the inside to $2\frac{1}{4}$ in. on the upper edge. The corners to be strengthened with a $\frac{1}{4}$ -in. wrought iron plate, 12 in. long on sides and ends, and 10 $\frac{1}{8}$ in. deep, bolted to bottom side, head-stock, top side, and end boards, with ten $\frac{1}{2}$ -in. bolts in each corner plate.

In centre of each truck is to be fixed transversely a bolster of blue-gum, 10 x 5; the ends to be shod for a length of 12 in. with a $\frac{1}{2}$ -in. iron plate, lapped 3 in. over the sides, each being secured by six wood screws on the top and two $\frac{5}{8}$ -in. bolts through the sides. These plates are to have $1\frac{3}{4}$ -in. square holes to receive the pins. The pins are to be of wrought iron, 2 ft. long, $1\frac{1}{4}$ -in. square, with a shoulder 3 in.; they enter the bolster 6 in., and have fastenings with eye-bolt and $\frac{1}{2}$ -in. chain.

The bolster is to be secured to under-frame by two $\frac{5}{8}$ -in. bolts 2 ft. long, and two $\frac{5}{8}$ -in. bolts 15 in. long, at ends, through bolster, and bottom side of bottom.

J. H. THOMAS,
Engineer.

GOVERNMENT

GOVERNMENT RAILWAYS, NEW SOUTH WALES—EXISTING LINES BRANCH.

Specification for B Trucks.

The under-framing, 15 ft. long, and 7 ft. 6 in. wide, to be the same as specified for D trucks.

The height from floor to top of sides 3 ft., and ends to be 3 ft. 4 in. in centre.

The general dimensions of body framing:—

	in.	in.		in.	in.
4 corner pillars	4½	4½	|	8 side diagonals	3½ x 3½
4 doorway do	4½	4½		2 end rails	4½ x 4½
8 side rails	4½	4½		2 do. 4½ thick,	ends 4½ 8½ in centre.
8 do. battens				3 x 3½	

Two side flaps, each constructed of four 7 in. x 2½ in., and one 8 in. x 2½ in. planks.

The whole of the framing to be of the best blue-gum, and the flaps and ends of kauri pine, planed, grooved and tongued, with 1 in. x ½ in. iron tongues.

The corner pillars are to be framed into head-stocks with two 1½ in. tenons.

The wheels, and axles buffers, and all other iron-work, to be the same as specified for D trucks.

The trucks are to be constructed in every respect (where not specified to the contrary) the same as B truck No. 30.

J. H. THOMAS,
Engineer.

GOVERNMENT RAILWAYS, NEW SOUTH WALES—EXISTING LINES BRANCH.

*Specification of D Trucks.*General arrange-
ment.

The general arrangement to be as in Truck No. 240, on the Southern, Western, and Richmond Railways.

Frames.

The frame to be 15 ft. long, and 7 ft. 6 in. wide over all, and 6 ft. 1 in. inside soles.

Each sole to be in one piece, 11 in. x 4 in., framed into the head-stocks with two 1½ in. tenons, and further secured by two knees at each corner of the sole, head-stock, and diagonal braces, and by five ⅝ in. bolts in each, independent of the buffer bolts.

The head-stock to be 7 ft. 6 in. long, 12½ in. deep, by 4 in. thick, and to be level to the bottom side of the sole.

Two transverse bearers 11 in. x 4 in., and two do. 6 in. x 4 in., to be framed into the sole with two 1½ in. tenons at each end, and housed ¼ in. into the sole.

Four ⅝ in. bolts to pass through the soles across the frame, with nuts and washer plates at each end.

The four diagonal braces to be 11 in. x 3 in., framed fair with the upper side of the cross bearers and soles, and tenoned into the head-stock and transverse bearer with two 1½ in. tenons on each, housed into each ¼ of an inch, and further secured by a 3 in. x ½ in. plate, 26 in. long on transverse bar, and 14 in. long on each diagonal bar, bolted by ⅝ in. bolts, 12 in. long.

Two longitudinal bearers 11 in. x 4 in., and two do. 4 in. x 3 in. are tenoned into the two transverse bearers, and also housed in ¼ in. at each end.

Horn-plates.

To be bolted with ⅝ in. bolts against the inside of sole, and to be 8 ft. 6 in. from centre to centre of each.

The nuts to be placed on the outside, and screwed up securely against washer-plates, as shown in Truck No. 240.

Great care must be taken that these plates are correctly fixed vertically, and by transverse and longitudinal measurement.

The horn-plate must be 3 in. x ¾ in. iron, and wings to do. 2½ in. x ¾ in. They must be the same form as No. 240, and planed on the inside where they pass over the axle-boxes.

Buffers.

Cases and rams of cast-iron, and fitted with vulcanized India-rubber springs 5 in. diameter and 8½ in. long, with a 2 in. hole through the centre.

The cases must be bored and the rams turned to fit them well, and great care must be taken that the ram will touch the end of the casing before the compression is wholly taken off the spring.

The cases are to be packed off from the end frames with pieces of kauri pine 1 in. thick.

The buffer facings must be of good and well-seasoned kauri pine, free from knots and shakes, neatly turned, and securely and carefully bolted to the rams—care being taken that the bolt-heads fit well, and do not project at all beyond the buffer facing.

By means of the pin at the back end of the casing, ⅓ an inch of compression must be put upon the spring before the buffer is put into its place.

It will be seen that the centre bolt is square hole under the head, and passes through the ram in a square to prevent its turning round.

Draw-bar.

To be made of the best cable iron, with an India-rubber spring 6 in. diameter, 8 in. long, and a 3 in. hole through the centre—the spring working in a cast-iron cylinder to pattern provided.

Wheels.

There are to be four wrought-iron wheels to each truck, of the same pattern as those imported by the Commissioner from Lloyd, Foster & Co., &c., and to be 3 ft. in diameter on the tread.

They must be turned and bored for the reception of the tire and axle to the exact diameter.

Tires.

To be of best Low Moor manufacture, 5 in. wide, and 2 in. thick on the thin edge—turned and bored to gauge.

Great care must be taken that the tires are shrunk securely upon the wheels, and that no undue strain is put on either; the diameter of the tire, after it is bored and before it is heated for expanding, must be precisely that of the wheel. It is to be riveted to the rim of the wheel with four ⅞ in. rivets coned into the tire, and with the head of the rivet on the inside of the rim of the wheel.

Axles.

To have journals 3¼ in. diameter by 7½ in. long; diameter of wheel seating, 4½ in.; length of ditto, 8½ in.; diameter behind wheel, 5 in.; diameter in middle of axle, 4 in.; length between centres of journals, 6 feet 3¼ in.; length between bosses of wheels, 4 feet 3 in.

Total length of axle, 7 feet. Nose of journal to be 4 in. diameter, and ⅝ in. wide.

Axle-boxes.

To be made in halves, and fitted with gun-metal steps.

Care

Care must be taken that the steps are fitted and bedded securely in the box, and that they be bored so that they bear on the journal on the top only for a space equal to one-third of the circumference of the journal.

The cores for the grooves for the horn-plates must be carefully fixed in the mould, so that they be out of winding, and perfectly opposite to each other,

To be made of the best spring steel, and tested before put in by being twice weighted until the whole camber has been taken off and the spring found to resume its original form. Springs.

Length between centres, when unweighted, to be 2 ft. 8½ in., with holes in the ends 1 in. in diameter. To be perfectly true, and at right angles to the spring.

There are to be ten plates in each spring, nine being 3 in. by ⅜ of an in., and one 3 in. by ½ in.

Compass, 7 in. from top of eyes to top of back plate.

The centres of the springs must correspond with the centres of the journals over which they are placed, and be secured to the axle-boxes by (4) four ½ in. bolts and nuts, and two spring plates.

Each truck is to have a break fitted of the form and dimensions of that on No. 240. Break.

The spring hangers are to be made of wrought-iron, 3 in. wide and ⅜ in. thick. They are blocked off from the bottom of the soles by cast-iron blocks 3 in. wide, and secured to it by three ⅝ in. bolts. Spring hangers.

Great care must be taken that these are securely and correctly fixed, and out of winding in every direction.

To be made of the dimensions of those in No. 240, and of the very best cable iron. Coupling and safety chains.

The end standards are to be 4 in. by 3½ in. End standards.

To be of the best clean kauri pine; the ends and side-flaps are each to be constructed of two 7 in. by 2½ in. planks, and one 8 in. by 2½ in. Sides and end planking.

The depth of the side above the level of the floor is 22½ in.

Four ½ in. bolts to pass directly down through the whole depth of the ends and flaps, with cup-heads on the top of the sides, and nuts underneath.

Wrought-iron knees, 2½ in. by 1 in. the full depth of end, and 14 in. into the sole bar.

A band of iron, 2½ in. wide by ⅜ in. thick, to be secured with wood screws, No. 18, 1½ in. long, and not more than 18 in. apart, to run round the top of truck.

To be of the best well-seasoned blue-gum, free from all defects, 2½ in. thick and 7 in. wide, laid longitudinally, and each plank well secured on the head-stocks; cross-bearers, and diagonal braces, with 3½ in. wrought-iron rose-headed nails. Floor-boards.

Wherever bolts are used, the washers underneath the nuts must not be less than 2¼ in. square by ¼ in. thick. Bolts and washers.

The whole of the work must be of the very best quality and finish in every respect. Quality of work.

Every part must be framed perfectly square and true in every direction, and all the tenons must fit well into the mortises, and be bedded in with white lead; and all the holes for bolts must be bored slightly less in diameter than the bolt itself, that the whole may be solid and firm when fixed together.

J. H. THOMAS,
Engineer.

GOVERNMENT RAILWAYS, NEW SOUTH WALES—EXISTING LINES BRANCH.

Specification for the Painting of Rolling Stock.

Locomotive Engines.

Paint, in two coats of red lead, the inside of boiler and water-tank.

Previous to new lagging being fixed, the whole exterior of the boiler is to receive two coats of red lead.

The lagging to have two coats of lead colour; and under-side of iron lagging sheets, two coats of red lead.

After the lagging is fixed, the whole of the exterior of engine and tender to receive two coats of colour, stopped and filled up with not less than three coats of Noble and Hoare's patent filling, to be rubbed down to a smooth surface. It is then to receive one coat of lead colour and two coats of green, picked out with black, and edged with white.

The under-frame to be in every respect painted in a like manner, the buffer plank being finished in vermilion, picked out with black.

The wheels to be painted with two coats of lead colour, stopped up, and to receive two coats of green, picked out with black.

The whole of the outside of the painted portion of the engine, tender, frames, wheels, &c., &c., to receive over all two coats of varnish.

Chains, springs, &c., to receive two coats of lead colour, and one of black or Japan.

Sufficient time must be allowed to elapse to enable each of the foregoing coats of paint, &c., to become perfectly dry before the application of another.

Carriages.

They are first to be given three coats of lead colour, and four of filling up; then to be well rubbed down with pumice-stone, and receive two more coats of lead colour, and stopped with hard stopper; and then again faced down to a smooth surface with pumice-stone; then receive an additional coat of lead, and two coats of pattern colour.

The mouldings and framework to be picked out. The letters, garters, and number, to be in gold, shaded with vermilion, lake, white, and black.

The whole to be finished with three coats of best copal varnish.

Roof to be covered with No. 1 navy canvas, but previous to this the wood-work is to receive two coats of paint and three coats over all.

Inside of under-frame and bottom of body, steps, springs, wheels, axles, and other iron-work, to receive two coats of colour.

Sufficient time must be allowed to elapse to enable each of the foregoing coats of paint to become perfectly dry before the application of another.

Blinds, glass frames, and all inside fittings, to receive three coats of varnish. C.

C. Vans, Sheep-vans, Cattle-wagons, and Meat-vans.

Paint body both inside and outside, as well as the under-frame, with four coats of colour, and one coat of pattern colour.

The outside of body and the under-frame to receive, in addition to the above, one coat of colour and varnish, and one coat of varnish to be given over all.

Sufficient time must be allowed to elapse to enable each of the foregoing coats of paint to become perfectly dry before the application of another.

The numbering and the lettering to be performed in a like manner to that which is done on the same class of vans and wagons as are at present on the Government Railways.

All the exposed iron-work, springs, wheels, axles, chains, and bottom, &c., to be painted one coat of lead colour and one of black.

A, B, D, and E, Goods-wagons, and Carriage-trucks.

Body to be painted both inside and outside, as well as the under-frame, in two coats of oil colour, and one coat of pattern colour.

The outside of body and the under-frame to receive, in addition to the above, one coat of colour and varnish.

Sufficient time must be allowed to elapse to enable each of the foregoing coats of paint to become perfectly dry before the application of another.

The numbering and lettering to be performed in a like manner to that which is done on the same class of wagons and carriage-trucks as are at present on the Government Railways.

All exposed iron-work, springs, wheels and axles, chains, and bottoms, &c., to be painted one coat of lead colour and one of black.

Funeral-cars.

To receive two coats of lead colour, three coats of filling up, one of staining, and then well rubbed down with hard pumice-stone.

It is then to be painted with two more coats of lead colour, and well stopped up with hard and soft stopper, after which it is to be faced to a smooth surface.

The panels to be finished with two coats of clean lead colour, and the frame-work, cornice, and moulding, with two coats of black paint.

Two coats of body varnish is to be given over all outside work.

The inside to receive three coats of clean light lead colour and two coats of varnish.

Roof, buffers, exposed iron-work, wheels, axles, chains, bottom, &c., to be given one coat of lead colour and one of black.

Sufficient time must be allowed to elapse to enable each of the foregoing coats of paint to become perfectly dry before the application of another.

Goods and Passenger Break-vans, and Horse-boxes.

These vans to receive three coats of lead colour, stopped up, and two coats of brown oil colour, according to sample supplied, and one coat of oil and varnish mixed, to be picked out with buff, and the whole to be finished with two coats of varnish.

The inside to receive three coats of paint, and afterwards grained oak, and finished with a coat of varnish.

The iron-work to have three coats of paint in oil finished black. The inside of under-frame to receive two coats of paint.

The numbering and lettering to be performed in a like manner to that which is done on the same class of vans at present on the Government Railways.

Sufficient time must be allowed to elapse to enable each coat of paint to become perfectly dry before the application of another.

J. H. THOMAS,
Engineer,

GOVERNMENT RAILWAYS, NEW SOUTH WALES—EXISTING LINES BRANCH.

Contracts for Rolling Stock.

General Stipulations and Conditions.

Material and workmanship.

The whole of the materials used in the construction of the rolling stock must be of the very best description, except where specified otherwise, and the work is to be executed in a sound, substantial, and workmanlike manner, and with a finish equal in all respects to the best class of their respective kinds of English manufacture.

Gauge.

The gauge of the railways for which the rolling stock is required is that of 4 feet 8½ inches.

Position of buffers.

The distance from centre to centre of buffers is in every case to be 5 feet 9 inches; and the height, above the upper surface of rail to centre of buffers, is to be 3 feet 4 inches.

Blinds, &c.

Venetian blinds in all the carriages are to be placed inside, and the glass frames outside, as in the imported carriages for the Western Line.

Panels.

It must be clearly understood that all the panels in carriages are to be grooved into the framing, and upon no account are nails or wood screws to be used in their fixture.

Contractor must provide all labor and materials. Bolts and nuts.

The contractor is to provide labour, materials, tools, machinery, and all other matters necessary for the due performance of the contract.

Delivery.

All bolts and nuts used throughout to be of Whitworth's standard threads.

It is to be distinctly understood that all the rolling stock required for either the Northern or Southern Lines are to be delivered at the Newcastle or Sydney Stations, as the case may be, free of all expenses for packing, cases, &c., &c.; and no allowance will be made for these, or for freight, insurance, or any other charges in connection with the delivery.

Tenders.

The Commissioner does not bind himself to accept the lowest or any tender.

All

All timber, whether Colonial or Foreign, is, before being used, to be thoroughly well seasoned, free from wanes, shakes, or other imperfections, and worked full to the dimensions given. Timber.

The tenders are to include the cost of all patent rights. Patent rights.

The probable amount of rolling stock which will be required during the first year will be about one-third of that set down for all the Lines in the schedule attached to the form of tender. Rolling stock required for first year.

The contractor is to be responsible for the period of one year from date of delivery, for all breakages arising from defective construction, or the use of inferior materials. Responsibility.

The whole of the rolling stock to be completed, delivered, and set to work entirely to the satisfaction of the Engineer for Existing Lines of Railway, within Time.

The Engineer, or any officer appointed by him, shall have full liberty, at all reasonable times during the construction, to examine all material or work which may be intended for them, and to reject the whole or any portion that may be thought necessary; and any so rejected shall immediately be replaced in a satisfactory manner by the contractor, and at his cost. Inspection.

The dimensions figured upon the drawings to be preferred in all cases to measurement by scale. Dimensions on drawings.

While the foregoing specification sets forth the general detail of the rolling stock, the Engineer reserves the option of such modifications as he may find necessary as the work proceeds, so long as the general dimensions are not interfered with, without any claim of extra payment being allowed. The drawings and specification must be taken to explain each other; but should there be any work and materials which may be reasonably and obviously considered necessary for the proper completion of the rolling stock, but which has not been shown on the drawings or described in the specification, or that may be mentioned or implied in one only, the same must be considered as included in the contract, and the contractor must find whatever may be necessary to complete the rolling stock according to the true intent and meaning of the specification and drawings; and in all cases of defective description or any ambiguity, the explanation given by the Engineer shall be binding upon the contractor. Right of altering details.

The Engineer reserves to himself the power of making any deviation from or additions to the rolling stock, without invalidating the contract; the value of such deviations, alterations, or additions to be ascertained and allowed for by the Engineer, at such rates as he shall consider to bear a due proportion to the other work, and the value thereof added to or deducted from the amount to be paid to the contractor, as the case may be.

In the event of the construction of the rolling stock not proceeding with that despatch which the Engineer may consider necessary, or the contractor fails from any cause to proceed in the execution of his contract, the Commissioner shall have full power and authority to cancel the contract, as far as relates to the work remaining to be done; and in such case the moneys which shall have been previously paid to the contractor on account of the work executed, shall be taken by him as full payment for all the work done and materials supplied under the contract; and upon notice in writing, under the hand of the Commissioner, that he, under the authority of this condition, cancels the contract, being served upon the contractor, or left at his last known place of abode, the contract shall be cancelled; and thereupon all sums of money that may be due or unpaid to the contractor, together with the portions of the rolling stock left unfinished, and all sums of money named as penalties for the non-fulfilment of the contract, shall be forfeited and become payable to the Commissioner, and the said portions of the rolling stock shall become and be the absolute property of the Commissioner, and with the moneys so forfeited and payable as aforesaid, shall be considered as ascertained damages for breach of contract. Cancellation of contract.

If the contractor become insolvent, have his estate placed under sequestration, or shall make an assignment of his estate for the benefit of his creditors, it shall be lawful for the Commissioner, without previous notice to the contractor, or to the Official or other Assignee or Assignees of his insolvent estate, or to the Trustee or Trustees under the assignment, to take such of, and all portions of the rolling stock, whether completed or not, from the contractor and of the Assignees or Trustees of his estate, and re-contract with any other person or persons to proceed with and complete the said rolling stock, upon such terms, stipulations, and conditions as shall be deemed expedient. Bankruptcy or insolvency.

The contractor will be required to provide two approved persons as sureties, to enter with him into a bond to the Commissioner for Railways, in the penal sum of Security. for the proper performance and completion of the contract. The names of the persons proposed by him as sureties must be stated in the tender, the Commissioner for Railways reserving to himself the power of rejecting such proposed sureties, should he deem it advisable to do so.

Should the contractor fail to procure such persons as may be deemed by the Commissioner to be eligible sureties, within days from the acceptance of the tender, or should the contractor fail to execute the contract for the due performance of the work, or to execute and to procure the due execution, by the person so approved of, as sureties of the bond required for securing the due completion of the work to be done under the said contract, within days after the acceptance of such persons as sureties has been notified to him, the Commissioner will have the option of, and full power and authority to declare such acceptance to be annulled.

Payment will be made on the Engineer's certificate as the work progresses, unless same shall become not payable by reason of anything contained in these conditions up to the date specified for the completion of the contract, in the proportion of of the value of the work satisfactorily executed, and the remaining will be paid after the Engineer has certified that the whole of the rolling stock has been completed to his entire satisfaction. Payment.

The words "or any officer appointed by him," in these general conditions, shall mean any person who may from time to time be appointed by the Engineer for Existing Lines of Railway, to supervise the work; and the words "Engineer for Existing Lines" or "Engineer" shall mean the Engineer for Existing Lines of Railways for the time being of the Commissioner for Railways. Interpretation clause.

J. H. THOMAS,
Engineer for Existing Lines of Railways.

Department of Public Works,
Railway Branch,
Sydney, 5 October, 1868.

TENDERS will be received at this Office, until Tuesday, the 3rd day of November next, at noon, from persons willing to contract for making, at a schedule of prices, the whole of the rolling stock (inclusive or exclusive of locomotive engines) which may be required on the Government Railways, for a period of five years, from 1st January, 1869.

Plans, specifications, and form of tender may be seen, and further particulars obtained, at the Office of the Engineer for Existing Lines, Sydney Station.

Tenders to be endorsed "*Tender for Rolling Stock.*"

JAMES BYRNES,
Commissioner for Railways.

VI.

NUMBER of Tenders received for rolling stock by present Government, and names of parties who tendered:—

Nine Tenders received on 17th November, 1868, as under:—

1. Vale and Lacy.
2. Duncan Sim.
3. John Robertson.
4. Hally and Clyde.
5. Joseph Mather.
6. Wm. Williams.
7. Thos. M'Arthur.
8. P. N. Russell.
9. Larkin and Wakeford.

1869.

LEGISLATIVE ASSEMBLY.
NEW SOUTH WALES.

CROWN LANDS.

(TENDERS FOR NEW RUNS, 1848-69.)

Ordered by the Legislative Assembly to be Printed, 14 October, 1869.

NUMBER OF TENDERS FOR NEW RUNS—1848-69.

	1848.	1849.	1850.	1851.	1852.	1853.	1854.	1855.	1856.	1857.	1858.	1859.	1860.	1861.	1862.	1863.	1864.	1865.	1866.	1867.	1868.	1869.
January ...	...	21	86	105	19	10	55	70	54	69	58	52	83	75	75	65	47	83	6	26	22	5
February ...	28	122	45	33	7	8	23	35	42	51	22	31	235	329	39	27	38	150	31	5	5	13
March ...	19	70	36	57	16	18	188	44	55	58	54	.....	81	101	35	22	38	96	14	3	4	14
April ...	26	35	53	87	12	...	87	24	85	44	85	68	223	98	32	42	85	69	16	5	6	9
May ...	29	35	78	91	13	34	24	74	78	58	100	81	176	24	83	33	10	53	37	11	6	7
June ...	35	48	52	58	12	33	39	74	31	...	70	143	99	49	46	19	22	35	24	7	5	4
July ...	23	40	65	70	23	23	56	44	71	100	89	335	94	83	47	46	34	77	22	8	10	12
August ...	23	29	114	18	10	22	112	124	54	111	121	279	72	165	100	20	53	30	43	17	15	8
September ..	22	57	96	309	9	58	76	50	98	74	132	338	72	99	117	16	71	50	30	11	11	12
October ...	38	62	101	47	52	35	55	43	105	51	98	530	46	145	33	63	121	41	16	17	6	8
November ...	34	63	60	46	23	41	77	69	59	61	34	299	192	35	48	39	53	27	17	9	8	...
December ...	19	20	57	15	18	17	52	45	53	110	94	97	82	48	24	28	60	28	16	3	9	...
TOTALS...	296	602	843	936	214	299	844	696	785	787	957	2,253	1,455	1,251	679	420	632	739	272	122	107	92

Crown Lands Office,
Sydney, 6 October, 1869.

A. O. MORIARTY,
Chief Commissioner of Crown Lands.

1869.

LEGISLATIVE ASSEMBLY.

NEW SOUTH WALES.

CROWN LANDS.

(HELD UNDER PASTORAL OCCUPATION—FURTHER RETURN.)

Ordered by the Legislative Assembly to be Printed, 21 October, 1869.

RETURN to an *Order* made by the Honorable the Legislative Assembly of New South Wales, dated 24th March, 1869, That there be laid upon the Table of this House,—

“ A continuation, to the end of the year 1868, of a Return headed ‘ Crown Lands (held under pastoral occupation)’ laid upon the Table of this House and ordered to be printed on the 4th April, 1866.”

(*Mr. J. Stewart.*)

CROWN LANDS.

RETURN in continuation to the end of the year 1868, of a Return of Crown Lands held under Pastoral Occupation, compiled to 31st March, 1865, and ordered to be printed, 4th April, 1866.

No.	Name of Run.	Lessee.	Estimated Area.	Rent.	Assessment (if any).	Date of commencement of present tenure.	Term of tenure.
			acres.	£ s. d.	£ s. d.		
ALBERT DISTRICT.							
335	Alto	Henty & Samson	48,640	10 0 0	20 0 0	10 Jan., 1868	Annual, pending appraisalment and conversion into a 5 years lease.
336	Ardfert	H. Glass & E. M. Curr	64,000	10 0 0	20 0 0	27 Dec., 1865	"
337	Beyond Outer Minden	T. S. & S. Staughton	48,640	10 10 0	20 0 0	21 Sept., 1867	"
338	Biparo	E. H. Acres	25,000	10 0 0	20 0 0	27 Dec., 1865	"
339	Birrawarra	J. de V. Lamb	32,000	10 0 0	20 0 0	30 May, "	"
340	Birrawarra West	Do.	32,000	10 0 0	20 0 0	30 " "	"
341	Bolo Gnoko East	S. G. Henty	57,600	10 0 0	20 0 0	16 " "	"
342	Boongunyarra	J. de V. Lamb	64,000	10 0 0	20 0 0	14 May, 1866	"
343	Bunker Creek	J. A. Panton, F. Otway, & W. H. Wright.	58,240	12 0 0	20 0 0	8 June, 1865	"
344	Byjerk South	E. H. Acres	32,000	11 1 0	20 0 0	27 Dec., "	"
345	Byjerkerns	J. L. Hyndman	64,000	10 0 0	20 0 0	1 Oct., 1868	"
346	Charlton	J. M'ulloch & R. Sellar	46,280	10 0 0	20 0 0	1 June, 1865	"
347	Cowary	Staughton Brothers	41,600	10 15 6	20 0 0	21 Sept., 1867	"
348	Farmcoat	F. A. Stratford	20,000	12 0 0	20 0 0	20 Aug., 1868	"
349	Flood's Creek, Block No. 1.	Charles Manton	64,000	10 0 0	20 0 0	1 Oct., "	"
350	Flood's Creek, Block No. 2.	Do.	64,000	10 0 0	20 0 0	1 " "	"
351	Flood's Creek, Block No. 3.	Do.	64,000	10 0 0	20 0 0	1 " "	"
352	Garidner Creek, Block No. 1.	Do.	64,000	11 11 6	20 0 0	6 June, 1867	"
353	Garidner Creek, Block No. 2.	Do.	64,000	11 11 6	20 0 0	6 " "	"
354	Garston Downs B	C. A. A. Manton	19,200	11 11 6	20 0 0	1 Oct., 1868	"
355	Garston Downs D	Do.	28,000	11 11 6	20 0 0	1 " "	"
356	Germans East	C. Brown & R. T. Reid	51,200	10 0 0	20 0 0	6 June, 1865	"
357	Inkerman West	J. M'ulloch & R. Sellar	21,120	11 11 6	20 0 0	6 June, 1867	"
358	Jump off No. 2	R. Youl & J. Capel	22,400	10 0 0	20 0 0	21 Dec., 1865	"
359	Jump off No. 3	Do.	61,000	10 0 0	20 0 0	21 " "	"
360	Jacombe	J. de V. Lamb	19,200	10 0 0	20 0 0	14 May, 1866	"
361	Keilor South, Block C	J. Felson	32,800	10 12 6	20 0 0	25 July, 1866	"
362	Keilor South, Block D	Do.	37,470	10 12 6	20 0 0	25 " "	"
363	Kenmare	H. Glass & E. M. Curr	64,000	10 0 0	20 0 0	27 Dec., 1865	"
364	Kerns	C. Brown & R. T. Reid	64,000	10 0 0	20 0 0	6 June, "	"
365	Kelfera	H. Glass & E. M. Curr	64,000	10 0 0	20 0 0	27 Dec., "	"
366	Killowen	Do.	58,880	10 0 0	20 0 0	27 " "	"
367	Langawirra	J. A. Panton	61,440	11 10 0	20 0 0	2 Oct., 1867	"
368	Manara North	G. C. Darbyshire	48,000	10 0 0	20 0 0	18 Sept., "	"
369	Manara North, No. 1	Do.	54,720	10 0 0	20 0 0	18 " "	"
370	Manara North, No. 2	Do.	22,400	10 0 0	20 0 0	18 " "	"
371	Manara North, No. 3	Do.	38,600	10 0 0	20 0 0	18 " "	"
372	Manara North, No. 4	Do.	64,000	10 0 0	20 0 0	18 " "	"
373	Marle	Staughton Brothers	58,240	10 15 6	20 0 0	21 " "	"
374	Morlort	H. Glass & E. M. Curr	64,000	10 0 0	20 0 0	27 Dec., 1865	"
375	Mount Arrowsmith No. 1	The London Chartered Bank of Australia.	64,000	10 0 0	20 0 0	9 Oct., "	"
376	Mount Arrowsmith No. 2	Do.	64,000	10 0 0	20 0 0	9 " "	"
377	Mount Arrowsmith No. 3	Do.	64,000	10 0 0	20 0 0	9 " "	"
378	Mount Arrowsmith No. 4	Do.	48,000	10 0 0	20 0 0	9 " "	"
379	Mount Gipps South	J. M'ulloch & R. Sellar	30,720	11 11 6	20 0 0	6 June, 1867	"
380	Mucruss	H. Glass & E. M. Curr	58,560	10 0 0	20 0 0	27 Dec., 1865	"
381	Murpa	J. C. Myers & E. Bonney	33,920	11 0 0	20 0 0	31 Oct., "	"
382	Myall, Block No. 4	E. Chisholm	62,400	10 0 0	20 0 0	5 June, "	"
383	Myall, Block No. 5	Do.	60,000	10 0 0	20 0 0	27 Sept., 1866	"
384	Nadback West	H. J. Adams	55,040	10 0 0	20 0 0	8 June, 1867	"
385	Narradin	J. M'ulloch & R. Sellar	54,400	10 0 0	20 0 0	11 May, "	"
386	Outer Berrawinnia West	A. Hood & A. W. Lorraine	70,000	10 0 0	20 0 0	15 Dec., 1865	"
387	Outer Mere No. 3	R. W. Nutt, J. Matcheson, J. Badcock, & T. H. Power.	46,080	10 0 0	20 0 0	10 June, 1867	"
388	Outer Thoulonna West	A. Hood & A. W. Lorraine	48,000	10 0 0	20 0 0	15 Dec., 1865	"
389	Onondoo	G. F. & F. W. Suttor	32,000	37 10 0	20 0 0	8 Oct., 1866	"
390	Parasia	H. Glass & E. M. Curr	60,000	10 0 0	20 0 0	27 Oct., 1865	"
391	Pulchra	S. G. Henty	64,000	10 0 0	20 0 0	16 May, "	"
392	Quamby	Do.	58,880	10 0 0	20 0 0	16 " "	"
393	Stephen's Creek	J. M'ulloch & R. Sellar	14,080	11 0 0	20 0 0	26 April, 1867	"
394	Tankarook	Kaye, Butchart & Co.	20,800	11 0 0	20 0 0	3 May, 1865	"
395	The Wells	J. A. Panton, F. Otway, & W. H. Wright.	37,120	11 0 0	20 0 0	8 June, 1865	"
396	Topar West	The London Chartered Bank of Australia.	64,000	10 0 0	20 0 0	24 April, 1867	"

No.	Name of Run.	Lessee.	Estimated Area.	Rent.	Assessment (if any).	Date of commencement of present tenure.	Term of tenure.
			acres.	£ s. d.	£ s. d.		
ALBERT DISTRICT—continued.							
397	Walla	S. G. Henty	58,880	10 0 0	20 0 0	16 May, 1865	Annual, pending appraisalment and conversion into a 5 years lease.
398	Rockey Glen	E. S. Bonney	64,000	10 0 0	20 0 0	18 April, 1867	
399	Wonkoo	J. C. Myers & E. Bonney.	41,600	10 0 0	20 0 0	31 Oct., 1865	
400	Wonkoo South	R. H. Budd	27,000	10 0 0	20 0 0	8 April, 1867	
401	Yancowinna Creek East No. 1.	The London Chartered Bank of Australia.	64,000	11 11 6	20 0 0	6 June, 1867	
402	Yancowinna Creek East No. 2.	Do.	61,440	11 11 6	20 0 0	6 " "	
403	Yancowinna West	E. Brett	12,800	10 10 0	20 0 0	9 Oct., 1868	
404	Yentabangee	R. H. Budd	24,760	10 0 0	20 0 0	8 April, 1867	
405	Yoongarignia	J. De V. Lamb	64,000	10 0 0	20 0 0	14 May, 1866	
406	Barbiston	C. Brown & R. T. Reid	38,400	10 0 0	20 0 0	6 June, 1865	
407	Buntiarra	G. C. Marryat	57,600	11 0 0	20 0 0	27 Dec., 1865	
408	Butha Butha West	W. A. Brodribb	47,360	10 0 0	20 0 0	19 " "	
409	Byjerk East	G. S. Marryat	36,800	10 0 0	20 0 0	23 " "	
410	Cahirnane	Do.	44,480	10 0 0	20 0 0	23 " "	
411	Castikin, Block F	R. Leake	60,480	12 12 6	20 0 0	21 Sept., 1867	
412	Dungarvan	A. Strettle	64,000	10 0 0	20 0 0	27 Dec., 1865	
413	Effluence East	G. S. Marryat	51,200	10 0 0	20 0 0	23 " "	
414	Evelyn Creek	E. S. Bonney	35,800	10 0 0	20 0 0	18 April, 1867	
415	Gleena	G. S. Marryat	48,400	10 0 0	20 0 0	23 Dec., 1865	
416	Glenample	A. Strettle	64,000	10 0 0	20 0 0	27 " "	
417	Lismore	Do.	57,600	10 0 0	20 0 0	27 " "	
418	Marfield, Block A	W. M. Miller	53,760	12 12 6	20 0 0	21 Sept., 1867	
419	Moama, Block P	R. B. Mason	64,000	10 12 6	20 0 0	27 April, 1868	
420	Moama, Block S	Do.	64,000	10 12 6	20 0 0	27 " "	
421	Moirra Plains, Block A.	R. C. Bagot	64,000	12 12 6	20 0 0	21 Sept., 1867	
422	Moorguinna	D. M'Rae, junr., & D. M'Rae.	27,040	10 0 0	20 0 0	2 May, 1865	
423	Mount Blackwood	J. C. Myers & E. Bonney..	64,000	10 0 0	20 0 0	18 April, 1867	
424	Mount Blackwood North	E. S. Bonney and J. C. Myers.	64,000	10 0 0	20 0 0	18 " "	
425	Mount Brown	E. S. Bonney	22,400	10 0 0	20 0 0	18 " "	
426	Mount Poole	Do.	64,000	10 0 0	20 0 0	18 " "	
427	Mount Poole North-east.	Do.	64,000	10 0 0	20 0 0	18 " "	
428	Mount Poole West	Do.	64,000	10 0 0	20 0 0	18 " "	
429	Mount Shannon	Do.	49,000	10 0 0	20 0 0	18 " "	
430	Mount Stuart	Do.	61,440	10 0 0	20 0 0	18 " "	
431	Mount Stuart South	Do.	51,200	10 0 0	20 0 0	18 " "	
432	Monolon Peak Downs No. 1.	G. S. Lang	49,920	10 1 0	20 0 0	1 Jan., 1868	
433	Monolon Peak Downs No. 2.	Do.	64,000	10 1 0	20 0 0	1 " "	
434	Monolon Peak Downs No. 3.	Do.	64,000	10 1 0	20 0 0	1 " "	
435	Monolon Peak Downs No. 4.	Do.	64,000	10 1 0	20 0 0	1 " "	
436	Monolon Peak Downs No. 5.	Do.	53,440	10 1 0	20 0 0	1 " "	
437	Monolon Peak Downs No. 6.	Do.	37,120	10 1 0	20 0 0	1 " "	
438	Monolon Peak Downs No. 7.	Do.	64,000	10 1 0	20 0 0	1 " "	
439	Monolon Peak Downs No. 8.	Do.	64,000	10 1 0	20 0 0	1 " "	
440	Monolon Peak Downs No. 9.	Do.	64,000	10 1 0	20 0 0	1 " "	
441	Molesworth Plains No. 5.	Do.	46,080	10 1 0	20 0 0	1 " "	
442	Molesworth Plains No. 6.	Do.	60,800	10 1 0	20 0 0	1 " "	
443	Noonthorangee East	William Wright	32,000	10 10 0	20 0 0	6 June, 1865	
444	Omura No. 1	G. S. Lang	64,000	10 1 0	20 0 0	1 Jan., 1868	
445	Omura No. 2	Do.	64,000	10 1 0	20 0 0	1 " "	
446	Omura No. 3	Do.	64,000	10 1 0	20 0 0	1 " "	
447	Omura No. 4	Do.	64,000	10 1 0	20 0 0	1 " "	
448	Osaca No. 1	Do.	64,000	10 1 0	20 0 0	1 " "	
449	Osaca No. 3	Do.	64,000	10 1 0	20 0 0	1 " "	
450	Osaca No. 4	Do.	64,000	10 1 0	20 0 0	1 " "	
451	Osaca No. 5	Do.	64,000	10 1 0	20 0 0	1 " "	
452	Outer Back Curranyall, Block B.	John Filson	64,000	10 12 6	20 0 0	21 Sept., 1867	
453	Outer Back Curranyall, Block C.	Do.	64,000	10 12 6	20 0 0	21 " "	
454	Parro Plains	G. S. Marryat	63,360	10 0 0	20 0 0	23 Dec., 1865	
455	Petita	Henty & Samson	19,200	10 0 0	20 0 0	1 Jan., 1868	
456	Takeiwa No. 5	G. S. Lang	40,960	10 1 0	20 0 0	1 " "	
457	Tralee	A. Strettle	36,480	10 0 0	20 0 0	27 Dec., 1865	
458	Ularara East No. 4.	G. S. Marryat	32,000	11 0 0	20 0 0	27 " "	
459	Urisino No. 1	G. S. Lang	64,000	10 1 0	20 0 0	1 Jan., 1868	
460	Urisino No. 3	Do.	64,000	10 1 0	20 0 0	1 " "	
461	Urisino No. 4	Do.	64,000	10 1 0	20 0 0	1 " "	
462	Urisino No. 5	Do.	64,000	10 1 0	20 0 0	1 " "	
463	West Parkungi	C. Brown & R. T. Reid	48,640	10 0 0	20 0 0	6 June, 1865	
464	Yamaranie	W. A. Torrance	75,000	10 0 0	20 0 0	15 Dec., 1865	

No.	Name of Run.	Lessee.	Estimated Area.	Rent.	Assessment (if any).	Date of commencement of present tenure.	Term of tenure.
ALBERT DISTRICT—continued.			acres.	£ s. d.	£ s. d.		
465	Callindra	R. B. Smith	59,520	55 0 0	No assessment.	1 Jan., 1867	31 Dec., 1871
466	Mount Jack	J. McCulloch & R. Sellar	48,000	30 0 0	"	1 " "	31 " "
467	Mount Macpherson, Block I.	R. Gayer, H. B. Crosse, and E. V. Gayer.	64,000	50 0 0	"	1 " "	31 " "
468	Mount Macpherson West No. 1.	J. McCulloch & R. Sellar...	51,200	40 0 0	"	1 " "	31 " "
469	Mount Macpherson West No. 2.	Do.	64,000	50 0 0	"	1 " "	31 " "
470	Rosstrevor	R. B. Smith	34,560	22 0 0	"	1 " "	31 " "
471	Gueralch East.....	M. Lestrangle & H. McCormack.	64,000	10 0 0	"	1 " 1868	31 " 1872
472	Gueralch West	Do do.	43,520	10 0 0	"	1 " "	31 " "
473	Wentworth No. 1 .....	.....	64,000	.....	.....	.....	Forfeited.
474	Wentworth No. 2 .....	.....	58,880	.....	.....	.....	"
475	Wentworth No. 3 .....	.....	57,600	.....	.....	.....	"
476	Wentworth No. 4 .....	.....	62,080	.....	.....	.....	"
477	Wentworth No. 5 .....	.....	64,000	.....	.....	.....	"
478	Wentworth No. 6 .....	.....	64,000	.....	.....	.....	"
479	Wentworth No. 7 .....	.....	64,000	.....	.....	.....	"
480	Wentworth No. 8 .....	.....	64,000	.....	.....	.....	"
481	Ballina .....	.....	60,800	.....	.....	.....	"
482	Bally Castle.....	.....	57,600	.....	.....	.....	"
483	Blarney .....	.....	59,860	.....	.....	.....	"
484	Dargle .....	.....	60,800	.....	.....	.....	"
485	Grassmere .....	.....	28,000	.....	.....	.....	"
486	Lubra .....	.....	52,800	.....	.....	.....	"
487	Maghera .....	.....	51,680	.....	.....	.....	"
488	Manatoo East .....	.....	64,000	.....	.....	.....	"
489	Manatoo West.....	.....	40,320	.....	.....	.....	"
490	Mooree .....	.....	48,880	.....	.....	.....	"
491	Nardo .....	.....	32,000	.....	.....	.....	"
492	Otakoo .....	.....	60,800	.....	.....	.....	"
493	Outer Kelly East .....	.....	22,320	.....	.....	.....	"
494	Outer Kelly West .....	.....	64,000	.....	.....	.....	"
495	Wanga East.....	.....	64,000	.....	.....	.....	"
496	Wanga West .....	.....	64,000	.....	.....	.....	"
BLIGH DISTRICT.							
369	The Fancy Ground ...	D. Watt and D. M'Master	64,000	10 0 0	20 0 0	1 Jan., 1867	Annual, pending appraisal and conversion into a 5 years lease.
370	Back Mount Harris ...	Bryan Eagan	16,000	11 1 0	20 0 0	1 " 1868	"
371	Joney Good Morning's Yard.	A. Peacock	16,000	13 0 0	20 0 0	1 Dec., "	"
372	New Bellemore	E. Flood, junr	64,000	10 5 0	20 0 0	1 Jan., "	"
373	New Bulorora	Do.	32,000	10 5 0	20 0 0	1 " "	"
374	Pretty Plains, Block A	J. Humphries	64,000	11 0 0	20 0 0	1 " "	"
375	Pretty Plains, Block B	A. Dick	16,000	11 0 0	20 0 0	1 " "	"
376	Quandong	A. Brown	12,800	12 10 0	20 0 0	14 April, 1866	"
377	Terrewenah	W. Heness	27,000	10 10 0	20 0 0	1 Jan., 1868	"
378	Ford's Creek	John Beckemore	16,000	30 0 0	No assessment.	1 " "	31 Dec., 1872
379	Turrigerie South	J. White and H. C. White	16,000	60 0 0	"	1 " "	31 " "
380	Upper Ningear	W. Smith	12,000	35 0 0	"	1 " "	31 " "
381	Yarraman	R. M'Manus	16,000	65 0 0	"	1 " "	31 " "
382	Gidjinbar	Do.	16,000	45 0 0	"	1 " "	31 " "
383	Upper Pretty Plains ...	R. Lowe	16,000	50 0 0	"	1 Jan., 1867	31 " 1871
384	Como	G. J. Gibson	16,000	50 0 0	"	1 " "	31 " "
385	Bucklenbaa East.....	J. & H. C. White	16,000	80 0 0	"	1 " 1868	31 " 1872
386	Terembone No. 1 .....	.....	16,000	.....	.....	.....	Forfeited.
387	Terembone No. 2 .....	.....	16,000	.....	.....	.....	"
388	Thurumbone Back .....	.....	16,000	.....	.....	.....	"
DARLING DISTRICT.							
200	Beyond Outer Tapio ...	G. B. Fletcher	51,200	10 0 0	20 0 0	5 Mar., 1868	Annual, pending appraisal and conversion into a 5 years lease.
201	West Parinigi, Block A	Dugald Fletcher	64,000	10 12 6	20 0 0	14 " 1865	"
202	Matalong	G. B. Fletcher	23,680	10 0 0	20 0 0	5 " 1868	"
203	Darnick	T. P. Fenner	64,000	10 1 0	20 0 0	1 Jan., 1868	"
204	East Parnigi	W. Nash	64,000	10 12 6	20 0 0	1 " "	"
205	Bildon	J. H. Wheelright.....	64,000	10 1 0	20 0 0	1 " "	"
206	Kasserhill	M. Palmer	38,400	10 1 0	20 0 0	1 " "	"
207	Midgehope	Do.	64,000	10 1 0	20 0 0	1 " "	"
208	North Paringi	W. Nash	51,200	10 12 6	20 0 0	1 " "	"
209	Candaba	J. Dunne	32,000	12 10 0	20 0 0	13 Nov., 1865	"
210	East Illawla.....	J. F. M'Mullen	58,880	10 0 0	20 0 0	4 April "	"
211	Lower Pernolingay.....	Do.	32,000	10 0 0	20 0 0	4 " "	"
212	Magenta	R. and A. Landale	49,280	10 0 0	20 0 0	9 Oct., 1866	"
213	Mendook	D. Fletcher	42,240	10 0 0	20 0 0	6 April, 1867	"
214	North Willibah	R. and A. Landale	36,480	10 0 0	20 0 0	9 Oct., 1866	"

No.	Name of Run.	Lessee.	Estimated Area.	Rent.	Assessment (if any).	Date of commencement of present tenure.	Term of tenure.
DARLING DISTRICT—continued.			acres.	£ s. d.	£ s. d.		
215	Outer Paringi Gaari ...	J. Dunne	48,000	10 0 0	20 0 0	13 Nov., 1865	Annual, pending appraisalment and conversion into a 5 years lease.
216	South Tubrigo.....	J. Scott	19,200	12 10 0	20 0 0	18 April, 1865	"
217	Solferino	R. and A. Landale	57,600	10 0 0	20 0 0	9 Oct., 1866	"
218	Inarma	W. Taylor	19,200	10 0 0	20 0 0	5 Mar., 1867	"
219	Outer Eurilla	F. Cadell	64,000	10 0 0	20 0 0	18 Feb., 1867	"
220	Outer Paringi Gaari West.	J. Baker	48,000	10 0 0	20 0 0	10 Jan., 1866	"
221	Tankee	J. B. Graves.....	51,200	15 0 0	20 0 0	15 Dec., 1865	"
222	Waneba	J. Dunne	64,000	10 0 0	20 0 0	14 Nov., "	"
223	Wendi	Do.	32,000	10 0 0	20 0 0	13 " "	"
224	Winda	G. M. Perry	57,600	10 0 0	20 0 0	27 Feb., 1867	"
225	Woolpagerie South.....	R. and A. Landale	57,600	15 0 0	20 0 0	23 Dec., 1865	"
226	Mundybah	Peter M'Gregor	32,000	15 0 0	20 0 0	10 Jan., 1866	"
227	East Milang	Francis Cadell	60,160	10 10 0	20 0 0	23 Mar., 1867	"
228	Gall Gall, Block A.....	F. Y. Walsely, W. C. Smith, E. A. Wynne, S. M. Gibbs, & R. B. Gibbs.	51,200	10 0 0	20 0 0	24 " "	"
229	Gall Gall, Block B.....	Do.	63,360	10 0 0	20 0 0	24 " "	"
230	Gall Gall, Block C.....	Do.	64,000	10 0 0	20 0 0	24 " "	"
231	Gall Gall, Block D.....	Do.	58,240	10 0 0	20 0 0	24 " "	"
232	Meroo	A. W. Fraser	44,800	10 0 0	20 0 0	23 " 1867	"
233	Milang West	Do.	64,000	10 0 0	20 0 0	23 " "	"
234	Blenalben No. 3	J. J. Phelps	32,000	40 0 0	No assessment.	1 Jan., "	31 Dec., 1871
235	Blenalben No. 5	Do.	32,000	50 0 0	"	1 " 1868	31 " 1872
236	South Terryaweyna	F. and S. S. Stanghton	8,000	10 0 0	"	1 " 1867	31 " 1871
237	Blenalben No. 6	J. J. Phelps	32,000	30 0 0	"	1 " 1868	31 " 1872
238	Whitminbah	J. Blackwood & C. Ibbotson	64,000	60 0 0	"	1 " "	31 " "
239	Oberwells	W. Taylor	12,800	20 0 0	"	1 " "	31 " "
240	Langsland	Do.	12,800	20 0 0	"	1 " "	31 " "
241	North Mythis, Block A	.....	64,440	.....	.....	.....	Forfeited.
242	North Mythis, Block B	.....	51,200	.....	.....	.....	"
243	North Mythis, Block C	.....	64,000	.....	.....	.....	"
244	South Gall Gall .....	.....	61,440	.....	.....	.....	"
245	South Gall Gall, Block A.	.....	61,440	.....	.....	.....	"
246	West Panban, Block A	.....	61,440	.....	.....	.....	"
247	West Panban, Block B	.....	61,440	.....	.....	.....	"
GWYDIR DISTRICT.							
165	Brigalow North	F. N. Bulknell	18,200	11 0 0	20 0 0	12 Mar., 1867	Annual, pending appraisalment and conversion into a 5 years lease.
166	North Meroo	A. J. Cobcroft & Thomas Donohoe.	16,000	12 0 0	20 0 0	26 Oct., 1868	"
167	Warthagar No. 2	J. Cobcroft	4,700	14 0 0	No assessment.	1 Jan., "	31 Dec., 1872
LACHLAN DISTRICT.							
563	Solferino	Carlo Marina	2,000	10 0 0	20 0 0	1 Jan., 1868	Annual, pending appraisalment and conversion into a 5 years lease.
564	Tallebung	The Trust and Agency Company of Australasia, Limited.	16,000	15 0 0	20 0 0	1 " "	"
565	Bonar West.....	W. Iee	12,800	11 0 0	20 0 0	2 Sept., 1867	"
566	Cookaburragong	Thomas Stone	16,000	20 0 0	20 0 0	12 " "	"
567	Dundoo Hills	Do.	38,400	15 0 0	20 0 0	12 " "	"
568	Hartwood	The Melbourne Banking Corporation, Limited.	51,200	14 10 0	20 0 0	26 April, 1865	"
569	Kangarong	Do.	64,000	11 0 0	20 0 0	27 Dec., "	"
570	Kiamba	Do.	62,000	15 0 0	20 0 0	27 " "	"
571	Rest Down	Do.	44,800	14 10 0	20 0 0	31 May, "	"
572	Shenandoah	Do.	64,000	11 0 0	20 0 0	27 Dec., "	"
573	Tarcombe	Do.	64,000	14 10 0	20 0 0	31 May, "	"
574	The Rookery	Do.	64,000	14 10 0	20 0 0	31 " "	"
575	Wargambegal	John Harris	12,800	10 10 0	20 0 0	10 Oct., 1867	"
576	Belowra	The Melbourne Banking Corporation, Limited.	41,000	24 0 0	No assessment	1 Jan., 1868	31 Dec., 1872
577	Bundure	Do.	64,000	10 0 0	"	1 " "	31 " "
578	Cobram	Do.	32,000	16 0 0	"	1 " "	31 " "
579	Coree	Do.	64,000	50 0 0	"	1 " "	31 " "
580	Coree	Do.	64,000	32 0 0	"	1 " "	31 " "
581	Gilgunnia East	Do.	41,600	16 0 0	"	1 " "	31 " "
582	Gorm	Do.	53,000	16 0 0	"	1 " "	31 " "
583	Killeen	Do.	39,000	25 0 0	"	1 " "	31 " "
584	Miparo of Manfred.....	Do.	64,000	40 0 0	"	1 " "	31 " "
585	Thule	Do.	25,600	16 0 0	"	1 " "	31 " "
586	Ticehurst	J. Blackwood and C. Ibbotson.	32,000	16 0 0	"	1 " "	31 " "
587	Ticehurst	H. Cunningham and J. R. Smythe.	64,000	50 0 0	"	1 " "	31 " "

No.	Name of Run.	Lessee.	Estimated Area.	Rent.	Assessment (if any).	Date of commencement of present tenure.	Term of tenure.
			acres.	£ s. d.	£ s. d.		
LACHLAN DISTRICT—continued.							
588	Urolee	The Melbourne Banking Corporation, Limited.	37,120	20 0 0	No assessment	1 Jan., 1868	31 Dec., 1872
589	Govan	Do.	64,000	32 0 0	"	1 " "	31 " "
590	Wagga	Do.	45,000	24 0 0	"	1 " "	31 " "
591	Warbreccan	Do.	52,000	20 0 0	"	1 " "	31 " "
592	West Thule	Do.	25,600	10 0 0	"	1 " "	31 " "
593	Wirlong	Do.	52,000	40 0 0	"	1 " "	31 " "
594	Yamma	Do.	52,000	20 0 0	"	1 " "	31 " "
595	Yanko	Do.	27,000	20 0 0	"	1 " "	31 " "
596	Yathong	Do.	56,000	26 0 0	"	1 " "	31 " "
597	Trigalong .....	.....	10,000	.....	.....	.....	Forfeited.
LIVERPOOL PLAINS DISTRICT.							
234	Belleboo South	Bucknell Brothers	16,000	10 10 0	20 0 0	1 Jan., 1868	Annual, pending appraisal and conversion into a 5 years lease.
235	Myall Downs	James Glass	16,000	11 1 0	20 0 0	24 Nov., "	"
236	Saddle Bags	Do.	16,000	11 1 0	20 0 0	24 " "	"
237	Therebry East	J. H. Cox	9,600	15 5 0	20 0 0	1 Jan., "	"
238	Back Mooki	Hawkesbury Benevolent Society.	16,000	12 0 0	20 0 0	18 Sept., 1867	"
239	Cryon South No. 1	J. Pearse	17,920	10 0 0	20 0 0	7 July, 1866	"
240	Cryon South No. 2	Do.	17,920	10 0 0	20 0 0	7 " "	"
241	Jimalong Josey	W. and G. Collis	12,800	12 10 0	20 0 0	22 Feb., 1867	"
242	Long Point East	E. Vickery	16,000	10 0 0	20 0 0	15 June, "	"
243	Wee Taliba	J. B. Rundle	12,800	15 0 0	20 0 0	8 April, "	"
MURRUMBIDGEE DISTRICT.							
382	Barraig	G. B. Mackinnon	44,800	10 0 0	20 0 0	1 Aug., 1868	Annual, pending appraisal and conversion into a 5 years lease.
383	New Maragle	W. Turnbull	32,000	11 0 0	20 0 0	24 April, "	"
384	Tom Groggin	J. Barry	19,200	10 10 0	20 0 0	29 July, "	"
385	Union	R. Raud	4,000	10 0 0	20 0 0	22 Sept., "	"
386	East Mundorah	J. Jackson	25,600	45 0 0	No assessment	1 Jan., "	31 Dec., 1872
387	South Lalalte	C. Fartiere	3,840	10 10 0	"	1 " "	31 " "
MONARO DISTRICT.							
217	Waste Point or Triangle	Sir D. Cooper and F. Buckland.	12,000	10 0 0	20 0 0	5 Sept., 1867	Annual, pending appraisal and conversion into a 5 years' lease.
WARREGO DISTRICT.							
385	Back Barwana	W. G. Walker	5,800	10 0 0	20 0 0	18 April, 1867	Annual, pending appraisal and conversion into a 5 years lease.
386	Back Kigwigil	Australian Joint Stock Bank.	50,000	10 0 0	20 0 0	21 July, 1866	"
387	Block C or Looden	J. B. Watt and W. G. Walker.	22,500	10 0 0	20 0 0	2 May, "	"
388	Booroomma Back	J. F. H. C. and E. White.	31,360	10 0 0	20 0 0	10 " "	"
389	Bugga	H. J. Adams	16,000	12 10 0	20 0 0	17 " "	"
390	Collywarry Back Run	B. Richards	39,680	10 0 0	20 0 0	10 Oct., 1865	"
391	Combaderry Back	E. J. Sparke	9,600	10 0 0	20 0 0	23 Dec., "	"
392	Diemunga	P. Drynan	19,840	10 0 0	20 0 0	20 June, "	"
393	Frederick's Land	G. C. V. Tisdall	16,000	10 0 0	20 0 0	18 Nov., "	"
394	Grawin Addendum	T. G. Dangar	16,000	11 0 0	20 0 0	21 May, 1866	"
395	Minna Back Block	H. J. Adams	22,400	10 0 0	20 0 0	28 March, "	"
396	Papperton Back	H. Stent and J. Hewitt	12,800	10 0 0	20 0 0	30 May, 1865	"
397	Plumbolah No. 5	E. J. Sparke	16,000	10 0 0	20 0 0	11 Oct., 1866	"
398	Plumbolah No. 6	Do.	16,000	10 0 0	20 0 0	11 " "	"
399	Plumbolah No. 7	Do.	16,000	10 0 0	20 0 0	20 Sept., 1867	"
400	Terra Walka	J. Eales	16,000	10 0 0	20 0 0	22 Feb., 1866	"
401	Ulah Back Run	A. Campbell and J. Hay	32,000	11 0 0	20 0 0	27 June, "	"
402	Umumbah West	H. Rourke	23,040	11 0 0	20 0 0	30 Aug., 1865	"
403	Wee Warra	E. J. Sparke	20,480	10 0 0	20 0 0	17 May, 1866	"
404	Wilby Wilby Back Block.	T. H. Hill	38,400	10 0 0	20 0 0	17 " "	"
405	Wilkie Plains	A. Hinchcliff	33,280	10 0 0	20 0 0	2 March, "	"
406	Back Morella	W. G. Walker	32,000	10 10 0	20 0 0	1 Jan., 1868	"
407	Bundabulla Back No. 2.	A. Doyle	8,960	10 0 0	20 0 0	6 March, "	"
408	Back Corongi Peak East	W. and W. Glasson	57,600	10 0 0	No assessment.	1 July, "	30 June, 1872
409	Coronga Peak	Do.	64,000	10 0 0	"	1 " "	30 " "
410	Coronga Peak Back	Do.	64,000	10 0 0	"	1 " "	30 " "
411	Coronga Peak East	Do.	54,400	10 0 0	"	1 " "	30 " "
412	North Darling Back Run No. 17.	Colin M'Kenzie	64,000	10 0 0	"	1 " "	30 " "

No.	Name of Run.	Lessee.	Estimated Area.	Rent.	Assessment (if any).	Date of commencement of present tenure.	Term of tenure.
WARREGO DISTRICT— <i>continued.</i>			acres.	£ s. d.	£ s. d.		
413	North Darling Back Run No. 18.	Colin M'Kenzie	64,000	10 0 0	No assessment	1 July, 1868	30 June, 1872
414	North Darling Back Run No. 20.	G. and H. Colless	63,360	10 0 0	"	1 Oct., "	30 Sept., "
415	North Darling Back Run No. 21.	Do.	64,000	10 0 0	"	1 " "	30 " "
416	North Darling Back Run No. 22.	C. M'Kenzie	64,000	10 0 0	"	1 July, "	30 June, "
417	Extremity Back No. 1	E. J. Sparke	16,000	32 0 0	"	1 Jan., "	30 Dec., "
418	Lower Bogaira	G. W. Lord	25,000	38 0 0	"	1 " "	30 " "
419	Back Coronga Peak West	.....	64,000	.....	.....	.....	Forfeited.
420	Back Dunlop's Range...	.....	42,240	.....	.....	.....	"
421	Back of Back Booroomugga.	.....	64,000	.....	.....	.....	"
422	Back of Back Booroomugga East.	.....	64,000	.....	.....	.....	"
423	Back of Back Dunlop's Range.	.....	49,280	.....	.....	.....	"
424	Booroomugga .....	.....	64,000	.....	.....	.....	"
425	Booroomugga North ...	.....	64,000	.....	.....	.....	"
426	Boorandara .....	.....	64,000	.....	.....	.....	"
427	Buckarooon East .....	.....	57,600	.....	.....	.....	"
428	Curraweena East Back .	.....	64,000	.....	.....	.....	"
429	Keerangundah .....	.....	35,200	.....	.....	.....	"
430	Marwarre .....	.....	36,480	.....	.....	.....	"
431	Moguilamba South .....	.....	64,000	.....	.....	.....	"
432	North Darling Back Run No. 10.	.....	64,000	.....	.....	.....	"
433	North Darling Back Run No. 11.	.....	64,000	.....	.....	.....	"
434	North Darling Back Run No. 12.	.....	64,000	.....	.....	.....	"
435	North Darling Back Run No. 13.	.....	64,000	.....	.....	.....	"
436	North Darling Back Run No. 15.	.....	47,360	.....	.....	.....	"
437	North Darling Back Run No. 16.	.....	64,000	.....	.....	.....	"
438	North Darling Back Run No. 24.	.....	64,000	.....	.....	.....	"
439	Tinderay .....	.....	64,000	.....	.....	.....	"
WELLINGTON DISTRICT.							
407	Triangle	John Brown	9,000	10 10 0	20 0 0	1 Jan., 1868	Annual, pending appraisalment and conversion into a 5 years lease.
408	East Gunningbland ...	James Rawsthorne	16,500	10 10 0	20 0 0	22 July, 1867	"
409	Gunning East	William Cummings	12,800	11 10 0	20 0 0	22 " "	"
410	Half-moon Plain	Thomas Brown	12,800	31 12 0	20 0 0	19 " 1866	"
411	Gunningbland Back Station.	Robert Martin	16,000	46 15 0	No assessment.	1 Jan., 1868	31 Dec., 1872

A. O. MORIARTY,
Chief Commissioner of Crown Lands.

SUMMARY.

District.	No. of Runs.	Estimated Area.	Annual Rental.	Assessment.	Total Charges.
		acres.	£ s. d.	£ s. d.	£ s. d.
Albert	138	7,123,910	1,635 10 0	2,600 0 0	4,235 10 0
Bligh	17	435,800	514 11 0	180 0 0	694 11 0
Darling	41	1,885,120	592 11 6	680 0 0	1,272 11 6
Gwydir	3	38,900	37 0 0	40 0 0	77 0 0
Lachlan	34	1,506,920	699 10 0	260 0 0	959 10 0
Liverpool Plains	10	151,040	117 7 0	200 0 0	317 7 0
Murrumbidgee	6	129,440	97 0 0	80 0 0	177 0 0
Monaro	1	12,000	10 0 0	20 0 0	30 0 0
Warrego	34	1,114,500	396 0 0	460 0 0	856 0 0
Wellington	5	67,100	110 17 0	80 0 0	190 17 0
TOTALS	289	12,464,730	4,210 6 6	4,600 0 0	8,810 6 6

N.B.—This Summary is exclusive of runs not under lease on 31st December, 1868, to the number of fifty-six, and with an area of 3,041,480 acres.
Crown Lands Office,
Sydney, 14 October, 1869.

A. O. MORIARTY,
Chief Commissioner of Crown Lands.

1869.

LEGISLATIVE ASSEMBLY.
NEW SOUTH WALES.

CROWN LANDS.

(CORRESPONDENCE RESPECTING LEASING OF RUNS IN THE WARREGO DISTRICT.)

Ordered by the Legislative Assembly to be Printed, 3 November, 1869.

RETURN to an *Order* made by the Honorable the Legislative Assembly of New South Wales, dated 23rd March, 1869, That there be laid upon the Table of this House,—

- “ (1.) Copies of all Correspondence between T. G. Dangar and the Chief
“ Commissioner of Crown Lands; and the Chief Commissioner of Crown
“ Lands and the Commissioner of the Warrego District, and all other
“ persons—relative to the Bunnawannah Runs, and the acceptance of the
“ Tenders for Georgy and Georgy East, and copies of the original Tenders
“ for Georgy and Georgy East.
- “ (2.) Copies of the Maps furnished the Commissioner of the Warrego
“ District. for his guidance by the Chief Commissioner of Crown Lands,
“ having reference to the Bunnawannah Runs and Georgy and Georgy
“ East.
- “ (3.) Copies of the Report submitted by the Commissioner of the Warrego
“ to the Chief Commissioner of Crown Lands, upon the alleged encroach-
“ ment of Georgy and Georgy East upon the Bunnawannah Runs.
- “ (4.) Copy of the final decision of the Land Board, and the Report upon
“ which it was made.
- “ (5.) Copies of all Tenders accepted for land between the junction of the
“ Culgoa and Bree, and the Bree and Darling.
- “ (6.) Copies of accepted Tenders for the Mohanna, Bunnawannah, West
“ Bunnawannah, Upper Turee, Birree, Kunreberee, East Kunreberee,
“ Gueranara, Georgy, and Georgy East.
- “ (7.) Also copies of all Correspondence and Minutes between the Minister
“ for Lands and the Chief Commissioner of Crown Lands, relative to the
“ licensing of Georgy and Georgy East.
- “ (8.) Also copies of all Correspondence between the Minister for Lands
“ and T. G. Dangar, on the subject of the leasing of Georgy and Georgy
“ East.
- “ (9.) Copy of Tender for block A, at the junction of the Bree with the
“ Culgoa.
- “ (10.) Copies of T. G. Dangar’s Tender for Bree, Culgoa, and Upper Bree.”

(*Mr. S. Brown.*)

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N.B.—The only map furnished by the C.C.C. Lands to the Warrego Commissioner, in reference to the above correspondence, was the tracing received with Mr. Dangar's letter of the 24th August, 1861.

CROWN LANDS.

No. 1.

T. G. DANGAR, Esq., to THE CHIEF COMMISSIONER OF CROWN LANDS.

Bullerawa, Wee Waa,
Namoi River, 17 December, 1860.

SIR,

I do myself the honor to protest in the strongest terms against any interference with the established boundaries of my Bunnawannah and Turee Runs by the alienation of any part thereof, either under the name of "Georgy" and "Georgy East," or in any other name; and in support of my claim to the land in question I beg leave to submit the grounds on which I protest:—

1st. That the position of the Bokira being erroneously marked upon the charts has led to the belief that there is more ground than really exists between the true junction of that river and the junction of the Culgoa or Bree.

2nd. That the tree marked wl has always been considered the western boundary of Moharma Run as originally taken up by the late Mr. W. Lawson, which can be proved by the evidence of numerous persons fully conversant with the position of the marked tree alluded to.

3rd. That the wl tree, being the original western boundary of the Moharma Run, is consequently the eastern boundary of the Bunnawannah Run and the commencing point of the same.

4th. That after having obtained the Bunnawannah Run, I tendered for the country lying between the western boundary thereof and Upper Turee under the name of Bunnawannah West, as will be seen by reference to the description inserted in my tender. The western boundary thereof was made the eastern boundary of Upper Turee Run, so as to include the whole of the vacant land lying between Bunnawannah and the land called Upper Turee, and the Government accepted my tender as such.

5th. That, being no surveyor, I estimated to the best of my ability the intermediate distance between the western boundary of Bunnawannah Run and the eastern boundary of the Upper Turee Run when tendering for the vacant country between these runs.

6th. That having every belief that the distance did not exceed the number of miles stated in my tender for West Bunnawannah, and having occupied the land ever since, I consider that even should the distance prove to be a little greater than my estimation, still, as the terms of my description intended to and do embrace all the vacant land from Bunnawannah to Upper Turee, that I ought not to be deprived of it, but rather that if in excess I should be permitted to pay arrears if any considerable excess should prove to exist, although I demur even to this sacrifice in support of a right authorized and confirmed by judicial precedents.

For the above reasons I protest against the acceptance of the tenders for land under the names of "Georgy" and "Georgy East," or under any other name, the object of which bears the intention of a desire to deprive me of a part of my property, and perpetrate an injustice that must lead eventually to expensive litigation.

Under these circumstances I trust you will see the justice of my claim to land in dispute, and withhold your final acceptance of any tender that will interfere with my runs above referred to; or if accepted that the same may be cancelled or some satisfactory method adopted to determine the validity of my claim to the land in question.

I have, &c.,
THOS. G. DANGAR.

No. 2.

THE CHIEF COMMISSIONER OF CROWN LANDS to T. G. DANGAR, Esq.

Crown Lands Office,
Sydney, 3 June, 1861.

SIR,

In reply to your letter dated 17th of December, 1860, I have now to inform you that the tenders of Messrs. Lord and Smith had been accepted, and the rent paid by the parties prior to the receipt of your letter, and that I find upon investigation that the claims of the respective holders of the licensed runs in the vicinity were fully considered and provided for prior to the acceptance of the tenders. The frontage of Mohanna, as claimed in the demand for a lease, extends only to 12 miles below the junction of the Bokhara, and the runs Bunnawannah and Bunnawannah West are entitled only to the frontages of 5 miles each below the lower boundary of Mohanna. The upper boundary of Turee Upper is also a fixed point.

The Tender Board adopting these views recommended the acceptance of a tender from Mr. Lord for the country found to be vacant between the lower boundary of Bunnawannah West and the Birie, and of one from Mr. Smith for that between the Birie and Upper Turee. Upon a careful review of the whole matter I think the course taken by the Board was that which was proper under the circumstances.

The value of the claims to the marked tree referred to by you must depend upon whether its position is consistent with the estimated distance of 12 miles from the Bokhara junction, which is about to be ascertained.

I have, &c.,
A. O. MORIARTY,
Chief Commissioner of Crown Lands.

No. 3.

No. 3.

T. G. DANGAR, Esq., to THE CHIEF COMMISSIONER OF CROWN LANDS.

Bullerawa, Wee Waa,
Namoi River, 13 July, 1861.

SIR,

I do myself the honor to enter my protest against the acceptance of any tender for land upon the Bree Creek, at the back of Bunnawannah and part of West Bunnawannah, by the Messrs. Colless or others, as the same, if licensed, will be an infringement upon my rights as the licensee of the abovenamed runs. This protest also applied to land on the north side of the Bree, now illegally occupied at the instance of the Commissioner of the Warrego District by the Messrs. Colless; such proceedings on the part of the Commissioner being inconsistent with the regulations, I beg that the Messrs. Colless may be removed at the instance of the Crown as trespassers.

I have, &c.,
THOS. G. DANGAR.

No. 4.

THE CHIEF COMMISSIONER OF CROWN LANDS to T. G. DANGAR, Esq.

Crown Lands Office,
Sydney, 2 August, 1861.

SIR,

In reply to your letter dated the 13th ultimo, protesting against the acceptance of any tender for land upon the Bree Creek, at the back of Bunnawannah and part of West Bunnawannah, I have to inform you that due care will be taken that no land forming part of your run Bunnawannah West is leased to other parties, but that beyond this I cannot entertain your protest.

I have, &c.,
A. O. MORIARTY,
Chief Commissioner of Crown Lands.

No. 5.

T. G. DANGAR, Esq., to THE CHIEF COMMISSIONER OF CROWN LANDS.

Bullerawa, Wee Waa,
Namoi River, 24 August, 1861.

SIR,

I do myself the honor to acknowledge your letter of the 3rd June last, in reply to mine of the 17th December, 1860, respecting the acceptance of Messrs. Lord's and Smith's tenders for land supposed to be vacant between my Bunnawannah West and Upper Turee Runs, and informing me that the claims of the respective holders of the said runs were fully considered and provided for prior to the acceptance of the tenders.

In reply I beg to state that, although the Board have fully considered the matter, I do not feel myself justified in acting upon their mature deliberations, the result of which, however plausible, are contrary to fact.

The Tender Board have, without doubt, acted innocently in accepting the tenders alluded to before the definite position of the Bokira was confirmed by survey, and in doing so I beg to observe that some indecent haste has been exhibited, amounting to a denial of justice to myself rather than admit an error.

That I should occupy a portion of Messrs. Loder and Capps' run of Mohanna, by conforming to the wish of the Land Board is, painfully ridiculous, as I would thereby lay myself open to an action for trespass (even if there were spare country beyond the twelve miles frontage to Mohanna, from the junction of the Bokira to the WL tree), in the expense of which I fear, notwithstanding the right the Land Board desire to invest me with, the Government would be disinclined to pay.

I regret that you yourself have confirmed the decision of the Board founded on an impression, no doubt, conveyed by erroneous maps and prejudiced reports, perhaps emanating from the Commissioner, at whose instance Messrs. Lord and Smith, or either one or other of them, tendered for the land in question.

With regard to the latter part of your letter I beg to observe that the position of the river alluded to ought to have been determined before the tenders of Lord and Smith upon *reconsideration* were confirmed by your acquiescence in the report of the Land Board; the survey will ultimately confirm what I have already asserted in previous letters.

By one of the Government maps published under the authority of the Surveyor General the distance from Brewarrina to Bunnawannah hut is 22 miles in a direct west line—the map must be correct as the opposite side has been surveyed by an officer of the Survey Department; he has, however, made an error which requires correction. The "Mohanna" marked on the plan should be "Walgra," which is $5\frac{1}{2}$ miles higher up the river than Mohanna. The Mohanna old yard is 5 miles, if so much by the road, as nearly as I can estimate from Bunnawannah; the error in this respect may have led the Land Board to adhere to an opinion inconsistent with facts, but merely gleaned from the incorrect details of an official map.

The labour of reinvestigating this *questio vexata* I will not inflict on those who have given it so much attention, but I shall take that remedy in the event of trespass which will hereafter insure me from annoyance.

I regret that the numerous verdicts in the squatting actions that have recently been tried had no effect to prevent the discredit which must attach to individuals acting upon impulse or arriving at conclusions upon incorrect data.

In my opinion the Commissioner of the Warrego was never on the land in dispute in his official capacity, nor did he ever survey it before sending in his report, although furnished with expensive instruments—the use of which it is *surmised* he is fully acquainted with.

In

Six months after
having been
written.Georgy and
Georgy East.

In conclusion I beg to say that I hold possession of the land licensed to Messrs. Lord and Smith as Georgy and Georgy East, in the pastoral district of Warrego, and I have no intention to relinquish my claim, unless compelled to do so by a verdict in the Supreme Court. I am perfectly convinced from the opinions I have received from the most eminent lawyers in the Colony that the labours of the Board in deciding against my rights are in opposition to the true state of the case.

I enclose a tracing* from the map of the surveyed runs on the Bogan and Darling Rivers, * Appendix A. showing the approximate position of Brewarrina, Bokira, Walgra, Mohanna, Bunnawannah, and the Bree Creek, for your information. This map may not be correct, nor do I consent to abide or be bound by it; it will however show that there can at the outside be only a narrow strip of country to meet Lord and Smith's tenders; even if the land were not included within the limits of the description inserted in my tender for West Bunnawannah, and accepted by the Government, it would be a great injustice to deprive me of such a small area and insert *two runs* between mine when there is not room for one, and by the Orders in Council and old regulations no run can be granted unless it contains an area of 16,000 acres.

It is asserted that Messrs. Lord and Smith are bounded by my runs; if so, I contend that when my claims are satisfied there will be no room for them—the land included within the two Georgy Runs I claim by virtue of my Bunnawannah and West Bunnawannah license, even if it is in excess of the proper distance you allege I have only a right to.

I notice that Messrs. Lord and Smith named no area for their runs—a rather peculiar circumstance, and quite at variance with the regulations—while Mr. Suttor's have been accepted for areas in excess of the regulations.

In the event of your persistence in refusing me redress I must petition Parliament, and if refused any satisfaction there trust to a decision of the Supreme Court.

I cannot resist observing that Smith's Georgy Run would extend up the Bree, and besides depriving me of frontage take away the back of my West Bunnawannah Run—another monstrous injury to me.

I have, &c.,
THOS. G. DANGAR.

No. 6.

T. G. DANGAR, Esq., to THE CHIEF COMMISSIONER OF CROWN LANDS.

Bullerawa, Wee Waa,
Namoi River, 27 August, 1861.

SIR,

I am in receipt of your letter of the 2nd instant, informing me that no land forming a part of my run, *Bunnawannah West*, will be leased to other parties, and to state that the protest contained in my letter of the 10th July last applied to both Bunnawannah and Bunnawannah West.

I have, &c.,
THOS. G. DANGAR.

No. 7.

THE CHIEF COMMISSIONER OF CROWN LANDS to T. G. DANGAR, Esq.

Crown Lands Office,
Sydney, 7 October, 1861.

SIR,

In reply to your letter of the 27th August last, I have the honor to inform you that my reply, dated the 2nd of the same month, to your previous communication, may be considered to apply to the case of Bunnawannah Run as well as to that of Bunnawannah West.

Your former letter, dated 13th July, was so worded that it was understood to refer to the latter Run alone, which was accordingly that named in my reply.

I have further to add, with reference to your communication of the 24th August last, that I do not see any object to be gained by further correspondence upon the subject at present.

I have, &c.,
A. O. MORIARTY,
Chief Commissioner of Crown Lands.

No. 8.

T. G. DANGAR, Esq., to THE SECRETARY FOR LANDS.

Bullerawa, Wee Waa,
Namoi River, 6 July, 1862.

SIR,

I do myself the honor to request that I may be favoured with a reply to my letters respecting the encroachment made by Mr. G. W. Lord on my Bunnawannah Runs, by virtue of his accepted tenders for Georgy East, and Mr. Smith's Georgy Run. The letter referred to was accompanied with a tracing explaining the encroachment, and was handed to you personally by Mr. Rusden.

I have, &c.,
THOS. G. DANGAR.

Chief Commissioner of Crown Lands, B.C., 12 Aug.—M.F.

Will the Surveyor General be so good as to say whether Mr. Roland's survey has afforded the materials for determining the junction of the Boekhara with the Darling; and, if so, will he favour me with a tracing of the Darling from the junction to that of the Culgoa?—A.O.M.—B.C., 27 Aug., 1862.

Mr.

Mr. Rowland's survey does not show what is required, but the enclosed tracing from Mr. Davidson's survey and Mr. R. Mitchell's sketch of the Darling will perhaps be of some service to the Chief Commissioner of Crown Lands in dealing with this case.

For the Surveyor General,
HENRY HALLORAN,
B.C., 19 Sept., 1862.

No. 9.

THE CHIEF COMMISSIONER OF CROWN LANDS to THE COMMISSIONER OF CROWN LANDS, WARREGO.

Crown Lands Office,
Sydney, 9 December, 1862.

SIR,

I have the honor to refer to you the accompanying correspondence respecting the alleged encroachment by Mr. Lord on Mr. Dangar's Bunnawannah Runs, and I have to request that you will be good enough to take the opportunity of reporting fully thereupon as to the several points which have been raised, when you visit the locality for the appraisalment of Georgy East.

I have, &c.,
A. O. MORIARTY,
Chief Commissioner of Crown Lands.

61-688.
7,462.
7,690.
62-0,198.
To be returned.

No. 10.

THE CHIEF COMMISSIONER OF CROWN LANDS to T. G. DANGAR, ESQ.

Crown Lands Office,
Sydney, 9 December, 1862.

SIR,

With reference to your letter of the 6th July last, requesting a reply to your letter respecting the encroachments made by Mr. Lord on your Bunnawannah Runs, I have the honor to inform you that I have referred all the correspondence on the subject to the Commissioner for the Warrego, and have requested him to report fully thereupon as to the several points which have been raised, when he visits the locality for the appraisalment of Georgy East.

I have, &c.,
A. O. MORIARTY,
Chief Commissioner of Crown Lands.

No. 11.

THE CHIEF COMMISSIONER OF CROWN LANDS to T. G. DANGAR, ESQ.

Crown Lands Occupation Office,
Sydney, 10 December, 1863.

SIR,

In reply to the inquiry contained in your letter of the 26th ultimo, I have the honor to inform you that the Warrego Commissioner has not yet reported upon the matter of the alleged encroachment by Mr. Lord on the Bunnawannah Run.

I have, &c.,
A. O. MORIARTY,
Chief Commissioner of Crown Lands.

No. 12.

THE COMMISSIONER OF CROWN LANDS, WARREGO, to THE CHIEF COMMISSIONER OF CROWN LANDS.

Report upon Mohana, Bunnawannah, Bunnawannah West.

Crown Lands Office,
Warrego, 20 April, 1865.

SIR,

Referring to your letter, dated 9th December, 1862, No. 9,198, I do myself the honor to inform you that, having made a very careful investigation into the extent of country lying between the junction of the Bockhara River and the junction of the Birie River with the Barwon, I have come to the following conclusions:—

1. That the distance from the Bokhara River to the Old Walgra Hut is not more than 3 miles.
2. That from the Walgra Hut to Old Mohana Station is not more than 6 miles.
3. That the distance from Mohana to the WL tree, on the banks of the Barwon, does not exceed two miles and a half.
4. It is my opinion that the distance from the Bockhara to the WL tree does not exceed 12 miles.
5. The lessees of Mohana Run claim the WL tree as the boundary between Mohana and Bunnawannah Runs; and from various statements which I have heard on the subject it is my impression that the WL tree has always been the western boundary on the Mohana Run.

6. With reference to the Bunnawannah and Bunnawannah West Runs, I beg to state that—
7. The distance from the WL tree to the Bunnawannah Head Station is not more than two miles and a half.
8. The distance from the Head Station to the junction of the Birie with the Barwon River does not exceed nine miles and a half.
9. It is my opinion that there is not room between the WL tree and the junction of the Birie and Barwon for any more runs than Bunnawannah and Bunnawannah West.
10. I do myself the honor of enclosing an illustration* showing the result of observations, which I believe to be quite correct, and which perfectly satisfy me that there is not room between the Bockhara and Birie Rivers for any more runs than Mohana, Bunnawannah, and Bunnawannah West. * Appendix B.
11. I have not been able yet to make any inquiry into the western side of the Birie River, but will do so as soon as possible, and will furnish you with a further report.

I have, &c.,
J. G. GRENFELL,
C.C. Lands.

No. 13.

THE CHIEF COMMISSIONER OF CROWN LANDS to MESSRS. WATT & WALKER.

Crown Lands Office,
Sydney, 27 September, 1865.

GENTLEMEN,

Referring to the Bunnawannah and Bunnawannah West Runs, formerly held by Mr. Dangar, and of which you are now the Lessees, and to a correspondence which has taken place in reference to an alleged encroachment thereon by Mr. Lord's Georgy and Georgy East Runs, I have the honor to inform you that it appears from a recent report of the Commissioner of the Warrego District, that the extent of country has been over-estimated, but I am unwilling to take any further action in the matter pending some further expression of opinion from yourselves and Mr. Lord as to your present respective claims, to which effect Mr. Lord has been apprised.

I have, &c.,
A. O. MORIARTY,
Chief Commissioner of Crown Lands.

No. 14.

THE CHIEF COMMISSIONER OF CROWN LANDS to G. W. LORD, Esq.

Crown Lands Office,
Sydney, 27 September, 1865.

SIR,

Referring to the runs Georgy and Georgy East in the Warrego District, and to the alleged encroachment by them on the Bunnawannah Runs (formerly Mr. Dangar's), I have the honor to inform you that it appears from a recent report of the Commissioner of Crown Lands for the Warrego District, that the country has been over-estimated, but I am unwilling to take any further action in the matter, pending some further expression of opinion from yourself and Messrs. Watt & Walker as to your present respective claims; to which effect those gentlemen have been apprised.

I have, &c.,
A. O. MORIARTY,
Chief Commissioner of Crown Lands.

No. 15.

W. G. WALKER, Esq., to THE CHIEF COMMISSIONER OF CROWN LANDS.

DEAR SIR,

In reply to your favour of the 27th September, addressed to Mr. Watt and myself, I would remark that Mr. Grenfell, the Commissioner of Crown Lands for the District, personally informed me that he had measured the frontage of Bunnawannah and Bunnawannah East, and found that they extended to within half a mile of Georgy West, or junction of Culgoa and Darling.

I am authorized to say, on behalf of all parties now interested in the Bunnawannahs, Georgy E. & W., Turrees, and Burie, that we shall be satisfied to have the block Georgy East as it is, provided the country on Culgoa, between Colliss and Georgy, inside of Thully Springs, is granted, as comprised in Mr. Lord's tender, Looden, and also provided a small corner, or perhaps two, of vacant country adjoining Burie, of not more area than 20 square miles, utterly valueless to any person other than owner of adjoining blocks, be granted us, instead of Georgy West's deficiency, and in accordance with my tenders. I make this proposal with concurrence of Mr. Cornish, who is pecuniarily interested now in Mr. Lord's country.

I am, &c.,
W. GLEN WALKER,
For Mr. Watt and Self.

Referred for the report of Mr. Grenfell on this proposal. A.O.M., B.C., 22 Jany., 1866.

No. 16.

THE CHIEF COMMISSIONER OF CROWN LANDS to W. G. WALKER, Esq.

Crown Lands Office,
Sydney, 23 January, 1866.

SIR,

I have the honor to inform you that I have referred for the report of Mr. Grenfell your letter of the 5th October last, on behalf of yourself and Mr. Watt, proposing certain arrangements with reference to country in the vicinity of the Bunnawannah, Georgy, and other runs in that locality.

I have, &c.,

A. O. MORIARTY,
Chief Commissioner of Crown Lands.

No. 17.

MR. COMMISSIONER GRENFELL to THE CHIEF COMMISSIONER OF CROWN LANDS.

Crown Lands Office, Warrego,
Bourke, 22 March, 1866.

SIR,

Referring to your B.C., dated 22nd January last, requiring my report upon a proposition made by Mr. W. G. Walker on the subject of his runs on the Barwon River, I do myself the honor to inform you that I forward by this mail a report upon Mr. Lord's tender for Block C, or Looden, recommending its acceptance, and also a description showing the portion of vacant land between the Birie and Barwon.

The portion of vacant land tendered for by Mr. Walker, in his Tender No. 16, of April, 1865, is too small to constitute a run, and as it adjoins Mr. Walker's other runs I beg to suggest that his proposal may be entertained.

I have, &c.,

J. G. GRENFELL,
C. C. Lands.

No. 18.

EXTRACTS from letter from W. G. Walker to The Chief Commissioner of Crown Lands, dated 4 January, 1867.

[Tenders for Country in the Warrego District.]

"Being informed that the late Mr. Grenfell had favourably reported on several tenders in which those whom I represent are interested, and especially of one in name of Mr. Lord, called Looden, and another for country adjoining it, tendered for by myself, as well as some country behind Burie and Bunnawannah, I would esteem it a favour (if I have been correctly informed) if these were considered with as little delay as may be found practicable."

* * * * *

"I have discontinued paying rent on Georgy East, which either has no existence at all, or if any, only a nominal one, and is not worth paying any rent for; and to squeeze in this nominal run, Georgy East, the adjoining runs Burie and Georgy, by their amended descriptions would be curtailed much under 25 square miles. In a former correspondence I have intimated that the acceptance of Mr. Lord's tender for Looden, of my tender for an irregular corner of land between Thully Springs, the Turies, and the Guririrus, and of my tender for country behind Bunnawannah and Burie (the acceptance of all which I believe the local Commissioner has recommended), would be considered as a fair settlement of my claim in respect to loss of Georgy East and curtailment of extent of adjoining blocks."

* * * * *

W. G. WALKER.

Appendix C.

Enclosed is a rough sketch of the Georgy and Bunnawannah Blocks, &c.

No. 19.

THE CHIEF COMMISSIONER OF CROWN LANDS to W. G. WALKER, Esq.

Crown Lands Office,
Sydney, 8 March, 1867.

SIR,

With reference to your letter of the 4th January last, I have the honor to inform you that the applications for water reserves, referred to in the second paragraph thereof, have not been yet reported on by the District Commissioner.

With respect to Mr. Lord's tender for block C, or Looden, and your own tender for Back Bunnawannah, referred to in the third and fourth paragraphs of your letter, I have now recommended the acceptance of the respective tenders.

This, I think, meets your proposal as to the deficient area of Georgy East; and as it appears from the report of the late Mr. Grenfell that the space supposed to be occupied by the run of that name is really included in the adjacent runs of the same parties, I am prepared to recommend the cancellation of that tenure should the parties concerned so desire.

I have, &c.,

A. O. MORIARTY,
Chief Commissioner of Crown Lands.

No. 20.

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No. 20.

W. G. WALKER, Esq., to THE CHIEF COMMISSIONER OF CROWN LANDS.

Sydney, 11 March, 1867.

SIR,

In reply to your favour of the 8th instant, I will feel obliged by the run supposed to exist, called Georgy East, having its tenure cancelled, as being included in the adjoining blocks.

When I have seen the accepted description of the run known as Block C, or Looden, I shall again communicate with you as to compensation for the deficient area of Georgy East.

I am, &c.,

W. GLEN WALKER,

(For self and others concerned.)

No. 21.

THE CHIEF COMMISSIONER OF CROWN LANDS to W. G. WALKER, Esq.

Crown Lands Office,

Sydney, 23 March, 1867.

SIR,

With reference to the second paragraph of your letter of the 11th instant, relative to your intention to claim compensation for the deficient area of Georgy East, I have the honor to inform you that I must not be misunderstood as implying that any claim for compensation exists in this matter.

I have, &c.,

A. O. MORIARTY,

Chief Commissioner of Crown Lands.

No. 22.

THE CHIEF COMMISSIONER OF CROWN LANDS to THE COMMISSIONER OF CROWN LANDS, WARREGO.

Crown Lands Office,

Sydney, 11 April, 1867.

SIR,

Referring to your predecessor's letter of the 22nd of March, 1866, and previous correspondence, I have the honor to inform you that the tenure of Georgy East, in the Warrego District, has now been cancelled in the books of this office.

I have, &c.,

A. O. MORIARTY,

Chief Commissioner of Crown Lands.

No. 23.

T. G. DANGAR, Esq., to THE SECRETARY FOR LANDS.

Sydney, 15 October, 1867.

SIR,

On the 9th and 10th December, 1862 and 1863, I received the enclosed copies of letters from the Chief Commissioner of Crown Lands, respecting an encroachment made upon my Bunnawannah runs.

Not having, up to this time, received any further intimation on the subject, perhaps you would do me the kindness to cause the matter to be looked up and the result made known to me.

I have, &c.,

THOS. G. DANGAR.

Chief Commissioner of Crown Lands.—16 October.—M.F.

Mr. Dangar was not further communicated with in the matter referred to, because it was presumed, the runs having passed into the hands of other parties who took up the correspondence, that he had no further interest in it.

The results of the enquiries that were instituted were duly communicated to the parties over two years ago.—A.O.M.—B.C., 21 Oct., /67.

The Under Secretary for Lands.—Inform.—J.B.W.

Mr. Dangar informed to the above effect.—30th Oct., 1867.

Enclosures referred to—
62-9193, dated 9 Dec., 1862;
63-4105, dated 10 Dec., 1863;—
For which see previous correspondence, page 6. (Nos. 9 and 11 of Schedule.)

No. 23 A.

THE UNDER SECRETARY FOR LANDS to T. G. DANGAR, Esq.

Department of Lands,

Sydney, 30 October, 1867.

SIR,

Referring to your letter of the 15th instant, I am directed to inform you that the reason why you were not communicated with since 10th December, 1863, as therein represented, respecting an encroachment made upon the Bunnawannah Runs, was because it was presumed, the runs having passed into the hands of other parties who took up the correspondence, that you had no further interest in the matter, and the result of the enquiries that were instituted on the subject were therefore communicated to them.

I have, &c.,

M. FITZPATRICK.

No. 24.

T. G. DANGAR, ESQ., to THE SECRETARY FOR LANDS.

Bullerawa, Wee Waa,
9 December, 1867.

SIR,

In acknowledging the receipt of your letter of the 30th October last, in reply to mine of the 15th of the same month, on the subject of the encroachment on the Bunnawannah Runs, I do myself the honor to state that the presumption was erroneous, that because I had parted with those runs my interest in the matter had ceased. It was I alone who suffered by this encroachment, and sustained a very heavy loss by depreciation of property in consequence thereof.

Under these circumstances I have to request the favour of your directing a copy of the correspondence, and the result of the inquiries that were instituted, to be sent to me.

I have, &c.,
THOS. G. DANGAR.

The Chief Commissioner for Crown Lands.—B.C., 18 Dec.—M.F.

The result of the investigation of the case has been to prove that Mr. Dangar was so far justified in his representations, that no sufficient area of vacant land existed to constitute a run in the position occupied by the description of Georgy. I do not perceive, however, that Mr. Dangar sustained any injury by the acceptance of the tender of Mr. Lord for a run of that name, for which the Government are responsible. No alteration whatever was made in the boundaries of his own runs; and the description of the new run was drawn up by the late Surveyor General in the obvious belief that but little if any vacant land existed, and in a manner carefully to avoid conflict with the descriptions of existing runs. A.O.M.—B.C., 2 January, /68.

The Under Secretary for Lands. Inform Mr. Dangar.—J.B.W., 12 Jany.

Mr. Dangar informed to the above effect.—17 Jany., /68.

No. 25.

T. G. DANGAR'S TENDER FOR "CULGOA RUN."

Tender for a Lease of a new Run of Crown Lands.—Intermediate or Unsettled Districts.

IN accordance with the provisions contained in Her Majesty's Order in Council, published in the *New South Wales Government Gazette* of the 7th October, 1847, and of the Regulations of the Local Government, published in pursuance thereof, I, Thomas Gordon Dangar, of Bullerawa, Wee Waa, do hereby propose to take a lease for fourteen years, of the Crown Lands known as Culgoa, in the District of Wellington; which lands are particularly described in the Schedule annexed to this tender.

2. And in consideration of such lease I am willing and hereby offer to pay in advance, minimum rent, below which it is provided by the said Order in Council that no run shall be let, namely, £10 per annum, with £2 10s. per annum added thereto for every thousand sheep, or their equivalent in cattle beyond 4,000 sheep or their equivalent, which the run shall, under the provisions of the said Order in Council, be estimated as capable of carrying; and also in consideration of such lease, and by way of premium for the same, I do offer to pay yearly in advance, the further sum of £1 in addition to the amount of the said minimum rent.

3. And I do agree that in the event of this tender being accepted by His Excellency the Governor General, and of such acceptance being notified in the *New South Wales Government Gazette*, I will within sixty days after such notification pay into the hands of the Colonial Treasurer, at Sydney, as and for the first year's rent of the said run, notwithstanding that the lease of the said run may not have been executed, the sum of £11, being the amount, according to my computation, of the grazing capabilities of the run, of the payments which I have above offered to make, viz. :—

Minimum yearly rent below which no run can be let	... ..	£10 0 0
Further payment, at the rate of £2 10s. per thousand for the number of	}	
stock above 4,000 sheep, or their equivalent, which the run applied for is		
estimated to be capable of carrying	... ..	1 0 0
Additional yearly payment offered by way of premium	... ..
Total	... ..	£11 0 0

Such payment nevertheless to be without prejudice to the subsequent adjustment of the rent according to the second and third sections of the second chapter of the above-mentioned Order in Council.

4. And I do agree that in the event of this tender being accepted, to subscribe to the following conditions, viz. :—That in addition to all other terms prescribed by the present Regulations, the occupancy of the said run and the lease to be ultimately issued, shall be subject to any new or modified conditions which the Legislature may impose.

5. And in consideration of this tender being accepted, and in the event of such payment not being made within the before-mentioned period of sixty days, I further agree to forfeit to Her Majesty the sum of £20 by way of liquidated damages, and to forfeit any right acquired by virtue of this tender, and such acceptance thereof as aforesaid.

Given under my hand, this 10th day of June, A.D. 1859,—

THOS. G. DANGAR.

To the Chief Commissioner of Crown Lands, Sydney.

SCHEDULE referred to in the foregoing Tender.

Commissioner's District, and general locality.	Name of Run.	Estimated number of Acres.	Estimated capability.		Description of lands by reference to leading geographical features and marked or determined boundary-lines.
			Cattle.	Sheep.	
District of Wellington, near the junction of the Culgoa with the Lower Barwon River.	Culgoa ...	16,000	640	.....	Commencing at a point where the Bunnawannah line cuts the Culgoa, at a tree on its north bank, marked TD over G, extending up the Culgoa on both sides 10 miles to a tree marked TD over G, with a back run of two and a half miles on each side.

No. 26.

T. G. DANGAR'S TENDER FOR "UPPER BREE" RUN.

Tender for a Lease of a new Run of Crown Lands—Intermediate or Unsettled Districts.

In accordance with the provisions contained in Her Majesty's Order in Council, published in the *New South Wales Government Gazette* of the 7th October, 1847, and of the Regulations of the Local Government, published in pursuance thereof, I, Thomas Gordon Dangar, of Bullerawa, Wee Waa, do hereby propose to take a lease for fourteen years of the Crown Lands known as The Upper Bree, in the district of Wellington, which lands are particularly described in the schedule annexed to this tender.

2. And in consideration of such lease I am willing and hereby offer to pay in advance, minimum rent, below which it is provided by the said Order in Council that no run shall be let, namely, £10 per annum, with £2 10s. per annum added thereto for every 1,000 sheep or their equivalent in cattle beyond 4,000 sheep or their equivalent, which the run shall, under the provisions of the said Order in Council, be estimated as capable of carrying; and also in consideration of such lease, and by way of premium for the same, I do offer to pay yearly, in advance, the further sum of £1 in addition to the amount of the said minimum rent.

3. And I do agree that in the event of this tender being accepted by His Excellency the Governor General, and of such acceptance being notified in the *New South Wales Government Gazette*, I will within sixty days after such notification pay into the hands of the Colonial Treasurer, at Sydney, as and for the first year's rent of the said run, notwithstanding that the lease of the said run may not have been executed, the sum of £11, being the amount, according to my computation, of the grazing capabilities of the run, of the payments which I have above offered to make, viz. :—

Minimum yearly rent below which no run can be let	... ..	£10 0 0
Further payment, at the rate of £2 10s. per thousand for the number of stock above 4000 sheep, or their equivalent, which the run applied for is estimated to be capable of carrying	... ..	.....
Additional yearly payment offered by way of premium	... ..	1 0 0
Total	... ..	£11 0 0

Such payment nevertheless to be without prejudice to the subsequent adjustment of the rent, according to the second and third sections of the second chapter of the above-mentioned Order in Council.

4. And I do agree that in the event of this tender being accepted, to subscribe to the following conditions, viz. :—That, in addition to all other terms prescribed by the present Regulations, the occupancy of the said run and the lease to be ultimately issued shall be subject to any new or modified conditions which the Legislature may impose.

5. And in consideration of this tender being accepted, and in the event of such payment not being made within the before-mentioned period of sixty days, I further agree to forfeit to Her Majesty the sum of £20 by way of liquidated damages, and to forfeit any right acquired by virtue of this tender, and such acceptance thereof as aforesaid.

Given under my hand this 10th day of June, A.D. 1859,—

THOS. G. DANGAR.

To the Chief Commissioner of Crown Lands, Sydney.

SCHEDULE referred to in the foregoing Tender.

Commissioner's District and general locality.	Name of Run.	Estimated number of Acres.	Estimated capability.		Description of lands by reference to leading geographical features and marked or determined boundary-lines.
			Cattle.	Sheep.	
District of Wellington, on the Bree Creek, on the north side of the Lower Barwon River.	The Upper Bree.	16,000	640	.....	Commencing at a point where the Bunnawannah line cuts the Bree Creek, and extending 10 miles up the Bree Creek on both sides, with a back run on each side of 2½ miles to a tree marked TD over G.

(Signature of Applicant.)

THOS. G. DANGAR.

No. 27.

THOS. G. DANGAR'S TENDER FOR "BREE NO. 1."

Tender for a lease of a new Run of Crown Lands—Intermediate or Unsettled Districts.

(For form of tender see tender No. 152 of July, 1859, preceding.—Name of tenderer, Thomas Gordon Dangar; name of run, Bree No. 1; premium offered, £45 10s. 6d.; date, 1st Sept., 1860.)

SCHEDULE referred to in the foregoing Tender.

Commissioner's District and general locality.	Name of Run.	Estimated number of Acres.	Estimated capabilities for grazing.		Description of lands, by reference to leading geographical features and marked and determined boundary-lines.
			Cattle.	Sheep.	
In the District of Warrego, on the north bank of the Bree.	Bree No. 1.....	16,000	640	None	On the north bank of the Bree: Commencing at a point 20 miles above the junction of the Bree with the Culgoa, and bounded on the south by that creek, upwards, 5 miles, with a back run of 5 miles.

THOS. G. DANGAR.

No. 28.

THOS. G. DANGAR'S TENDER FOR "BUNNAWANNAH."

Tender for a lease of a vacated or forfeited Run of Crown Lands—Intermediate or Unsettled Districts.

(For form of tender see tender preceding.—Name of run, Bunnawannah; name of tenderer, Thomas Gordon Dangar; premium offered, £10; date, 24th April, 1855.)

SCHEDULE referred to in the above Tender.

Commissioner's District and general locality.	Name of Run.	Estimated number of Acres.	Estimated capabilities for grazing.		Description of lands, by reference to leading geographical features and marked or determined boundary-lines.
			Cattle.	Sheep.	
District of Bligh, situated on the Lower Barwon River.	Bunnawannah..	16,000	640	.....	A block of land on the right bank of the Darling River, bounded on the east by Wm. Lawson's (now Messrs. E. & J. Drutt's) station, Mohanna; on the southward by the Barwon River, having a frontage of 5 miles; and on the west and north by vacant Crown Lands.

(Signature of Applicant.)

THOS. G. DANGAR.

No. 29.

THOS. G. DANGAR'S TENDER FOR "WEST BUNNAWANNAH."

Tender for a lease of a New Run of Crown Lands—Intermediate or Unsettled Districts.

IN accordance with the provisions contained in Her Majesty's Order in Council, published in the *New South Wales Government Gazette* of the 7th October, 1847, and of the Regulations of the local Government, published in pursuance thereof, I, Thomas Gordon Dangar, of Bullerawa, Wee Waa, do hereby propose to take a lease for fourteen years of the Crown Lands known as West Bunnawannah, in the District of Wellington, which lands are particularly described in the Schedule annexed to this tender.

2. And in consideration of such lease I am willing, and hereby offer to pay in advance the minimum rent, below which it is provided by the said Order in Council that no run shall be let, namely:—£10 per annum, with £2 10s. per annum added thereto for every thousand sheep, or their equivalent, which the run shall, under the provisions of the said Order in Council, be estimated as capable of carrying; and also, in consideration of such, and by way of premium for the same, I do offer to pay yearly, in advance, the further sum of £1 in addition to the amount of the said minimum rent.

3. And I do agree that in the event of this tender being accepted by His Excellency the Governor General, and of such acceptance being notified in the *New South Wales Government Gazette*, I will, within sixty days after such notification, pay into the hands of the Colonial Treasurer, at Sydney, as and for the first year's rent of the said run, notwithstanding that the lease of the said run may not have been executed, the sum of £11, being the amount, according to my computation, of the grazing capabilities of the run, of the payments which I have above offered to make, viz.:—

Minimum yearly rent below which no run can be let	... ..	£10 0 0
Further payment, at the rate of £2 10s. per thousand for the number of	}	}
stock above 4,000 sheep, or their equivalent, which the run applied		
for is estimated by ——— to be capable of carrying	... ..	1 0 0
Additional yearly payment offered by way of premium	... ..	1 0 0
Total...	... ..	£11 0 0

Such payment, nevertheless, to be without prejudice to the subsequent adjustment of the rent according to the second and third sections of the second chapter of the above-mentioned Order in Council.

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4. And in consideration of this tender being accepted, and in the event of such payment not being made within the before-mentioned period of sixty days, I further agree to forfeit to Her Majesty the sum of £20, by way of liquidated damages, and to forfeit any right acquired by virtue of this tender, and such acceptance thereof as aforesaid.

Given under my hand this 11th day of June, A.D. 1857.

THOS. G. DANGAR.

The Chief Commissioner of Crown Lands.

SCHEDULE referred to in the foregoing Tender.

Commissioner's District and general locality.	Name of Run.	Estimated number of Acres.	Estimated capabilities for grazing.		Description of lands, by reference to leading geographical features and marked or determined boundary-lines.
			Cattle.	Sheep.	
District of Wellington, on the north side of the Lower Barwon River, situated between Thos. G. Dangar's Bunnawannah Station (in the District of Wellington) and Mr. W. B. Tooth's Upper Turee Run.	West Bunnawannah.	16,000	640	None	Bounded on the east by Thos. G. Dangar's Bunnawannah Station; on the west by Mr. W. B. Tooth's Upper Turee Run; on the south by the Barwon River; and on the north by vacant unoccupied Crown Lands—Boundaries commencing at the lower marked tree of Thos. G. Dangar's Bunnawannah Station, and extending down the Barwon River about 5 miles to the upper marked tree of Mr. W. B. Tooth's Upper Turee Run, claiming a frontage to the north side of the Barwon River of 5 miles, with a back run of 5 miles.

(Signature of Applicant.)
THOS. G. DANGAR.

No. 30.

W. B. TOOTH'S TENDER FOR "UPPER TUREE."

Tender for a lease of a vacated or forfeited Run of Crown Lands.—Intermediate or Unsettled Districts.

(For form of tender see Tender 51, August, 1857, preceding.—Name of run, Upper Turee; name of tenderer, William Butler Tooth; premium offered, £27 11s.; date, 25th March, 1856.)

SCHEDULE referred to in foregoing Tender.

Commissioner's District and general locality.	Name of Run.	Estimated number of Acres.	Estimated capability for grazing.		Description of lands, by reference to leading geographical features and marked or determined boundary-lines.
			Cattle.	Sheep.	
Bligh, on the north bank of the Barwon River.	Upper Turee ..	16,000	.....	4,000	Upper Turee; estimated area, 16,000 acres. This run is situated on the northern bank of the Barwon River, 3 miles below the junction of the Bree, a creek running into the Barwon, 20 miles from Mowhanna, Mr. Wm. Lawson's station, and extends 5 miles down the said river, and is bounded on all sides by unoccupied waste lands.

(Signature of Applicant.)
WILLIAM B. TOOTH.

No. 31.

SAML. SMITH'S TENDER FOR "GEORGY."

Tender for a lease of a new Run of Crown Lands.—Intermediate or Unsettled Districts.

(For form of tender see tender preceding, No. 51, of August, 1857.—Name of tenderer, Samuel Smith; name of run, Georgy; premium offered, nil.; dated 8th March, 1856.)

SCHEDULE referred to in the foregoing Tender.

Commissioner's District and general locality.	Name of Run.	Estimated number of Acres.	Estimated capability.		Description of lands, by reference to leading geographical features and marked or determined boundary-lines.
			Cattle.	Sheep.	
District of Wellington, at the junction of the Culgoa with the Darling.	Georgy	16,000	640	or 4,000	Bounded on the east by the river Culgoa 5 miles; on the south by the River Darling 5 miles; on the west by a line north 5 miles; and on the north by a line east 5 miles to the River Culgoa aforesaid.

(Signature of Applicant.)
SAML. SMITH.

No. 32.

No. 32.

W. COLLESS & G. COLLESS, JUNR.—TENDER FOR "GURIWARRA."

Tender for a lease of a new vacated or forfeited Run of Crown Lands.—Intermediate or Unsettled Districts—Unsettled.

(For form of tender see Tender No. 51 of August, 1857, preceding.—Names of tenderers, William Colless & G. Colless, junr.; name of run, Guriwarra; premium offered, £15; date, 12th July, 1858.)

SCHEDULE referred to in foregoing Tender.

Commissioner's District and general locality.	Name of Run.	Estimated number of Acres.	Estimated capabilities for grazing.		Description of lands by reference to leading geographical features and marked or determined boundary-lines.
			Cattle.	Sheep.	
Warialda	Guriwarra.....	16,000	640 — 20 horses.	None	Bounded on the west side by unoccupied Crown Lands: Commencing at a water-hole called Bulibudda, 5 miles; on the north side by unoccupied Crown Lands, 5 miles; on the east side by unoccupied Crown Lands, 5 miles; on the south side by the Beeree, being a branch of the Balloon, about 20 miles from its junction with the Barwon River.

(Signatures of Applicants.)

WILLIAM COLLESS.
GEORGE COLLESS, JUNR.

No. 33.

JAMES EVANS' TENDER FOR "KUNREEBEREE."

Tender for a lease of a vacant new Run of Crown Lands.—Unsettled Districts.

(For form of tender see Tender No. 51 of August, 1857, preceding.—Name of tenderer, James Evans; name of run, Kunreeberee; premium offered, £10; dated 19th July, 1858.)

SCHEDULE referred to in foregoing Tender.

Commissioner's District and general locality.	Name of Run.	Estimated number of Acres.	Estimated capabilities for grazing.		Description of lands by reference to leading geographical features and marked or determined boundary-lines.
			Cattle.	Sheep.	
Warialda	Kunreeberee ...	16,000	640 — 10 horses.	None	Kunreeberee, situated on the north side of the Beree: Commencing on the east side at a water-hole called Gunge-hole, bounded by unoccupied Crown Lands; on the west by unoccupied Crown Lands; on the north by unoccupied Crown Lands; on the south by the Beree Creek, a branch from the Balome.

(Signature of Applicant.)

JAMES EVANS.

No. 34.

GEORGE LEE'S TENDER FOR "KUNREEBEREE."

Tender for a lease of a new Run of Crown Lands.—Intermediate or Unsettled Districts.

(For form of tender see Tender No. 152 of July, 1859, preceding.—Name of run, Kunreeberee (accepted as Kunreeberee East); name of tenderer, George Lee; premium offered, £10; date 3rd September, 1858.)

SCHEDULE referred to in above Tender.

Commissioner's District and general locality.	Name of Run.	Estimated number of Acres.	Estimated capabilities.		Description of lands by reference to leading geographical features and marked or determined boundary-lines.
			Cattle.	Sheep.	
Warialda	Kunreeberee ...	16,000	640	...	Kunreeberee: Situated on the south side of the Birree Creek; bounded on the east by unoccupied Crown Lands; and on the west by unoccupied Crown Lands; and north by Birree Creek, situated about 20 miles up the Berree Creek, from its junction with the Barwon River.

(Signature of Applicant.)

G. LEE.

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No. 35.

GEORGE LEE'S TENDER FOR "BURIE."

Tender for a lease of a new Run of Crown Lands.—Intermediate or Unsettled Districts.—Unsettled Districts.
(For form of tender see Tender No. 139 of July, 1859, preceding.—Name of tenderer, George Lee; name of run, Burie; premium offered, nil; date, 3rd September, 1858.)

SCHEDULE referred to in the foregoing Tender.

Commissioner's District and general locality.	Name of Run.	Estimated number of Acres.	Estimated capabilities.		Description of lands by reference to leading geographical features and marked or determined boundary-lines.
			Cattle.	Sheep.	
Warialda	Burie.....	16,000	640	...	Burie: Situated 5 miles below the run called Kureebere, tendered for by me on this date, on the south side of the Beree Creek; bounded on the east by unoccupied Crown Lands; and on the west by unoccupied Crown Lands; and on the north by the Beree Creek, situated about 15 miles up the Beree Creek from its junction with the Barwon River.

(Signature of Applicant.)
G. LEE.

No. 36.

GEORGE WILLIAM LORD'S TENDER FOR "BLOCK A."

Tender for a lease of a new Run of Crown Lands.—Intermediate or Unsettled Districts.
(For form of tender see Tender No. 139 of July, 1859, preceding.—Name of tenderer, George William Lord; name of run, Block A; premium offered, £1; date, 2nd April, 1859.)

SCHEDULE referred to in the foregoing Tender.

Commissioner's District and general locality.	Name of Run.	Estimated number of Acres.	Estimated capabilities.		Description of lands by reference to leading geographical features and marked or determined boundary-lines.
			Cattle.	Sheep.	
Wellington	Block A.....	46,000	640	4,000	Commencing at the junction of the Culgoa and Balandool Rivers; thence by a line north 8 miles; thence by a line east 8 miles, crossing the Culgoa River; thence by a line south to meet portions of the northern boundary of blocks Nos. 4 and 5; thence by parts of these northern boundaries to the starting point.

(Signature of Applicant.)
GEO. W. LORD.

No. 37.

MESSRS. PARNELL & GAIDEN'S TENDER FOR "BIRIE NO. 1 EAST."

Tender for a lease of a new Run of Crown Lands.—Intermediate and Unsettled Districts.
(For form of tender see Tender No. 152 of July, 1859, preceding.—Name of tenderers, Charles Parnell & Burton Gaiden; name of run, Birie No. 1 East; premium offered, £1 1s.; date, 3 May, 1859.)

SCHEDULE referred to in the foregoing Tender.

Commissioner's District and general locality.	Name of Run.	Estimated number of Acres.	Estimated capabilities.		Description of lands by reference to leading geographical features and marked or determined boundary-lines.
			Cattle.	Sheep.	
Bligh	Birie No. 1 East.	16,000	640	...	Commencing 25 miles from the junction of the Darling and Birie Rivers, on the Birie; thence by a line east 5 miles; thence by a line north 5 miles; thence by a line west 5 miles; and thence by a line south 5 miles, to the starting point; and bounded on the west by the Berie.

(Signatures of Applicants.)

RAYMOND & Co.
(pro MESSRS. PARNELL & GAIDEN.)

No. 38.

No. 38.

MESSRS. PARNELL & GAIDEN'S TENDER FOR "BIRIE NO. 2 EAST."

Tender for a lease of a new Run of Crown Lands.—Intermediate or Unsettled Districts.

(For form of tender see Tender No. 139 of July, 1859, preceding.—Name of tenderers, Charles Parnell & Burton Gaiden; name of run, Byrie No. 2 East; premium offered, £1 1s.; date, 3 May, 1859.)

SCHEDULE referred to in the foregoing Tender.

Commissioner's District and general locality.	Name of Run.	Estimated number of Acres.	Estimated capabilities.		Description of lands by reference to leading geographical features and marked or determined boundary-lines.
			Cattle.	Sheep.	
Bligh	Birie No. 2 East.	16,000	640	...	Commencing at the north-west corner of the run called Birie No. 1 East; thence by a line east 5 miles; thence by a line north 5 miles; thence by a line west 5 miles; thence by a line south 5 miles, to the starting point; and bounded on the west by the Birie.

(Signatures of Applicants.)

RAYMOND & Co.
(pro MESSRS. PARNELL & GAIDEN.)

No. 39.

EBEN ORR'S TENDER FOR "KUNREEBEREE EAST BACK."

Tender for a lease of a new Run of Crown Lands.—Second Class Settled and Unsettled Districts.

In accordance with the provisions of the Crown Lands Occupation Act of 1861, and on the Regulations made in pursuance thereof, I, Eben Orr, of Coonabarabran, do hereby propose to take a lease of the Crown Lands known as Kunreeberee East Back Block, in the District of Warrego, which lands are particularly described in the Schedule annexed to this tender.

2. And in consideration of such lease I am willing and hereby offer to pay yearly, in advance, the rent of the said Crown Lands, as the same may be determined by appraisalment under the said Act.

3. And I do agree that in the event of this tender being accepted and of such acceptance being notified in the *Gazette*, I will within sixty days after such notification pay into the hands of the Colonial Treasurer, at Sydney, as and for the first year's rent of the said run, and pending such appraisalment as aforesaid, the sum of £10, together with the sum of £20, being the assessment payable under the Increased Assessment and Rent Act of 1858, and also the sum of £1 1s. sterling, by way of premium for the said lease: that is to say:—

Rent, pending appraisalment	...	...	...	...	...	...	...	£	s.	d.
Assessment do.	...	...	...	...	...	...	...	20	0	0
Additional yearly payment, offered by way of premium (if any)	...	...	...	...	...	...	...	1	1	0
								£31	1	0

And in default of such payments I agree to forfeit my deposit on this tender.

Given under my hand this 22nd day of January, A.D. 1862.

(Signature of Applicant.)

To the Honorable the Minister for Lands, Sydney.

EBEN ORR.

SCHEDULE referred to in the foregoing Tender.

Pastoral District and general locality.	Name of Run.	Estimated Area in Square Miles.	Estimated Pastoral Capability.		Description of the boundaries of the run, and the marks or natural features by which such boundaries are indicated. (N.B.—This description must be clear, detailed, and specific.)
			Cattle (alone).	Sheep (alone).	
District of Warrego.....	Kunreeberee East Back Block.	16,000 (? acres.)	4,000	Commencing at the north-east corner of Kunreeberee East; thence by a line east 5 miles; thence by a line south 5 miles; thence by a line west 5 miles to the south-east corner of Kunreeberee East Block.
			Or cattle and	sheep	
			

17

No. 40.

W. LAWSON'S DEMAND FOR A LEASE OF "MOHENIA RUN."

Application for a lease of waste lands of the Crown beyond the Settled Districts, in the Colony of New South Wales.

I, WILLIAM LAWSON, sen., of Prospect, do hereby claim to have issued to me, under and in pursuance of Her Majesty's Order in Council, published in the *Government Gazette* of New South Wales of the 7th day of October, 1847, a lease of the waste lands of the Crown, described in the Schedule hereunder written.

The said lands are now in my licensed occupation; and at the date of the publication of the above Royal Order, and for twelve months previously thereto, the same were held under license to me.

Given under my hand, this 5th day of April, A.D. 1848.

WM. LAWSON.

To the Honorable the Colonial Secretary, Sydney.

SCHEDULE.

Commissioner's District and general locality.	Name of Run.	Estimated number of Acres.	Estimated grazing capabilities.		Description of lands by reference to leading geographical features and marked or determined boundary-lines.
			Cattle.	Sheep.	
Liverpool Plains	Mohenia	38,400	600	.....	Bounded on the east by a line running 5 miles north from the junction of the Bokhira River with the Barwon River, and thus divided from Mr. Druitt's Station, Brewannia; bounded on the south by the Barwon River, a distance of 12 miles; on the west and north by unoccupied Crown Lands.

(Signature of Applicant.)

WM. LAWSON.

No. 41.

G. W. LORD'S TENDER FOR BLOCK No. 3 (ACCEPTED AS "GEORGY EAST.")

Tender for a lease of a new Run of Crown Lands—Intermediate or Unsettled Districts.

(For form of tender see Tender No. 139 of July, 1859, preceding.—Name of tenderer, George William Lord; name of run, Block No. 3; premium offered, £5; date of tender, 2nd April, 1859.)

SCHEDULE referred to in the foregoing Tender.

Commissioner's District and general locality.	Name of Run.	Estimated number of Acres.	Estimated capabilities.		Description of lands by reference to leading geographical features and marked or determined boundary-lines.
			Cattle.	Sheep.	
Wellington, North Bank, Darling.	Block No. 3 ...	46,000	640	4,000	Block No. 3: Commencing at a point on the River Darling, and bounded on the west 6 miles by Block No. 2; thence by a line east to the junction of the Culgoa and Ballandool Rivers; thence by a line south to the River Darling; thence by that river, downwards, to the starting-point, being a continuation of Block No. 2.

G. W. LORD.

No. 42.

COMMISSIONER SIBTHORPE'S REPORT.

Crown Lands Office,
Molong, 6th August, 1859.

RESPECTING the Run named in the margin I have the honor to report,—

- 1st. The land does not comprise any land under lease or promise of lease, or applied for in any other tender.
- 2nd. In my opinion the public interests do not require any portion of the land tendered for should be reserved from lease.
- 3rd. The description given in the tender correctly indicates the land tendered for.
- 4th. There being no other tender for the land there can be no identity for the same.
- 5th. Nil.
- 6th. Nil.
- 7th. Nil.
- 8th. The land is situated in the Unsettled Districts.

54—April, 1859.
Block No. 3.
Unobjectionable.L. H. SIBTHORPE,
C.C.L.

No. 43.

MINUTE OF THE LAND BOARD.

Tender No. 54, of April, 1859—Geo. Wm. Lord.

THE Board find that this tender embraces an area very largely in excess of what is estimated by Mr. Commissioner Huthwaite (in his letter of 9th May, 1860) to be necessary to support 4,000 sheep or 640 head of cattle, and that it embraces, apparently, the entire runs of Bunnawanna and Bunnawanna West, and part or all of the land for which Samuel Smith's tender, No. 48, of April, 1856, has been recommended to be accepted.

Accepted—18
October, 1860.

The Board beg to recommend, with reference to their special report of this date, that the tender be accepted under the amended description enclosed, any land not already granted on tenders, but embraced by this tender, being left open for future tenderers.

W. C. MAYNE.
EDWARD C. MEREWETHER.
A. G. M'LEAN.

No. 44.

AMENDED DESCRIPTION OF GEORGY EAST RUN.

Tender 54, of April, 1859—G. W. Lord.

Amended description.

District—Warrego. Name—Georgy East. Area—Supposed to be about 30 square miles. Commencing on the Darling River, at the south-west corner of Bunnawanna West; and bounded thence by a line bearing north, dividing it from that run, to the Culgoa or Birie River; on the north and west by that river to its confluence with the Darling; and on the south by the Darling River, upwards, to the point of commencement.

No. 45.

MINUTE OF THE LAND BOARD.

Tender No. 48, of April, 1856—S. Smith.

Accepted—30
October, 1860.

THE Board, with reference to their special report of this date, beg to recommend the acceptance of this tender under the amended description enclosed.

W. C. MAYNE.
EDWARD C. MEREWETHER.
A. G. M'LEAN.

*Amended description above referred to.**Tender 48, of April, 1856—Samuel Smith.*

Amended description.

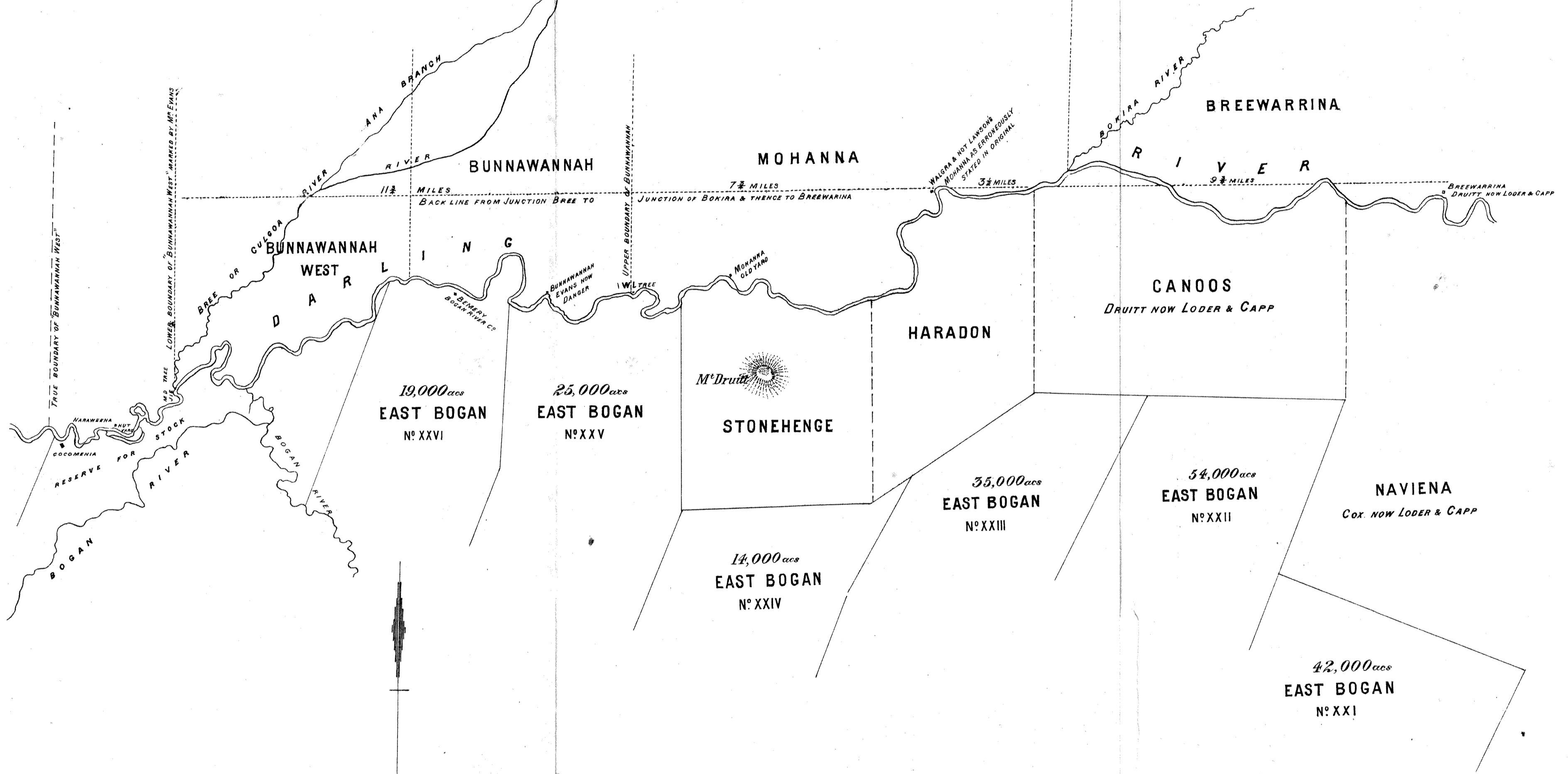
District—Warrego. Name—Georgy. Area—About 20 square miles. Commencing on the Darling River, at the south-east corner of Upper Turee, being a point 3 miles below the junction of the Culgoa or Birie with the Darling; and bounded thence on the west by the eastern boundary of Upper Turee, bearing north 5 miles; on the north by a line bearing easterly, parallel with the Darling River to the Culgoa River, should it meet that river within 5 miles or otherwise for 5 miles; on the east either by the Culgoa River or by a line south to that river; and then by that river to the River Darling; and on the south by the Darling, downwards, to the point of commencement.

A. G. M'LEAN,
A.C.C.L.

5th July, 1860.

[Three Plans.]

APPENDIX A



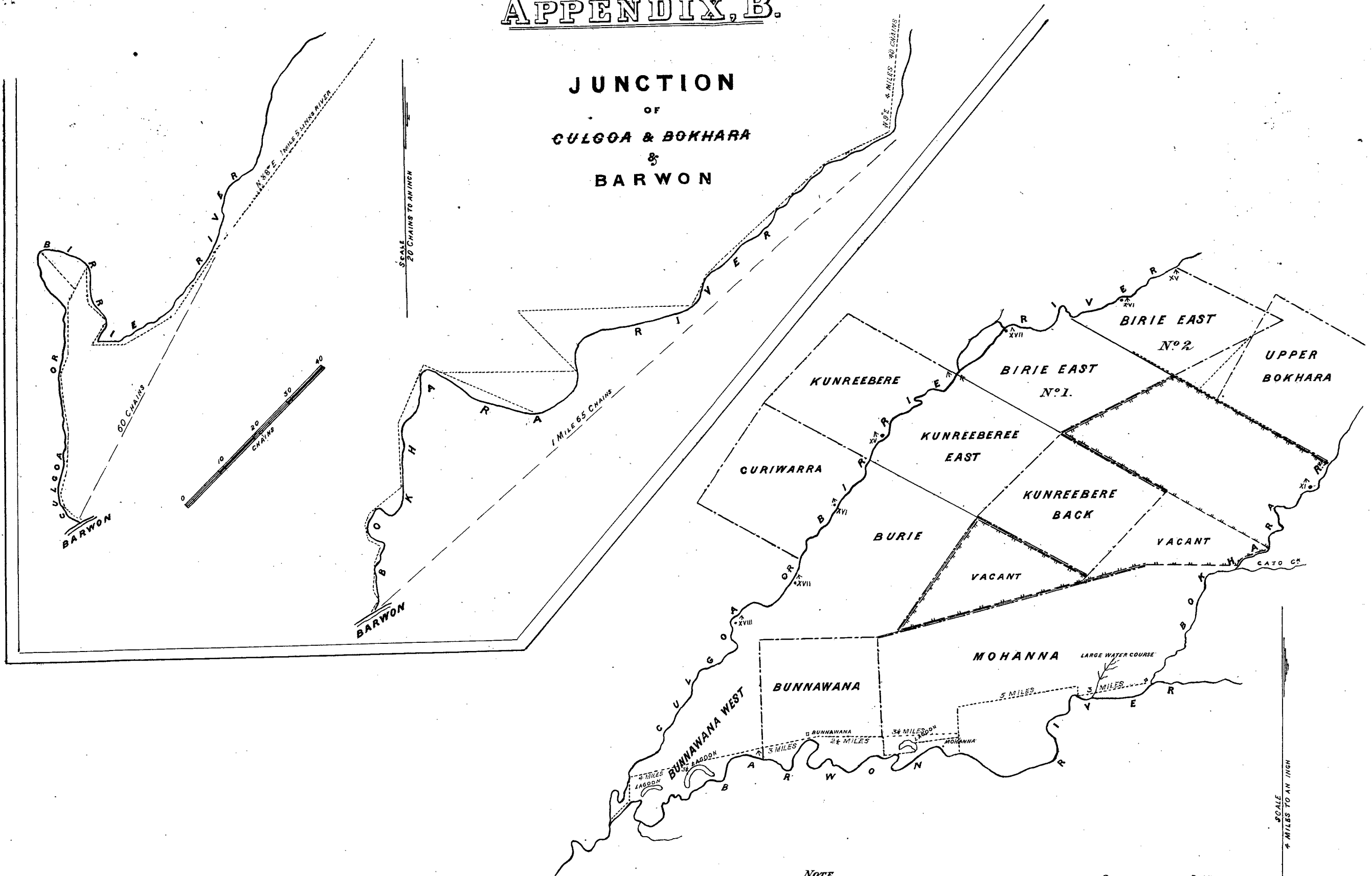
(Sig 167)

NOTE LINES SHOWN THUS..... ARE COLORED RED ON ORIGINAL PLAN

- 9 1/2 MILES BREEWARRINA TO JUNCTION OF BOKIRA.
- 3 1/2 " JUNCTION BOKIRA TO WALGRA.
- 5 1/2 " WALGRA TO MOHANNA OLDYARD.
- 2 1/2 " MOHANNA OLDYARD TO W.L. TREE.
- 2 1/2 " W.L. TREE TO BUNNAWANNAH.
- 12 1/2 " FROM BUNNAWANNAH HUT TO 3 MILES BELOW JUNCTION OF BREE.
- 11 1/2 " FROM W.L. TREE TO JUNCTION OF BREE.

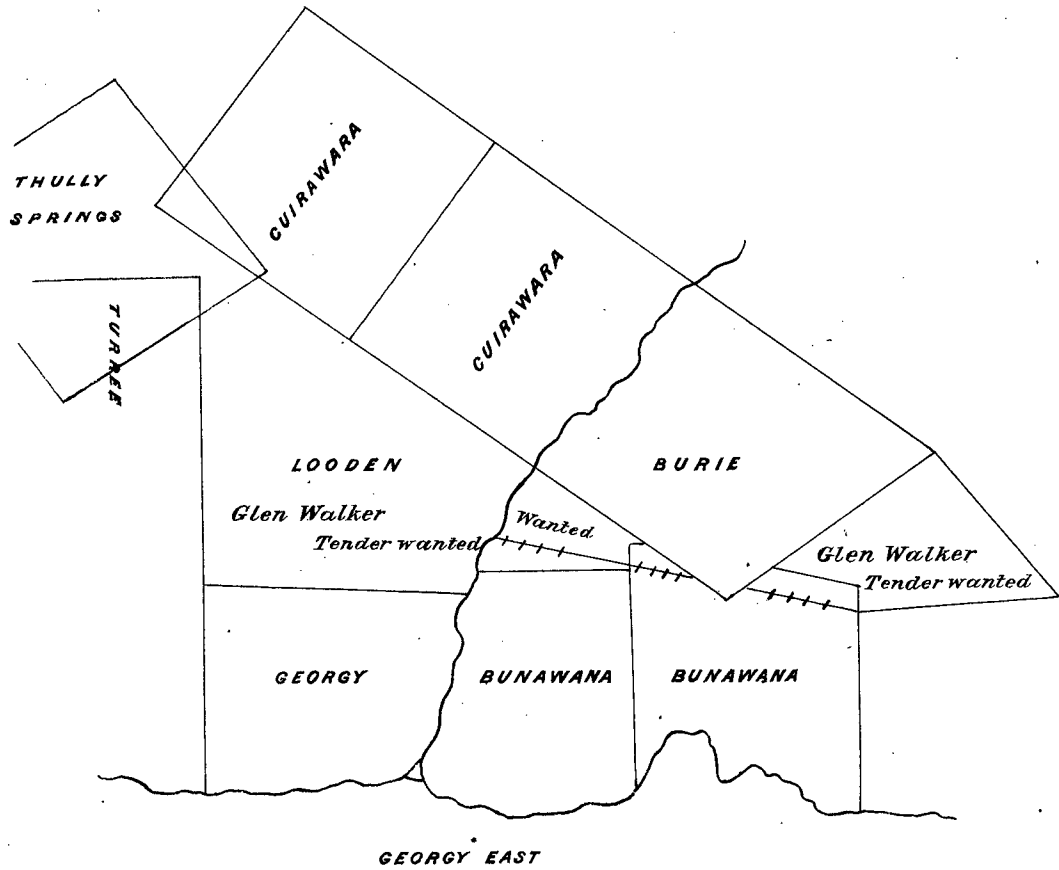
APPENDIX, B.

JUNCTION OF CULGOA & BOKHARA & BARWON



(Sig 167)

APPENDIX, C.



(Sig 167)

1869.

NEW SOUTH WALES.

CROWN LANDS ALIENATION ACT OF 1861.

(ADDITIONAL REGULATIONS UNDER.)

Presented to Parliament, pursuant to Act 25 Vict., No. 1, sec. 30.

Department of Lands,
Sydney, 21 September, 1869.

ADDITIONAL REGULATIONS UNDER THE CROWN LANDS ALIENATION ACT OF 1861

His Excellency the Governor, with the advice of the Executive Council, has been pleased to approve of the following additional Regulations, under the Crown Lands Alienation Act of 1861, having reference to payment of interest and balance upon conditional purchases.

WILLIAM FORSTER.

Payments authorized at Land Agent's office.

1. Any conditional purchaser or his alienee, or the authorized agent of either, may tender, at the office of the Land Agent for the district, at any time during office-hours, upon a Land Office day, any payment of interest or balance upon his conditional purchase, authorized or required by any Regulations under the Crown Lands Alienation Act of 1861, to be made at the office of the Colonial Treasurer; and any amount so tendered shall be received by such Land Agent, and held to the credit of such conditional purchaser or his alienee, as if the same had been tendered at the office of the Colonial Treasurer.

Payment by way of instalment upon conditional purchases.

2. Any conditional purchaser or his alienee, or the authorized agent of either, after expiry of the three years necessary to complete his conditional purchase, may tender, at the office of the Colonial Treasurer, at any time during office-hours, or at the office of the Land Agent for the district, at any time during office-hours, upon a Land Office day, payment by way of instalment of any portion of the balance upon such conditional purchase, at the rate of one shilling, or any multiple of one shilling, per acre, of the whole quantity of land included in such conditional purchase; and the amount so tendered shall be received by the Colonial Treasurer, or Land Agent, as the case may be, and held to the credit of such conditional purchaser, in proportionate reduction of the said balance: Provided, however, that unless such payment be made within the first quarter of the year, no rebate or reduction of interest shall be allowed for that year on account of such instalment.

When to take effect.

3. The above Regulations will take effect from the 1st day of January, 1870.

1869.

NEW SOUTH WALES.

CROWN LANDS.

(DEDICATED TO RELIGIOUS AND PUBLIC PURPOSES.)

Presented to Parliament pursuant to Act 25 Vict., No. 1, sec. 5.

ABSTRACT of Crown Lands authorized to be Dedicated to Religious and Public Purposes, in accordance with the 5th Section of the Act, 25 Victoria, No. 1.

Place.	County.	Allotment.	Section.	Locality.	Area.	To what Purpose Dedicated.
Adaminiby ...	Wallace ...	2, 3, & 9	3	Town of Adaminiby ...	a. r. p. 1 2 0	Roman Catholic Church and Presbytery.
Adelong ...	Wynyard ...	1, 2, & 10	17	do. Adelong ...	1 2 0	Wesleyan Church and Minister's Residence.
Do. Creek... ..	do. ...	Portion	73	On Adelong Creek, Parish of Bangus ...	1 0 0	Public School.
Do. Upper ...	do. ...	Portion	14	At Upper Adelong, Parish of Hindmarsh...	2 0 0	Do.
Araluen ...	St. Vincent ...	6, 7, 8, & 9	5	Village of Araluen ...	2 0 0	Do.
Do. Lower ...	do. ...	Portion	395	At Davis Point, Lower Araluen ...	2 0 0	Do.
Armidale ...	Sandon... ..	2	30	Town of Armidale ...	1 2 32	Do.
Ballina, West ...	Rous ...	1, 2, & 3	20	do. West Ballina ...	1 2 0	Wesleyan Church and Minister's Residence.
Do. ...	do. ...	10	11	do. do. ...	0 2 6	School of Arts.
Ballington ...	Durham ...	.....	.....	Parish of Avenal, at Ballington ...	2 0 0	Public School.
Batlow ...	Wynyard ...	Portion	24	do. Batlow ...	2 0 0	Do.
Bega ...	Auckland ...	Part of 14 & 15	39	Town of Bega ...	0 0 21½	School of Arts.
Bellingen, South	Raleigh ...	.....	.....	Parish of South Bellingen, near the Bel- lingen River.	2 0 0	Public School.
Bingera ...	Murchison ...	1, 2, & 3	27	Town of Bingera ...	1 2 0	Church of England Church and Parsonage.
Boorowa ...	King ...	18 & 19	23	do. Boorowa ...	1 2 2½	Wesleyan Church and Minister's Residence.
Do. ...	do. ...	1, 2, 3, & 4	24	do. do. ...	1 3 20	Public School.
Bourke... ..	Cowper ...	.....	.....	At Bourke, at the junction of an ana branch with the Darling River.	1,300 0 0	Permanent Common.
Bowna ...	Goulburn ...	8, 9, & 10	10	Town of Bowna ...	1 2 0	Church of England Church and Parsonage.
Bowra ...	Raleigh ...	.....	.....	Parish of Bowra, within the Reserve at the junction of Taylor's Arm with the Nam- bucca River.	7 2 0	General Cemetery.
Braidwood ...	St. Vincent ...	34	5	Town of Braidwood ...	0 1 0	Site for Literary Institute.
Brushgrove (Reserve)	Clarence ...	.....	9	Within the Brushgrove Reserve, Woodford Island.	1 3 12	Public School.
Brushgrove ...	do. ...	1, 2, & 3	7	Village of Brushgrove ...	1 2 0	Presbyterian Church and Manse.
Clarensa ...	do. ...	Portion	61	Parish of Clarensa, on the road from Graf- ton to Ulmarra.	2 0 0	Public School.
Collector ...	Argyle ...	Part of	26	Town of Collector ...	2 0 0	Do.
Collendina ...	Hume ...	Portion	35	Parish of Collendina ...	2 0 0	Do.
Cooma ...	Beresford ...	.....	.....	do. Cooma, at Cooma ...	640 0 0	Permanent Common.
Coonabarabran	Gowen ...	.....	.....	Town of Coonabarabran ...	2 0 0	Public School.
Coonamble ...	Leichhardt ...	.....	.....	Parish of Coonamble, at Coonamble ...	1 3 20	General Cemetery.
Do. ...	do. ...	1, 2, & 3	2	Town of Coonamble ...	1 2 0	Church of England Church and Parsonage.
Do. ...	do. ...	12, 13, & 14	8	do. do. ...	1 2 0	Roman Catholic Church and Presbytery.
Cootamundry...	Harden ...	.....	.....	Parish of Cootamundry, at Cootamundry...	160 0 0	Race-course.
Coraki ...	Richmond ...	4, 5, & 6	62	Village of Coraki ...	2 0 19	Public School.
Corowa... ..	Hume ...	.....	.....	Portion of Reserve No. 46 in the Parish of Corowa, Quat Quatta Run.	270 0 0	Public Watering-place and Camping-ground.
Crookwell ...	Georgiana ...	.....	.....	Parish of Kiama, near Crookwell ...	7 2 0	General Cemetery.
Cunningham or Cru- dine Creek.	Roxburgh ...	Portion	25	do. Crudine, at Cunningham Creek...	5 0 0	Public School.
Cunninggar ...	Harden... ..	5	22	Village of Cunninggar... ..	21 2 0	Do.
Dalton ...	King ...	6	9	Town of Dalton ...	1 2 0	Do.
Dandalingalong	Dudley... ..	.....	.....	Parish of Kalateene, Yessabah Brook ...	2 0 0	Do.
Deepwater ...	Gough ...	1, 2, and 8	3	Village of Deepwater ...	1 2 0	Wesleyan Church and Minister's Residence.
Drake ...	Drake ...	4, 5, & 6	12	Town of Drake... ..	1 2 0	Do.
Dungowan ...	Parry ...	Portion	56	Parish of Dungowan ...	2 0 0	Public School.
Dubbo ...	Lincoln... ..	Portion	151	Parish of Dubbo, near Dubbo ...	5 0 0	Site for Hospital.
Do. ...	do. ...	4	30	Town of Dubbo ...	0 1 0	Mechanics' Institute.
Elrington ...	St. Vincent ...	1	17	Town of Elrington ...	0 1 18	Site for a Union Church.
Emu Plains ...	Cook ...	Portion	32	Parish of Strathdon, Emu Plains ...	43 3 30	Public Recreation.
Eurundury ...	Phillip ...	Portion	85	Parish of Eurundury, at Eurundury ...	10 0 0	Public School.
Euston ...	Talla ...	.....	.....	At Euston, near the sand hill known as Preak.	7 2 0	General Cemetery.
Forbes ...	Ashburnham ...	1 & 2	30	Parish of Forbes, Town of Forbes ...	1 0 0	Wesleyan Church.
Do. ...	do. ...	4	10	Do. do. ...	1 0 0	Do. Minister's Residence.

Place.	County.	Allotment.	Section.	Locality.	Area.	To what Purpose Dedicated.
					a. r. p.	
Germanton	Goulburn	1	7	Village of Germanton	1 0 0	Church of England Church.
Do.	do.	1	8	Do.	0 2 0	Do. Parsonage.
Goulburn	Argyle	Portion	177	Parish of Goulburn, within the Goulburn Town Reserve.	20 0 0	Do. Episcopal Residence.
Grubbenbun Creek	Bathurst	Portions	66 & 66a	Parish of Lucan, near Grubbenbun Creek. do. do.	1 2 0	Presbyterian Church and Manse.
Do.	do.	Portion	171	do. do.	4 0 0	Public School.
*Grafton, South	Clarence ... ..	.....	.....	Parish of Southampton, at South Grafton	9 1 20	General Cemetery.
Grafton	do.	3, 5, and 6	79	Town of Grafton, Parish of Great Marlow	1 3 8	Presbyterian Church and Manse, in connection with the Synod of Eastern Australia.
Hargraves	Wellington ... ..	.....	.....	At Hargraves, at the S.E. of Town Reserve	640 0 0	Permanent Common.
Hexham	Northumberland.	Portion	56	Parish of Hexham, at Hexham	1 0 0	Wesleyan Church.
Hillend	Wellington	5	8	Village of Hillend	0 1 28	Church of England Church.
Do.	do.	3 and 4	7	do. do.	1 0 0	Wesleyan Church and Minister's Residence.
Do.	do.	2, 3, and 4	8	do. do.	1 1 4	Public School.
Howlong	Hume ... ..	.....	.....	Between the Murray River and Town of Howlong.	500 0 0	Permanent Common.
Huon	Goulburn	Portions	125 and 126	Parish of Huon	1 2 0	Roman Catholic Church and Presbytery.
Ilford (or Keen's Swamp).	Roxburgh	Portions	63 and 64	do. Warrangunia, at Ilford	1 2 0	Church of England Church and Parsonage.
Inverell	Gough	9 and 10	20	Town of Inverell	1 2 0	Do.
Jembaicumbene	St. Vincent	1	13	Parish of Boyle, at Jembaicumbene	2 0 0	Public School.
Jugiong	Harden	7, 8, and 9	2	Town of Jugiong	1 2 0	Wesleyan Church and Minister's Residence.
Kangaroo Ground, on road from Broughton Creek.	Camden ... ..	.....	.....	Parish of Cambewarra	4 2 3½	General Cemetery.
Lake George	Argyle and Murray. ... ..	.....	.....	Parishes of Collector and Gundaroo, between Lake George and Murray's Lagoon.	110 2 3	Preservation of Water Supply.
Lambton	Northumberland.	Portions	317 and 318	Parish of Newcastle, near Lambton	1 2 0	Church of England Church and Parsonage.
Lismore	Rous	17 and 18	11	do. Lismore, Town of Lismore	1 2 0	Wesleyan Church and Minister's Residence.
Do.	do.	Part of	6	do. do. do.	2 0 0	Public School.
Marchdale	Wellington	Portion	64	On the road from Orange to Stony Creek and Wellington.	2 0 0	do. and Playground.
Marlee	Macquarie ... ..	.....	.....	Near Marlee, and near the eastern bank of Dingo Creek.	2 0 0	Public School.
Maryland	Buller	9 and 10	5	Village of Maryland	1 2 0	Wesleyan Church and Minister's Residence.
Menindie	Menindie	Section	13	Parish of Perry, Town of Menindie	1 3 17	Public School.
Merrygoen	Lincoln ... ..	.....	.....	On the left bank of Merrygoen Creek	9 0 0	Boarding and Industrial School.
Middle Creek	Brisbane	Portion	28	Parish of Melbourne, on Middle Creek	2 0 0	Public School.
Do.	Argyle	Portion	125	do. Pegar, at do.	2 0 0	Do.
Mogo	St. Vincent	Portions	54 and 55	Parish of Bateman, at Mogo... ..	1 2 0	Church of England Church and Parsonage.
Moree	Courallie ... ..	.....	.....	do. Moree, near Moree... ..	7 2 0	General Cemetery.
Do.	do.	1 and 11	52	Town of Moree... ..	1 2 0	Wesleyan Church and Minister's Residence.
Mudgee	Wellington ... ..	.....	.....	At Mudgee, at the intersection of the southern side of Short-street with the western side of Perry-street.	1 0 0	Site for Water-works.
Mulbring	Northumberland.	Portion	86	Parish of Mulbring	2 0 0	Public School.
Murrumboola (near)	Harden ... ..	.....	.....	do. Murrumboola near Murrumboola... ..	7 2 0	General Cemetery.
Mitchell's Island	Macquarie ... ..	.....	.....	On Mitchell's Island, Scott's Creek... ..	2 0 0	Public School.
Musclebrook	Durham ... ..	.....	.....	At Musclebrook, on the Hunter River	2 1 0	Public Recreation.
Narrabri	Nandewar	Part of	11	Town of Narrabri	2 0 0	Public School.
Narrandera	Cooper	1, 9, and 10	5	Town of Narrandera	1 2 0	Wesleyan Church and Minister's Residence.
Nerrigundah	Dampier ... ..	.....	.....	Parish of Cadgee, near Nerrigundah	3 3 0	General Cemetery.
Do.	do. ... ..	.....	.....	do. Nerrigundah, on the Tuross River	1 2 0	Roman Catholic Church and Presbytery.
Newcastle (near)	Northumberland.	Portions	6 and 7	do. Newcastle, near Newcastle	1 2 0	Church of England Church and Parsonage.
Nowendoc	Hawes ... ..	.....	.....	do. Nowendoc, near Nowendoc	7 2 0	General Cemetery.
Ollera	Hardinge	5, 6, 7, and 8	2	Village of Ollera	2 0 12	Public School.
Parkesbourne	Argyle	Portion	85	Parish of Bredalbane, at Parkesbourne	2 0 0	Do.
Farramatta	Cumberland ... ..	.....	.....	do. Field of Mars, on Hunt's Creek, at N.E. corner of J. Seville's 50 acres.	45 0 0	Reserve for Water-supply.
Queanbeyan	Murray... ..	.....	.....	Town of Queanbeyan, at the intersection of N.E. side of Trincullo-place, with S.E. side of Morrisett-street.	1 0 32	Public School.
Rainbow Reach	Dudley ... ..	.....	.....	Parish of Clybucca, at Rainbow Reach	2 0 0	Do.
Rocky Mouth	Richmond	Portion	51	Near the junction of Rocky Mouth Creek with the Richmond River.	1 0 0	Presbyterian Church.
Robertson	Camden	3, 4, and 5	15	Village of Robertson	1 2 0	Wesleyan Church and Minister's Residence.
Rouchel Brook	Durham ... ..	.....	.....	Parish of Rouchel, near Rouchel Brook	7 2 0	General Cemetery.
Rydal	Roxburgh	15 and 16	24	do. Rydal, at Rydal	1 2 0	Church of England Church and Parsonage.
Do.	Cook ... ..	.....	.....	do. Lidsdale, at Rydal	2 2 0	Public School.
Do.	do. ... ..	.....	.....	do. Thornshope, at Rydal	1 2 0	Presbyterian Church and Manse.
Smith's Flat	Clarence ... ..	.....	.....	do. Copmanhurst, at Smith's Flats... ..	7 2 0	General Cemetery.
Southgate	do. ... ..	.....	.....	do. Southgate, Clarence River	1 2 0	Wesleyan Church and Minister's Residence.
St. Albans	Northumberland.	1 and 2	1	At St. Albans	1 0 0	Public School.
Stony Creek	Monteagle ... ..	.....	.....	Parish of Young, at Stony Creek	1 2 0	Wesleyan Church and Minister's Residence.
†St. Leonards	Cumberland	Sections	14, 19, & 20	At St. Leonards	28 0 0	Public Recreation.
Do.	Do. ... ..	.....	.....	At St. Leonards, at the intersection of the N. building line of Mount-street with the eastern building line of William-street.	0 0 23½	Site for Municipal Council Chambers.
Susan Island	Clarence ... ..	.....	.....	Near Grafton, being the island on the Clarence River known as Susan Island.	149 0 0	Public Recreation.
Swan Creek	Do.	Portion	116	Parish of Ulmarra, on Swan Creek	1 2 0	do. School.
Sydney	Cumberland ... ..	.....	.....	At Grosse Farm, on the Newtown Road	25ac. (about)	do. Recreation.
Tenterfield	Clive	1, 2, and 10	5	Town of Tenterfield	1 2 0	Wesleyan Church and Minister's Residence.
Thurgona	Goulburn	Portions	75 and 76	Parish of Thurgona, on Thurgona or Eight-mile Creek.	1 2 0	Church of England Church and Parsonage.
Tuckurimba	Rous ... ..	.....	.....	Parish of Tuckurimba, near the Richmond River.	1 2 0	Presbyterian Church and Manse.
Ulmarra	Clarence ... ..	.....	.....	Parish of Ulmarra, near the Clarence River.	1 2 0	Wesleyan Church and Minister's Residence.
Do.	do.	Portion	117	Do. do. on the Coldstream River	2 0 0	Public School.
Uringalla	Argyle ... ..	.....	.....	Do. Uringalla	2 0 0	Do.
Vittoria	Bathurst ... ..	.....	.....	Parish of Vittoria, at Vittoria	1 2 0	Roman Catholic Church and Presbytery.

* Inclusive of the 5 acres submitted to Parliament and published in Supplement to *Government Gazette* of 15 July, 1863.

+ This land has already been dedicated; but section 14 was improperly described as section 4 in the Abstract submitted to Parliament and published in the *Government Gazette* of 12th March last.

Place.	County.	Allotment.	Section.	Locality.	Area.	To what Purpose Dedicated.
Wallabadah	Buckland	1 and 2	29	Parish of Wallabadah, Village of Wallabadah.	a. r. p. 1 2 0	Wesleyan Church and Minister's Residence.
Do.	do.	16, 17, & 18	28	Do. do.	1 2 0	Roman Catholic Church and Presbytery.
Wambat	Harden	Portion	56	Do. Wilkie	1 3 6	Public School.
Warburton	Wellington	4, 5, and 6	9	Do. Biragambil, Village of Warburton.	1 2 0	Roman Catholic Church and Presbytery.
Warialda	Burnett	1, 2, and 3	51	Town of Warialda	1 2 0	Church of England Church and Parsonage.
Wattle Flat	Roxburgh	Portion	71	Parish of Wyagdon, at Wattle Flat	6 0 0	Cricket Ground.
Wentworth	Wentworth ... ..	.....	.....	Town of Wentworth	2 0 0	Site for Hospital.
Windeyer	Wellington ... ..	.....	.....	Parish of Windeyer, at Windeyer	160 0 0	Permanent Common.
Wolumla Reserve	Auckland	Portion	129	Within the Wolumla Reserve	2 0 0	Public School.
Wondalga	Wynyard	5, 6, and 7	12	Parish of Wondalga, Village of Wondalga..	1 2 0	Wesleyan Church and Minister's Residence.
Yass	King ... ..	.....	.....	Parishes of Yass and Derringullen, on the Yass River.	680 0 0	Permanent Common.
Do.	Murray ... ..	.....	.....	Parish of Yass, near Yass	1 0 0	An addition to Roman Catholic Burial Ground.
Yetman	Arrawatta ... ..	.....	.....	Do. Yetman, at Yetman	7 2 0	General Cemetery.
Young	Monteagle	12	33	Town of Young	1 0 30	Site for Hospital.
Do.	do.	Portion	541	Parish of Young, on M'Henry's Creek	240 0 0	Race-course.
Do.	do.	8 and 9	33	Town of Young	1 2 0	Presbyterian Church and Manse.
Hyde's Falls	Raleigh	2	3	Parish of South Bellingen, at Hyde's Falls.	1 0 13 $\frac{3}{4}$	Wesleyan Church.
Do.	do.	2	2	Do. do.	0 1 26 $\frac{1}{2}$	Do. Minister's Residence.
Do.	do.	3	2	Do. do.	0 1 30	Public School.
Do.	do.	1	3	Do. do.	0 3 24	Presbyterian Church.
Do.	do.	1	2	Do. do.	0 2 16	Do. Manse.
Longreach	Argyle ... ..	.....	.....	Parish of Billyrambija	2 0 0	Public School.

1869.

NEW SOUTH WALES.

CROWN LANDS.

(RESERVED AS SITES FOR CITIES, TOWNS, AND VILLAGES.)

Presented to Parliament, pursuant to Act 25 Vict. No. 1, sec. 4.

ABSTRACT of all sites for Cities, Towns, and Villages, declared under the 4th Section of the Act 25 Victoria No. 1, during the period from 16th March to 1st October, 1869.

City, Town, or Village.	Area for City, Town, or Village.	Area for Suburbs.	Locality.	Government Gazette in which published.
Warburton	411 acres ...	.....	County of Wellington, Parish of Birigambil.	1869. 23 March, folio 760.
Sancrox	97½ " ...	390 acres ...	County of Macquarie, Parish of Macquarie, Hastings River.	25 " " 804.
Coonabarabran	306 " ...	634½ " ...	County of Gowen, at Coonabarabran, on the Castlereagh River.	16 April, " 1061.
Omigal	83 " ...	34 " ...	County of Wellington, Parish of Ironbarks, at the crossing of the road from Orange to Wellington.	16 " " 1061.
Saumarez	310 " ...	225 " ...	County of Sandon, Parishes of Butler and Arding, at the crossing of the Great North Road over Saumarez Creek.	15 June, " 1561.
Woomargama	52 " ...	104 " ...	County of Goulburn, Parish of Woomargama, on the Main Southern Road, at Woomargama or Mountain Creek.	15 " " 1562.
Toogong	200 " ...	520 " ...	County of Ashburnham, Boree Creek, at Toogong.	20 July, " 1847.
Apsley	334 " ...	309 " ...	County of Bathurst, Parish of Apsley, at Campbell's River.	20 " " 1848.
Jindera	126 " ...	34½ " ...	County of Goulburn, Parish of Jindera, at Jindera.	23 " " 1871.
Gundabloui	383½ " ...	326½ " ...	County of Finch, at Gundabloui, Moonie River.	10 August, " 1988.
Mogil Mogul	223 " ...	195 " ...	County of Finch, at Mogil Mogul, Barwon River.	10 " " 1988.
Uralla	340 " ...	310 " ...	County of Sandon, at Uralla	17 Sept., " 2331.
Cargo	261 " ...	378 " ...	County of Ashburnham, at the confluence of Warrie and Bowan Creeks.	21 " " 2371.
Kinchela	16 " ...	44 " ...	County of Macquarie, at Kinchela, on the Macleay River.	1 October, " 2524.

1869.

NEW SOUTH WALES.

CROWN LANDS.

(RESERVED AS SITES FOR CITIES, TOWNS, AND VILLAGES.)

Presented to Parliament, pursuant to Act 25 Vict. No. 1, sec. 4.

ABSTRACT of all Sites for Cities, Towns, and Villages, declared under the 4th section of the Act 25 Victoria, No. 1, during the period from 1st October to 1st November, 1869.

City, Town, or Village.	Area for City, Town, or Village.	Area for Suburbs.	Locality.	Government Gazette in which published.
Kinchela	16 acres ...	44 acres ...	County of Macquarie, at Kinchela, on the Macleay River.	1 October, folio 2524.
Dunedoo	212 „ ...	194 „ ...	Parish of Bolaro, Talbragar River	12 „ „ 2612.

1869.

NEW SOUTH WALES.

CROWN LANDS.

(RESERVED FROM SALE AS SITES FOR FUTURE VILLAGES.)

Presented to Parliament, pursuant to Act 25 Vict. No. 1, sec. 4.

ABSTRACT of Crown Lands reserved from Sale until Surveyed, as the sites for future Villages, in accordance with the 4th section of the Act 25 Victoria No. 1, during the period from 16th March to 1st October, 1869.

No.	Locality.	Area.	<i>Government Gazette</i> in which the description is published.
—	County of Northumberland, Parish of Corrumbung, on Dorah Creek ...	360 acres.....	23 March, 1869, fol. 763.
421	County of Gipps, Yeo Yeo Creek	2,219 „	30 July, „ „ 1926.

1869.

NEW SOUTH WALES.

CROWN LANDS.

(RESERVED FROM SALE UNTIL SURVEYED AS SITES FOR FUTURE VILLAGES.)

Presented to Parliament, pursuant to Act 25 Vict. No. 1, sec. 4.

ABSTRACT of Crown Lands reserved from Sale until surveyed, as the Sites for future Villages, in accordance with the 4th section of the Act 25 Victoria No. 1, during the period from 1st October to 1st November, 1869.

No.	Locality.	Area.	<i>Government Gazette</i> in which the description is published.
480	County of Nicholson, Lachlan River, at Redbank	acres. 306	1 October, folio 2523.

1869.

NEW SOUTH WALES.

CROWN LANDS.

(RESERVED FROM SALE UNTIL SURVEYED, FOR THE PRESERVATION OF WATER SUPPLY OR OTHER PUBLIC PURPOSES.)

Presented to Parliament, pursuant to Act 25 Vict. No. 1, sec. 4.

ABSTRACT of Crown Lands reserved from Sale until Surveyed, for the preservation of Water Supply or other Public Purposes, in accordance with the 4th Section of the Act 25 Victoria No. 1, during the period from 16 March to 1 October, 1869.

No.	Locality.	Area.	Government Gazette in which the description is published.
138	County of Richmond, on Myrtle Creek, at the crossing of the road from Grafton and Lawrence to Tenterfield and Casino	520 acres ...	16 Mar., 1869, fol. 678
412	County of Harden, Parish of Bobbara	10 " ...	" " " 710
71	County of Beresford, Parish of Micalago. Portion 26	2 " ...	19 " " " 762
605	County of Hume, Parish of Castlestead, at the Main Cattle Camp.....	80 " ...	" " " "
269	County of Lincoln, Parish of Warrie, on Plum-pudding Creek.....	115 " ...	23 " " " "
270	County of Lincoln, Parish of Warrie, on Plum-pudding Creek.....	80 " ...	" " " "
327	County of Gordon, Parish of Dubbo, on the Macquarie River	88 " ...	" " " "
328	County of Gordon, Parish of Whylandra, on the Macquarie River	200 " ...	" " " "
329	County of Gordon, Parish of Whylandra, near Butler's Falls	20 " ...	" " " "
330	County of Narromine, Parish of Burrabadine, at the junction of Sandy Creek with the Macquarie River	167 " ...	" " " " 763
7	County of Bathurst, Parish of Colville, at Corse's Lagoon	22 " ...	10 " " " 805
33	County of Inglis, at the Cockburn River and Moore's Creek	43,100 " (about)	25 " " " "
137	County of Rous, Parish of Murwillumbah, on the Tweed River	161 " ...	" " " "
608	County of Goulburn, Parish of Billabong, on Little Billabong Creek ...	240 " ...	" " " "
606	County of Goulburn, Parish of Gerogery, about 110 chains westerly from A. A. Huon's 800 acres	40 " ...	" " " "
607	County of Goulburn, Parish of Gerogery, on the Albury and Wallah Wallah Road	40 " ...	" " " " 828
72	County of Wallace, Parish of Murroo, on Dry Plains Run, at Back Creek	13 ac. 5 p.	31 " " " "
73	County of Wallace, Parish of Adaminiby, on Namungo or Frying-pan Creek. Portion 5	117 acres ...	" " " "
282	At Gunywarildi, at Scrubby Gully Spring, 4 miles from Head Station	640 " ...	9 April, 1869, fol. 976
74	County of Dampier, Parish of Murrabraine	33 " ...	" " " "
331	County of Narromine, at Minore, Macquarie River	112½ " ...	" " " "
413	County of Burke, Parish of Berimbed, at Bundigerie Creek	100 " ...	" " " " 1060
284	(Amended) County of Wynyard, Parish of Calafat, at Bunna-buck-buck	280 " (about)	16 " " " "
75	County of Wellesley, Parish of Gecar	169 " ...	" " " "
609	County of Wynyard, Parish of South Wagga Wagga.....	135 " ...	" " " "
332	County of Ashburnham, Brymedura and Manildra Runs	740 acres ...	20 " " " 1090
139	County of Rous, Parish of Coraki, Richmond River	76 " ...	" " " "
5	County of Bligh, Parish of Duridgere	214 " ...	" " " "
6	County of Bligh, Parishes of Curryall and Bobordeen, on Currycurryall Creek.....	598 " ...	" " " "
344	County of Nandewar, Parish of Narrabri, on Narrabri Creek and Namoi River.....	740 " ...	" " " "
344	County of White, Parish of Wee Waa, Namoi River.....	640 " ...	27 " " " 1165
283	County of Burnett, on Hughey's Arm, Croppa Creek, 3½ miles above its junction with Croppa Creek	162 " ...	1 June, 1869, fol. 1418
345	County of Inglis, near Attunga, on Attunga Creek	80 " ...	" " " "
6	County of Durham, on Massy's Creek	85½ " ...	" " " " 1419
9	Counties of Argyle and Camden, on Barber's Creek, near the viaduct of the Great Southern Railway	18½ " ...	" " " "
15	County of Camden, on Barber's Creek, near the viaduct of the Great Southern Railway	110 a. 2 r. ...	" " " " 1557
10	Counties of Argyle and Murray, Parishes of Collector and Gundaroo ...	100 acres ...	15 " " " "
333	County of Narromine, at the Gundong overflow	102 " ...	" " " "
76	County of Wallace, Parish of Myack, at Kiar Lake	10 a. 1 r. ...	" " " "
77	County of Dampier, Parish of Wondallon, Sandy Flat	6 a. 1 r. 23 p.	" " " "
78	County of Dampier, Parish of Tanga.....	28 acres ...	" " " "
79	County of Dampier, Parish of Murrabraine		" " " "

No.	Locality.	Area.	Government Gazette in which the description is published.
80	County of Auckland, Parish of Bemboka	37½ acres...	15 June, 1869, fol. 1557.
415	County of Clarendon, Parish of Kimo	1 "	" " "
414	County of Clarendon, Parish of Nangus	1 a. 3 r. ...	" " "
610	County of Goulburn, Parish of Cookardina	1 acre	" " "
612	County of Goulburn, Parish of Talmalmo, at Abraham's Bosom	90 acres	" " 1558
611	County of Goulburn, Parish of Cumbaroona	"	" " "
78	County of Cowper, at West Bourke, Darling River	800 acres	" " "
32	County of Tara, Salt Creek, Murray River	4 sq. miles	" " "
613	County of Mitchell, Parish of Mundowry, on the road from Wagga Wagga to Urana	160 acres	" " "
614	County of Mitchell, at the crossing of the road from Wagga Wagga to Urana, over Bullenbong Creek	400 "	" " "
615	County of Urana, at Irvine's Dam, on Brooking Creek	240 "	" " "
616	County of Urana, on the road from Brooking to Urana	240 "	" " "
617	County of Urana, on the road from Brooking to Urana	320 "	" " "
78	Counties of Baradine, Finch, and Leichhardt, at the Inn, on J. Barr's c.p., Barwon River	40 "	" " "
271	County of Lincoln, Parish of Terramungamine	44 "	15 June, 1869, fol. 1562
284	County of Courallie, at Gurrygedah Old Station	60 "	18 " " "
353	County of Inglis, Peel River, North Meoredebrie Run	870 "	6 July, 1869, fol. 1700
6	County of Phillip, Parish of Bayly, Cooyal Creek	28½ "	" " "
81	County of Wellesley, Parish of Troy	40 "	" " "
82	County of Dampier, at Dry River	17 a. 2 r. ...	" " "
83	County of Dampier, at Dry River	1 a. 3 r. 25 p. ...	" " "
84	County of Dampier, Parish of Bergalia	2 a. 3 r. 20 p. ...	" " "
7	County of Durham, Parish of Doon	66 acres	13 " " 1757
643	County of Goulburn, Parish of Germanton. Portion 70	79 a. 3 r. ...	" " "
355	County of Pottinger, Parishes of Walla Walla and Gullindaddy, Cox's Creek	215 acres	16 " " 1805
354	County of Buckland, Coey Polly, at Quirindi	180 "	20 " " 1847
644	County of Goulburn, Parish of Mitchell, Woomargama Run	112 "	" " " 1848
645	"	44 a. 1 r. ...	" " " 1849
646	County of Goulburn, Parish of Woomargama, on Main Southern Road	22 acres	" " "
223	County of Hardinge, at Bundarra, Bundarra or Gwydir River	738 "	" " "
144	County of Rous, Parish of East Gundurimbah	40 "	23 " " 1871
7	County of Northumberland, Parish of Warkworth, on Doctor's Creek ...	5 "	" " "
360	County of Pottinger, Parish of Clarke, at the Little Plain near the 15-mile tree	240 "	30 " " 1926
11	Counties of Argyle and St. Vincent, Parishes of Jerralong and Jenick- norra, at Oallen Ford	576 "	" " "
16	County of Camden, Parishes of Yarrowa and Wallaya, Kangaroo River	749 "	" " "
272	County of Gowen, Parish of Coonabarabran	10 "	" " 1927
8	County of Northumberland, on Oumbah Creek, near Tuggerah	8 "	" " "
338	County of Gordon, Wambanglang Run, Tanner's Springs	40 "	" " "
85	County of Wellesley, Parishes of Troy and Wellesmore	300 "	" " "
85	County of Auckland, Parish of Bemboka, on Sandy Creek	5 a. 2 r. ...	10 Aug., 1869, fol. 1987
86	County of Wallace, Parish of Caddigat	103 acres	" " "
422	County of Dowling, Parish of Uabba, on the Lachlan River	4 sq. m. ...	" " "
124	County of Clarence, Parish of Ulmarra, at Avenue Point	320 acres	17 " " 2064
356	Melville Plains Run, County of Pottinger, Parish of Cooyal	500 "	31 " " 2196
357	Melville Plains Run, County of Pottinger, Parish of Cooyal, on Turra- bill's or Cox's Creek	520 "	" " "
358	Melville Plains Run, County of Pottinger, Parish of Cooyal, on Cox's Creek	560 "	" " "
359	Melville Plains Run, County of Pottinger, Parish of Denison, Cox's Creek	408 "	" " "
2	County of King, Parish of Grabben Gullen, on the new line of road from Wheeo to Goulburn, Portion 125 and 126	87 a. 2 r. ...	17 Sept., 1869, fol. 2329
66	County of Killara, at the Mulyec Spring, Far West Run	640 acres	" " "
67	County of Killara, on South Tungo Run, Yatabunnia Creek	640 "	" " "
3	County of Cumberland, Parish of Southend, near North Illawarra	"	" " "
17	County of Camden, Parish of Yarrowa	7 acres	" " "
339	County of Ashburnham, at Currajong	14 "	" " "
18	County of Camden, Parish of Werriberri, on the road from Burragorang to Warragamba	40 "	21 " " 2372
423	County of Gipps, on Englo Creek	108 "	" " "
424	County of Harden, Parish of Ubindal, at Apps' Lagoon	131 "	" " "
425	County of Harden, Parish of Cootamundry, Hurley's Springs, Coota- mundry Creek	6 "	" " "
427	County of Harden, Parish of Galong	70 "	" " "
87	County of Wellesley, Parish of Burnima, Bombala River	175 "	" " "
646	County of Hume, Parish of Walla Walla	92 a. 1 r. ...	" " "
647	County of Goulburn, Parish of Narra Narrawa, on Spring Creek	80 acres	" " 2373
4	County of King, Parishes of Jerrawa, Manton, and Mundoonen	180 "	" " "
3	County of King, Parish of Cutlarin, on the Main Southern Road	106 "	" " "
7	County of Bligh, Portion I-VI, on the Talbragar River	39 "	" " "
644	County of Hume, Parish of Morven, on Billabong Creek	456 "	" " "
645	County of Hume, Parish of Thugga, Billabong Creek	1,440 "	" " "
428	County of Cooper, Barralong Run, Barralong Homestead	140 "	1 Oct., 1869, fol. 2523
429	County of Cooper, on the road from Binya to Wagga Wagga	320 "	" " "
430	County of Nicholson, Lachlan River	306 "	" " 2523
648	County of Goulburn, Parish of Little Billabong, at Sawpit Gully	20 "	" " "
649	County of Wynyard, Parish of Gadara, on the road from Adelong to Tumut	40 "	" " "
650	County of Goulburn, Parish of Cookardina, Back Creek	10 "	" " "
651	County of Selwyn, Parish of Welaregang, Murray River	102 "	" " "

1869.

NEW SOUTH WALES.

CROWN LANDS.

(RESERVED FROM SALE UNTIL SURVEYED FOR THE PRESERVATION OF WATER SUPPLY OR OTHER PUBLIC PURPOSES.)

Presented to Parliament, pursuant to Act 25 Vict. No. 1, sec. 4.

ABSTRACT of Crown Lands reserved from Sale until Surveyed for the preservation of Water Supply or other Public Purposes, in accordance with the 4th section of the Act 25 Victoria, No. 1, during the period from 1st October to 1st November, 1869.

No.	Locality.	Area.	Government Gazette in which the description is published.
428	County of Cooper, Merool Creek, Barralong Run, Barralong Homestead	140 acres ...	1 Oct., 1869, fol. 2523
429	County of Cooper, on the road from Binya to Wagga Wagga and Narrandera	320 " ...	" "
648	County of Goulburn, Parish of Little Billabong, at the Sawpit Gully, Main Southern Road	20 " ...	" "
649	County of Wynyard, on the road from Adelong to Tumut	40 " ...	" "
650	County of Goulburn, in the Parish of Cookardinia	10 " ...	" "
651	County of Selwyn, Parish of Welaregang, on the Murray River	102 " ...	" "
146	County of Clarence, at the Stony Waterhole, Southgate Run	240 " ...	" 2550
147	At the Saltwater Camp, on the Southgate Run	210 " ...	" "
33	At Lowe Lowe, on the Murray River, on the Moorna Run	880 " ...	" "
34	On the Murray River, 1 mile east of Gope's conditional purchase, Neilpo Run	800 " ...	" "
35	At Mullolgana Point, Darling River, Police Run	1,600 " ...	" "
36	On the Darling River, on the Police and Yartla Runs	2,000 " ...	" "
37	At Windimatia, on the Willotia Run, Darling River	2,560 " ...	" "
291	Big Leather Water-hole, on the Big Leather Run	640 " ...	" "
292	At the Long Water-hole, on the Bingerang Run	320 " ...	" "
293	At Neargo, Burrandoon Run	640 " ...	" "
294	At Big Leather Waterhole, South Cagildool Run	640 " ...	" "
295	Cowmerton Water Reserve, on the Cowmerton Run	320 " ...	" "
296	At the Millie Crossing-place, County of Courallie, Gurley and Bumble Runs	320 " ...	" "
297	At Boomuckledie, on the Bumble and Gurley Runs	640 " ...	" "
298	At Windondilly, Gurley Creek, portion of Gurley and Bumble Runs ..	320 " ...	" 2551
299	At the Big Waterhole, on the Gurley and Bumble Runs	320 " ...	" "
		(about)	
300	At Bumble, on Gurley Creek, portion of Bumble and Gurley Runs	300 " ...	" "
301	At the Springs, on Duck-hole Creek, Lindsay Run	640 " ...	" "
302	At Sir Thomas Mitchell's Crossing-place, Moomin Creek, Minna Minnane Run	640 " ...	" "
303	At Walbundunga, on the Walbundunga Run	640 " ...	" "
431	On the Bland Creek, near Gibson's old hut, portion of East Bland Run ..	640 " ...	" "
432	Native Dog Creek Run, adjoining J. B. Woods' 320 acres	640 " ...	" "
433	On the Bundaburra Creek, portion of Wangajong Run	480 " ...	" "
361	On the Namoi River, $\frac{1}{4}$ mile below the dairy on Bull Run	480 " ...	" "
362	On the Namoi River, near Quinn's 665 acres, Glen Quinn Run	320 " ...	" "
363	Namoi River, near the Wash-pool, Glen Quinn Run	320 " ...	" "
364	Cumbadoon, Namoi River, on the Goangra Run	320 " ...	" "
365	Namoi River, at the boundary between Ulumbie and Goangra Runs, on Goangra Run	800 " ...	" "
366	At Tory-wee-waa Water-hole, on Goangra Run	320 " ...	" "
367	At Reedy Waterhole, at the junction of Boggy and Nundy Creeks, Gundemaine Run	320 " ...	" "
368	Namoi River, near the Gurley Lagoon	480 " ...	" 2552
369	At Gommel Gommel, on the Gundemaine Run	320 " ...	" "
370	On the Namoi River, $4\frac{1}{2}$ miles above Gundemaine Head Station	320 " ...	" "
371	Bunyah Lagoon, on the Mille North Run	960 " ...	" "
372	At Tea Tree Waterhole, Spring Creek, Narrabri Run	160 " ...	" "
373	At Spring Creek, Spring and Waterfall, Narrabri Run	80 " ...	" "
374	On the Babbymall Creek, near the Long Plain Gunyah and Yards	320 " ...	" "
375	At the Hawk's Hole Cattle Camp, on Spring Creek, Narrabri Run	160 " ...	" "
376	On right bank of Goonoo Creek, Rangers' Valley Run	480 " ...	" "

No.	Locality.	Area.	Government Gazette in which the description is published.
377	At the Chain of Ponds, Tareela Run	160 acres ...	1 Oct., 1869, fol. 2552
378	On Sheep Station Creek, Tareela Run	160 " ...	" "
379	At the Little Creek, on the Tareela Run	160 " ...	" "
380	On the left bank of Manilla River, Tareela Run	640 " ...	" "
381	On right bank of Tareela Creek, Tareela Run	160 " ...	" "
382	Oaky Creek, on left bank of Manilla River, Tareela Run	640 " ...	" "
383	Near the junction of Bullewa and Deep Creeks, Teriario Run.....	640 " ...	" "
384	On right bank of Namoi River, Tiberenah Run.....	960 " ...	" "
385	At the Little Mountain Station, Tiberenah Run	160 " ...	" "
386	On right bank of Namoi River, portion of Toloduna Run.....	320 " ...	" 2553
387	On the Namoi River, $\frac{1}{2}$ mile below the old Toloduna Crossing-place.....	320 " ...	" "
388	On the right bank of the Namoi River, at the effluence of Pian or Gunnedah Creek	320 " ...	" "
389	On left bank of Namoi River, on Ulambie Run	160 " ...	" "
390	On left bank of Namoi River, on Ulambie Run	480 " ...	" "
391	At the Seven-mile Lagoon, Ulambie Run	960 " ...	" "
392	Near the Town of Turrawon, Namoi River, portion of Wallah Run.....	.....	" "
393	On right bank of Namoi River, about $3\frac{1}{2}$ miles below Wallah Head Station	320 " ...	" "
394	At Derria, on the Wallah Run	160 " ...	" "
395	At Bara Creek, on the Wallah Run	160 " ...	" "
396	At Dariel, on Wallah Run	960 " ...	" "
397	On left bank of Namoi River, Wee Waa South Run	480 " ...	" "
398	On the Gurley Lagoon, Wee Waa South Run	480 " ...	" "
399	On the Namoi River, near the Weeta Waa Crossing-place, Wee Waa South Run	320 " ...	" "
400	At Five-mile Point, County of Denham, Yarraldool Run	320 " ...	" "
401	Namoi River, at the Tory Wee Waa Waterhole, Yarraldool Run.....	320 " ...	" "
145	County of Clarence, Parish of Clarence.....	64 " ...	8 " 2580
402	County of Jamieson, at Galathera Creek, at the crossing of the Moree and Narrabri Roads.....	85 " ...	12 " 2612
224	Parishes of Hillgrove and Davidson, at Pint-pot Creek, County of Sandon	320 " ...	" " 2708
66	Near Mootwingee Waterhole, portion of the Mootwingee Run	320 " ...	22 " "
402	At Lower Waterhole, Nundi Creek, County of Jamieson, Galathera Run	480 " ...	" "
403	At the Main Spring Reserve, Galathera Run	320 " ...	" "
404	$5\frac{1}{2}$ miles above Head Station, Galathera Run	320 " ...	" "
405	At Tunlee Waterhole, 2 miles easterly from Head Station on the Galathera Run	320 " ...	" "
406	At the Old Paddock Spring, Galathera Run	120 " ...	" "
407	At the Camp Spring, County of Jamieson, Galathera Run.....	120 " ...	" "
408	At Devil's Hole Spring, Galathera Run	160 " ...	" "
8	County of Bathurst, Parish of Lowry, Caloola Creek	160 " ...	26 " 2733
6	County of Murray, Parish of Warroo	36 " ...	29 " 2794
148	Parish of Coraki, on the Richmond River.....	42 a. 2 r. 35 p.	" "
304	County of Courallie, on the Gwydir River	$33\frac{1}{2}$ acres...	" "
403	County of Forbes, Wangogong Run, Bundaburra Creek.....	.....	" "
403	County of Pottinger, Parish of Coomoo Coomoo, on west bank of Yarra- man Creek	60 acres ...	" "
9	County of Northumberland, at Wiseman's Ferry.....	40 " ...	" "

1869.

LEGISLATIVE ASSEMBLY.

NEW SOUTH WALES.

MINERAL LANDS IN THE HUNTER RIVER DISTRICT.

(CORRESPONDENCE, &c., RESPECTING.)

Ordered by the Legislative Assembly to be Printed, 5 October, 1869.

RETURN to an *Order* made by the Honorable the Legislative Assembly of New South Wales, dated 23rd March, 1869, That there be laid upon the Table of this House,—

“ A Return of all Mineral Lands situate in the Hunter River Districts, examined and reported upon by the Government Examiner of Coal Fields, from the 1st January, 1867, to the 31st December, 1868, together with all Minutes, Reports, Correspondence, and other documents connected therewith.”

(Mr. Lucas.)

SCHEDULE.

NO.	PAGE.
1. Examiner of Coal Fields to Under Secretary for Lands, reporting the discovery of beds of limestone near Clarence Town. 28 January, 1868	2
2. Same to Deputy Surveyor General, respecting discovery of limestone, and requesting sketch map of the locality, &c. 28 January, 1868	2
3. Under Secretary for Lands to Examiner of Coal Fields, forwarding sketch. 18 February, 1868.	2
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MINERAL LANDS IN THE HUNTER RIVER DISTRICT.

No. 1.

THE EXAMINER OF COAL FIELDS to THE UNDER SECRETARY FOR LANDS.

Sydney, 28 January, 1868.

Ridge of Limestone (Paleozoic Oolite) near the Williams River steamers' wharf.

SIR,

I have the honor to report to you, for the information of the Honorable the Secretary for Lands, the discovery of fine beds of limestone, the outcrops of which I have traced for two miles, and to within about seven miles of the steamers' wharf at Clarence Town on the Williams River. I purpose making a more minute examination, in the expectation that I may be able to trace it further—even to the river itself.

2. Very imperfect attempts have been made to burn some of it at one end of the ridge; but I have engaged to send to the Engineer-in-Chief for Harbours, Mr. Moriarty, sufficient to burn in a kiln in Sydney and test its quality, for I believe it will turn out a very strong lime.

3. The stone bears as high a polish as marble, and abounds sufficiently in marine fossils to be ornamental. It can be got out in large blocks useful to the marble mason.

4. I will wait upon the Surveyor General to point out the locality and obtain from him a sketch-map to aid in my further examination.

5. So far as at present observed, the limestone passes from the Australian Agricultural Company's to the Church and School Lands, in the direction of the Williams River.

I have, &c.,

WILLIAM KEENE,
Examiner of Coal Fields.

No. 2.

THE EXAMINER OF COAL FIELDS to THE DEPUTY SURVEYOR GENERAL.

Sydney, 28 January, 1868.

DEAR SIR,

I have reported to the Honorable the Secretary for Lands, in a letter dated this day, the discovery of a ridge of limestone, which I have traced over a distance of two miles, from the lands of the Australian Agricultural Company to the Church and School Lands, in the parish of Malata, bordering the Williams River, and to within seven miles of the steamers' wharf at Clarence Town.

2. I shall be much obliged if you will furnish me with a sketch-map of the locality, as I purpose returning there to make a more minute examination, in the expectation that I may be able to track this limestone to the river side, and even across to the western side of the Williams River.

I have, &c.,

WILLIAM KEENE.

P.S.—I shall be much obliged if you will furnish me with two copies of the last maps of the Colony—one for use in the field, the other for my office.

[Annexure to No. 2, with tracing.]

Minute of Surveyor General.

MR. ADAM,

The tracing should be made from the map which shows the lands on the east side the river opposite and above Clarence Town; when ready I will point out what is to be traced.

Mr. Hogan to supply the Colony maps. P.F.A.—30.

Mr. Hogan to supply the Colony maps, which may, with enclosed tracing*, be forwarded to the Under Secretary for Lands with view to transmission to Mr. Keene. P.F.A.—7 Feb.

Supplied two copies of the Colony map on the 31st Jan., 1868. P. J. HOGAN,—7 Feb., 1868.

Separate
Appendix A.

See Annexure to
No. 2.

No. 3.

THE UNDER SECRETARY FOR LANDS to THE EXAMINER OF COAL FIELDS.

Department of Lands,

Sydney, 18 February, 1868.

SIR,

Referring to your letter of the 28th ultimo, reporting the discovery of limestone near the Williams River, I am directed to forward to you a sketch* of the locality to aid in your further examination therein alluded to.

I have, &c.,

M. FITZPATRICK.

No. 4.

3

No. 4.

TELEGRAM from THE EXAMINER OF COAL FIELDS to THE SECRETARY FOR LANDS.

THE anticipation in my reports to you are realized. Have found a seam of petroleum oil coal in the lower coal measures below the spirifer beds at Greta, near Branxton, and the Great Northern Railway—have men at work opening the seam, and will send a box by Friday's steamer.

No. 5.

TELEGRAM from THE ACTING UNDER SECRETARY FOR LANDS to THE EXAMINER OF COAL FIELDS.

Telegram received. Should the land therein alluded to be reserved or not?

No. 6.

THE EXAMINER OF COAL FIELDS to THE UNDER SECRETARY FOR LANDS.

Newcastle, 30 April, 1868.

Samples from the seam of Petroleum Coal opened at Greta, near Braidwood.

SIR,

Having charged some miners at Greta Colliery to examine the adjoining creek as the lowering of the waters might permit, I have the satisfaction of reporting to you, for the information of the Honorable the Secretary for Lands, that a seam of petroleum coal has been discovered in the creek at Greta, of which I send samples in a box by this afternoon's steamer, and which will be delivered to you in the course of to-morrow morning.

2. It will take a few day's work to clear the creek and bale out the water so as to ascertain the importance of the seam, and which, when done, I will report to you. It will be seen that what I send is of good quality, and readily ignites in a candle flame.

3. I shall be glad to receive as soon as possible, from the Surveyor General, a plan, on as large a scale as the Survey Office may possess, of the village of Greta, marking the allotments unsold, and of the land to the west and north of the village. The unsold land should be reserved till further examined.

I have, &c.,

WILLIAM KEENE,

Examiner of Coal Fields.

Surveyor General.—Please forward the plan.—B.C. J.B.W.—7 Mar.

No. 7.

TELEGRAM from THE EXAMINER OF COAL FIELDS to THE ACTING UNDER SECRETARY FOR LANDS.

1 May, 1868.

RESERVE unsold land at village of Greta and vicinity, and send me diagram of it.

Surveyor General.—G.J.A. (for the U.S.)—B.C., 1 May.—Very urgent.

Tracing now ready, but the Surveyor General wishes it to await a letter which he understands is in No. 6. the Office on this subject.—May 6/68.

No. 8.

THE EXAMINER OF COAL FIELDS to THE UNDER SECRETARY FOR LANDS.

West Maitland,

15 May, 1868.

Coal and Petroleum Coal and "Resinite" at Greta, Anvil Creek.

SIR,

I am still occupied in opening the most remarkable seam of coal which has yet come under my observation, the discovery of which I had the honor to report in a previous letter.

2. So now, as the work, so far as I intend to carry it, is finished, and which will be in the course of the next week, I will further report with diagram and sections for the information of the Honorable the Secretary for Lands. ^{No. 6.} ^{30 April, 1868.}

Seen. J.B.W.—21 May.

I have, &c.,

WILLIAM KEENE.

No. 9.

THE EXAMINER OF COAL FIELDS to THE UNDER SECRETARY FOR LANDS.

Coal Fields Office, Newcastle,

28 May, 1868.

Petroleum Coal and Coal Seam at Greta, near Branxton.

SIR,

I beg to acknowledge receipt this day, under blank cover from Surveyor General, of my preliminary report to you and papers relating to the opening of a petroleum coal and coal seam at Greta near Branxton, as also the application of Mr. George Vindin to lease mineral land; and I have read the minutes thereon. ^{See Appendix No. 4.}

2. I am glad to see by these minutes that my recommendation to reserve Crown Lands in the vicinity, awaiting my further report, has been resolved on.

3.

3. After much trouble in keeping back and baling out the water, I have gone through the seam, and find that there is a total of about 22 feet,—giving seven varieties of coal, with the brown cannel or petroleum coal, and all good.

4. I have the satisfaction to tell you, I am informed by Mr. Mitchell that himself and Mr. Vindin have arranged with the owners (Messrs. Clift) of the land adjoining the Crown Land on which I am working to work the coal on the Messrs. Clift's land to which the coal seam immediately extends.

5. It will therefore be of little consequence to Mr. Vindin that his request for mineral lease may not be complied with, whilst his operations will greatly augment the value of the village allotments and land still unsold.

6. It will, I am sure, be desirable that these allotments should be still further divided; and of this I will give my more decided opinion on the completion of my examination, for the further information of the Honorable the Secretary for Lands.

Seen. J.B.W.—4 June.

I have, &c.,
WILLIAM KEENE,
Examiner of Coal Fields.

No. 10.

THE EXAMINER OF COAL FIELDS to THE UNDER SECRETARY FOR LANDS.

Opening of Greta Coal Fields.

Newcastle, 4 July, 1868.

SIR,

No. 6.

I had the honor to report to you, for the information of the Minister for Lands, under date of the 30th April, 1868, the discovery of petroleum coal in the Greta field.

2. A continuation of the research has led to the further discovery in the last few days of what I believe to be the bottom seam of the carboniferous deposits in our coal fields, and this coal—like to that of the seam above it, and which contains the petroleum coal—is of most excellent quality; I have not yet been able to ascertain the thickness of this bottom seam.

3. I have carried on these researches under the exceptional circumstances of the drought, and which made it urgent to proceed in the work without delay.

4. When finished, the expenditure for labour will not exceed £40, and will give great value to more than a thousand acres of Crown Land at Greta. I therefore hope for approval of what I am doing, as I shall take care that this expenditure shall be within the limit of the annual vote for the contingent amount of the coal fields.

Approved J.B.W.—11 July.

I have, &c.,
WILLIAM KEENE,
Examiner of Coal Fields.

No. 11.

THE SENIOR CHIEF CLERK, DEPARTMENT OF LANDS, to THE EXAMINER OF COAL FIELDS.

Department of Lands,
Sydney, 21 July, 1868.

SIR,

Referring to your letter of the 4th instant, respecting the further discovery of petroleum coal on the Greta Coal Field, I am directed to inform, that Mr. Secretary Wilson has approved of the researches being proceeded with on the understanding mentioned by you, namely, that the expenditure for labour will not exceed £40.

I have, &c.,
S. B. WARBURTON,
(For the Under Secretary).

No. 12.

THE EXAMINER OF COAL FIELDS to THE UNDER SECRETARY FOR LANDS.

Newcastle, 14 January, 1869.

Village of Greta and Greta Coal Fields, with plan and sections.

SIR,

I have the honor to forward herewith, for the further information of the Honorable the Secretary for Lands, plan and sections showing the great seam opened by me in Anvil Creek at Greta, in which petroleum oil coal and other varieties of coal are found in a thickness altogether of 22 feet.

2. The dip of the coal is to the west (10 degrees), and I have indicated by a line A.B. on the plan that portion of the Crown Lands on which no coal will be found.

3. I am of opinion that the village allotments as already laid out may be disposed of as at present surveyed, and that the portion of the Crown Land unsurveyed, upon which I believe workable coal to exist, may be left to be taken up under mineral lease.

4. It is mainly however the bottom seam and not the petroleum seam which will be found on this land; but the land will become of value for the surface, from the numerous working population which will in all probability be settled at Greta, when the main seam shall be opened on the private lands to the west of the township and for the working of which a Private Bill is now before the Parliament.

5. The Surveyor General is well acquainted with the locality, and can well decide on the disposal of the Crown Lands as yet unsurveyed and unsold, and I shall be glad to be of any assistance in the work.

6. Referring to the coal seam, I cannot refrain from saying that it is more remarkable for variety and quantity of coal than any which has come under my observation in any part of the world. Its geological position is below the spirifer beds; it is the lowest seam but one of our carboniferous deposits, and will be found to extend from Greta over a large area. Its proximity to the Great Northern Railway, and the excellent quality of the coal, will insure its being extensively worked.

I have, &c.,
WILLIAM KEENE,
Examiner of Coal Fields.

Seen. W.F.—21 January, 1869.
Surveyor General. B.C., 22 January. M.F.

No. 13.

THE EXAMINER OF COAL FIELDS to THE UNDER SECRETARY FOR LANDS.

Newcastle, 15 January, 1869.

Village of Greta, Mineral Selection of Mr. George Vindin.

SIR,

I have had the honor to send to you* plan and section of the Greta Coal Field, and now return ^{*Separate Appendix B.} the application of Mr. George Vindin for mineral lease of allotments 7, 8, 9, and 21, subject to my letter ^{No. 9.} to you of 28th May, 1868.

2. I am now of opinion that the survey of Greta should be maintained as needful and appropriate for the mining population likely to settle down in this quarter, and the reserves for access to water will be eminently needful.

3. I see however no objection to the allotment 21 being appropriated to mineral working, and an equal area of land to the north-east of lot 21 may be permitted to be taken up by Mr. Vindin in lieu of the water reserves 7, 8, and 9.

4. I advise that further allotments should be surveyed for sale or for mineral selections as the Surveyor General who is well acquainted with the locality may think proper, and I will take early opportunity of seeing and conferring with him on the subject.

I have, &c.,
WILLIAM KEENE,
Examiner of Coal Fields.

Surveyor General. B.C., 20 January, 1869.
See Appendix No. 8.

APPENDIX.

No. 1.

G. Vindin, Esq., to The Under Secretary for Finance and Trade.

Sydney, 6 May, 1868.

Sir,
purposes.

I beg to hand you the sum of £10, being deposit on application for authority to select 40 acres of land for mineral

I have, &c.,
GEO. VINDIN.

Land desired to be selected:—Reserves 7, 8, 9, and 21, township Greta, county Northumberland.
The Under Secretary for Lands. B.C., 6 May, 1868. H.L.

No. 2.

The Under Secretary for Lands to G. Vindin, Esq.

Department of Lands,
Sydney, 6 May, 1868.

Sir,

In compliance with the request contained in your* application of this date, I am instructed by the Secretary for ^{*Verbal.} Lands to convey to you authority to select, within twelve months from this date, 40 acres from any available Crown Lands, for the purpose of working minerals,—subject of course to all prior claims, and to all the conditions of the Crown Lands Occupation Act of 1861 and the regulations founded thereon.

2. If no unobjectionable selection be reported to this Department, within twelve months from this date, the present authority will be considered obsolete, and the first year's rent already paid by you will be forfeited.

I have, &c.,
M. FITZPATRICK.

No. 3.

6

No. 3.

G. Vindin, Esq., to The Under Secretary for Lands.

Sydney, 6 May, 1868.

Mineral Lease.

Sir,

I have the honor to report to you, that in pursuance of the authority conveyed to me in your letter of the 6th May, 1868, I have selected the portion of Crown Lands hereunder described for the purpose of working coal, viz., 40 acres, county of Northumberland, parish of _____, situated in the town of Greta, being reserves Nos. 7, 8, 9, and 21.

I have, &c.,
GEO. VINDIN.

Surveyor General, B.C., 16 May. M.F.

No. 4.

Report of Surveyor General.

THE design for the Village of Greta was submitted to the Executive Council, approved on 30th May, 1842, and allotments sold in accordance therewith. The reserves mentioned were shown in the design as "for access to water," but have not been dedicated otherwise. They are separated from one another by streets, and each of them is of a less area than 40 acres. As the separation by streets would, it is presumed, prevent the leasing of the land in one portion, as prescribed by the 58th clause of the Regulations, this application appears to be inadmissible. Were it not that the Inspector of Coal Fields has recommended the reservation from sale of all lands within the Greta Reserve, this and other land within it might probably, with advantage, be sold at auction after measurement into portions of suitable area.

P. F. ADAMS.
7 May.

The Surveyor General should consult Mr. Keene as to the size of the lots. J.B.W.—17 May.
Surveyor General, B.C., 22 May, 1868.

Mr. Keene will perhaps be good enough to state his views as to the size and form of the lots. J. S. ADAM, 26 May, 1868. No. 18.

No. 5.

The Under Secretary for Lands to G. Vindin, Esq.

Department of Lands,
Sydney, 20 May, 1868.

Sir,

In reference to your letter of the 6th instant, reporting that you have selected the Reserves Nos. 7, 8, 9, and 10, at Greta, for the purpose of working coal, I am directed to inform you that, under the report obtained by the Surveyor General, it appears that your selection is objectionable, the land being part of that comprised within the boundaries of the village of Greta.

I have, &c.,
M. FITZPATRICK.

No. 6.

G. Vindin, Esq., to The Under Secretary for Lands.

West Maitland,
24 June, 1868.

Sir,

In reply to your letter respecting my application for reserves in Greta, I now beg to request that I may be permitted to select (40) forty acres elsewhere.

I have, &c.,
GEO. VINDIN.

I conclude he may select any available land within twelve months from date of order. If so, inform.

No. 7.

The Under Secretary for Lands to G. Vindin, Esq.

Department of Lands,
Sydney, 6 July, 1868.

Sir,

In reference to your letter of the 24th ultimo, respecting your selection for mineral purposes of 40 acres at Greta, which you were informed was objectionable as being partly within the town boundary, I am directed to invite your attention to the first subdivision of the 2nd clause of the Crown Lands Occupation Act, and to state that the authority under which you made your selection entitles you to select any other available land within twelve months from the date thereof.

I have, &c.,
M. FITZPATRICK.

No. 8.

The Chief Draftsman, Surveyor General's Office, to Mr. Licensed Surveyor Biden.

* Separate Appendix C. REQUESTED to measure 40 acres for Mr. Vindin, as shown on the accompanying tracing*. Also, allotments for sale in sections 11, 12, 18, and 19, in accordance with regulations.

J.S.A.,
15 March, /69.

G. Vindin's min. selection, per Examiner of Coal Fields—see No. 13.

No. 9.

No. 9.

Mr. Licensed Surveyor Biden to The Surveyor General.

Singleton, 12 April, 1869.

Sir,

I have the honor to transmit herewith plan* of a portion of 40 acres, No. LX, parish of Branxton, county of *Separate Ap-
Northumberland, surveyed the 9th April, 1869, in compliance with instructions 15 March, 69/17, on application of George pendix D.
Vindin, under the 22nd clause of the Crown Lands Occupation Act, 1861, with plan of sections XI, XII, XVIII, XIX, in the
village of Greta, laid out in allotments for sale. In determining a datum from which to commence these surveys, I have
adopted the south-east boundary-line of sections X and XX, upon which I found three pegs of old survey, and the south side
of High-street as defined by the peg and marked line in section XIII; and I have accordingly taken as the bearings of the
main outlines lines running north 44 degrees 42 minutes west, and east 44 degrees 42 minutes north. The only other indica-
tions of old survey seen by me were (6) six pegs on the south-west side of section XII corresponding in portions with present
corners.

The allotments are measured and marked in accordance with regulations, and were so measured and marked during the
periods from March 29 to April 8, 1869.

I have, &c.

W. D. BIDEN,
Licensed Surveyor.

Description :—

40 acres : County of Northumberland, parish of Branxton, at Greta, mineral lease No. 319, portion 60 : Commencing on
the north-eastern side of High-street, town of Greta, at the western corner of allotment 4 of section 21, and bounded
thence on the south-west by that street, bearing west 39 degrees 24 minutes north 6 chains 39 links to the eastern boundary-line of
William Holden's 6 acres ; on the west by the eastern boundary-line of that 6 acres, bearing about north 13 degrees 31 minutes
east 15 chains 13 links ; on the north by part of the southern boundary-line of Samuel Clift senr's. 421 acres, bearing east
14 degrees 9½ minutes south 4 chains 54 links ; on the north-west by a line bearing east 42 degrees 44 minutes north 14 chains
and 85 links ; on the north-east by a line bearing south 44 degrees 42 minutes east 14 chains and 44 links ; and on the south-
east by a line bearing west 44 degrees 42 minutes south 18 chains 15 links to Branxton-street ; thence by that street, bearing
north 44 degrees 42 minutes west 2 chains ; thence by a line forming the north-western end of Branxton-street and the
western boundary of allotment 5, bearing west 44 degrees 42 minutes south 6 chains and 25 links ; thence by the north-
eastern boundaries of allotments 3 and aforesaid 4, of section 21, being a line bearing north 44 degrees 42 minutes west in all
2 chains ; and thence by the north-western boundary-line of the last-mentioned allotment, bearing west 44 degrees 42 minutes
south 5 chains to the point of commencement. N.B.—Lease not issued.

[Four plans.]

[1s.]

Sydney : Thomas Richards, Government Printer.—1869.

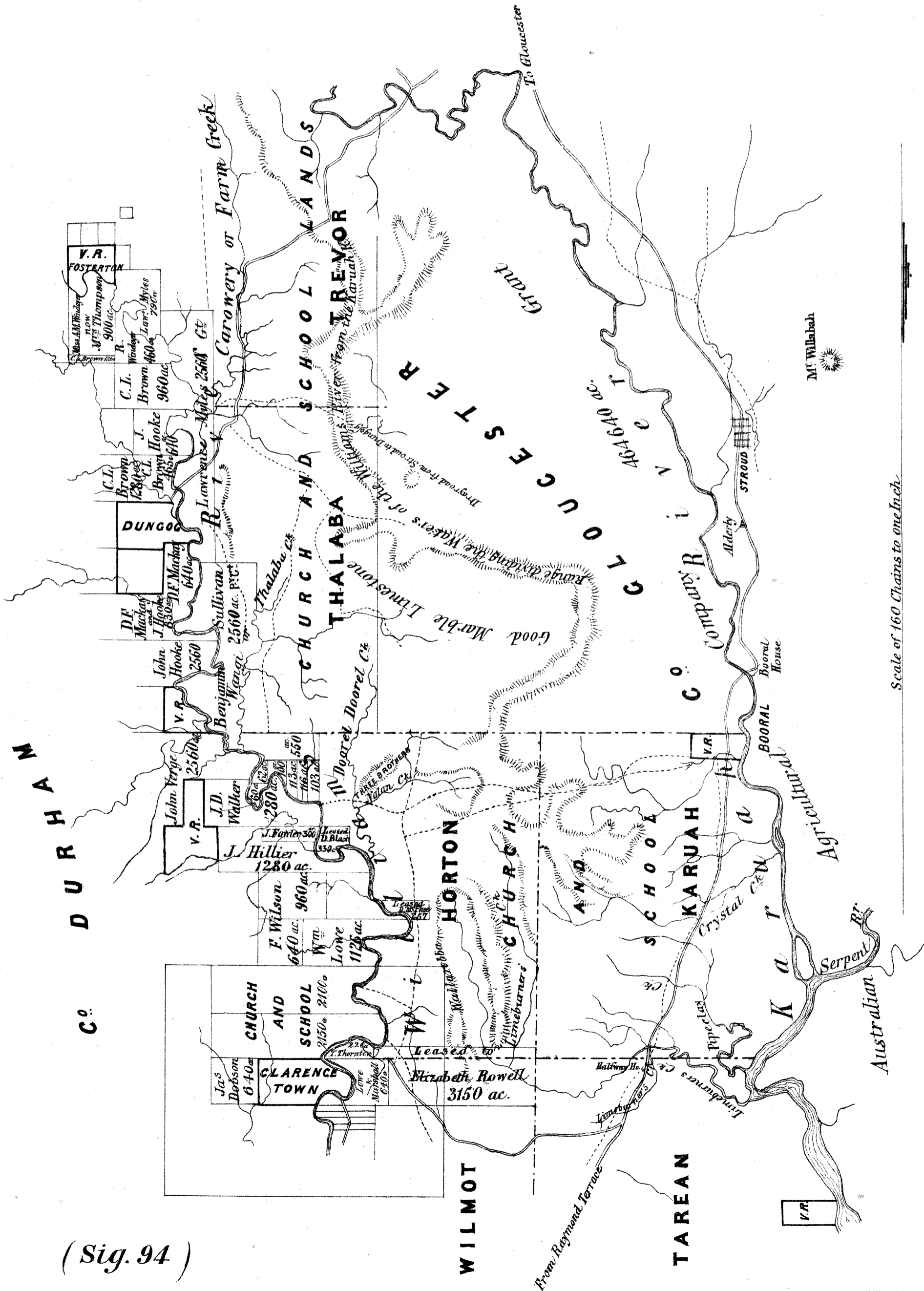
SEPARATE APPENDIX A

TRACING

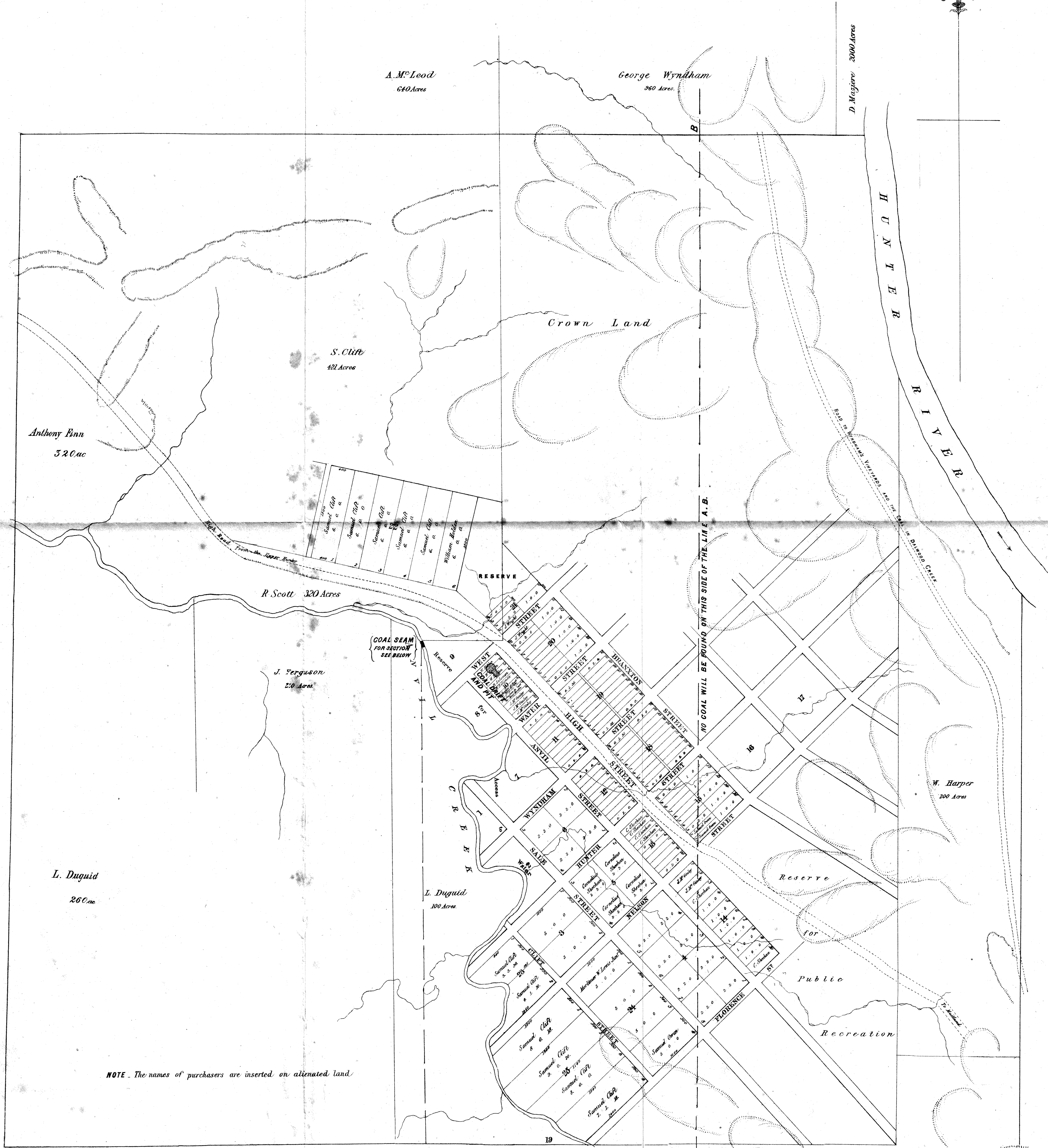
from the Counties of Durham and Gloucester

showing Country between

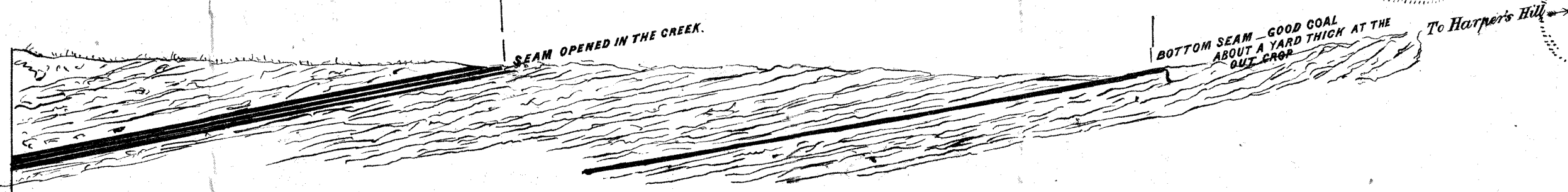
DUNGOG, CLARENCETOWN, & STROUD



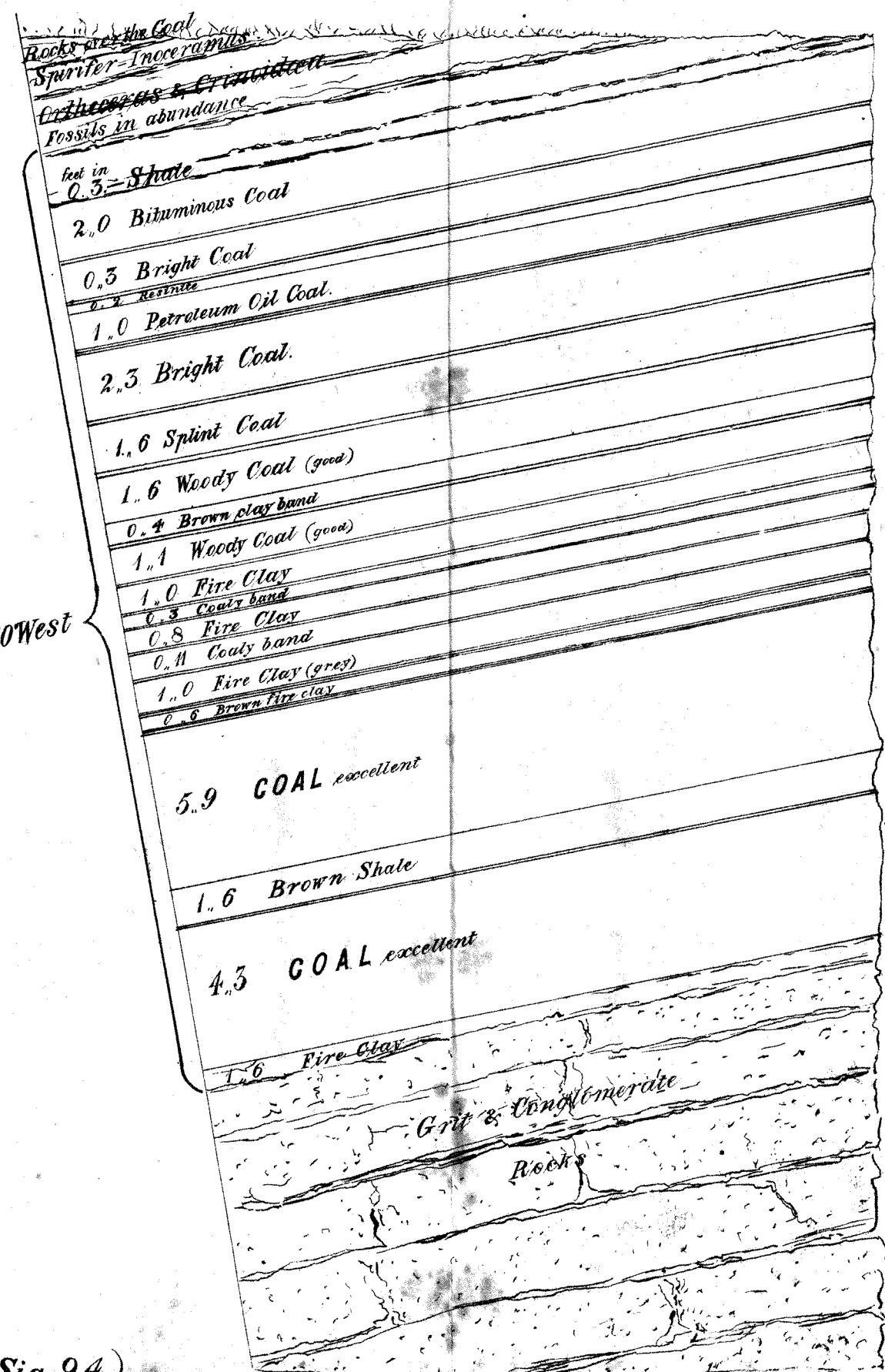
(Sig. 94)



NOTE - The names of purchasers are inserted on alienated land



SECTION of the Coal Seam opened in the Creek
on a Scale of 5 feet to an inch.



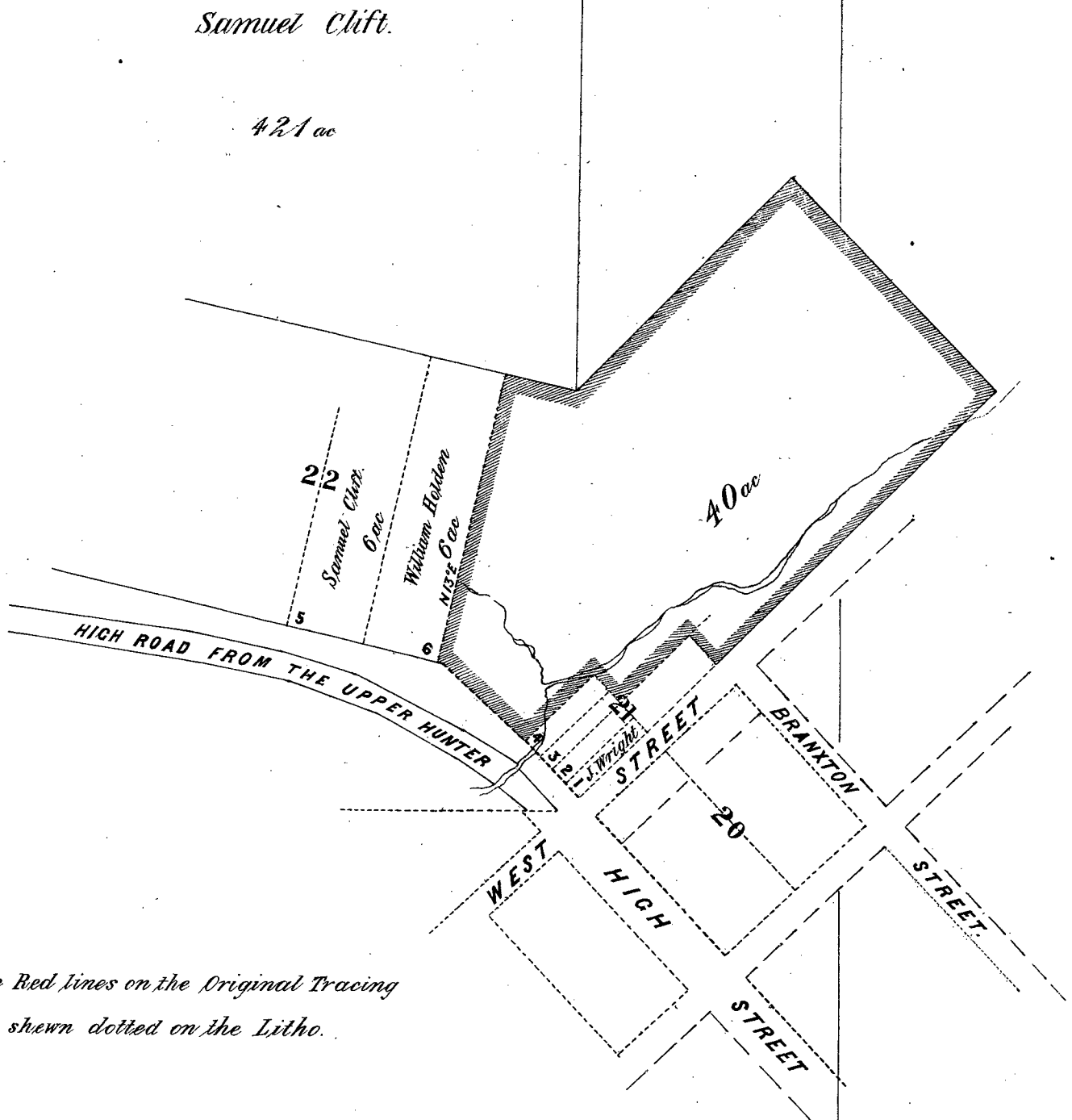
(Sig 94)

TRACING
Shewing the position of the Lower Coal Seams
AT
G R E T A
and SECTION of the
Great Seam opened in the Creek
ON A SCALE OF 5 FEET TO AN INCH
AS ALSO THE
different Varieties of Coal contained therein
SUCH AS
**BITUMINOUS & RESINITE COAL, PETROLEUM OIL COAL,
CANNEL COAL, SPLINT COAL, COKEING COAL &c.**

(Signed) **WILLIAM KEENE F.C.S.**
EXAMINER of COAL FIELDS

NEWCASTLE 14TH JANUARY 1869.

SEPARATE APPENDIX, C.



NOTE. The Red lines on the Original Tracing are shewn dotted on the Litho.

(Sig 94)

Scale 8 Chains to an Inch

1869.

LEGISLATIVE ASSEMBLY.

NEW SOUTH WALES.

COMMONAGES FOR THE TOWN OF MERRIWA.

(CORRESPONDENCE RESPECTING.)

Ordered by the Legislative Assembly to be Printed, 1 October, 1869.

RETURN to an *Order* made by the Honorable the Legislative Assembly of New South Wales, dated 25 February, 1869, That there be laid upon the Table of this House,—

“Copies of all Correspondence and Papers in the possession of the Government relative to the sale or exchange of certain Lands set apart as
“Permanent and Temporary Commonages for the Town of Merriwa.”

(Mr. Burns.)

SCHEDULE.

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COMMONAGES FOR THE TOWN OF MERRIWA.

No. 1.

JAMES WHITE, ESQ., M.L.A., to THE SECRETARY FOR LANDS.

Sydney, 23 September, 1867.

SIR,

On behalf of the inhabitants of Merriwa I beg to request that 1,000 acres of land in the vicinity of that town may be granted as a Permanent Common, and that the remainder of the Crown lands within the population boundary may be granted as a Temporary Common. The most suitable portion for the Permanent Common would be the land immediately to the east of the town, adjoining the eastern boundary of J. M. Blaxland's 903 acres.

I have, &c.,

JAMES WHITE, M.L.A.

Surveyor General, B.C., 24 September, 1867.—M.F.

Very urgent. It is stated that some of the land is under lease expiring this year.

No. 2.

REPORT OF SURVEYOR GENERAL.

Commons, Merriwa.

REFERRING to the Under Secretary for Lands' B.C., 24 September, Ms. 67-3291, application for 1,000 acres for Permanent Common, Merriwa, through J. White, Esq., M.L.A., the land applied for is part of 1,536 acres shown on the map of the county of Brisbane, published by the Government in 1857 as a reserve for town pasturage, Merriwa; but since 1857 a reserve has been noted on the map in use of that county, in this office, of a similar area for pasturage, fronting Smith's or Merriwa Rivulet, but no dedication has been made of either portion, the present application being for one thousand (1,000) acres, part of the original reserve for pasturage, and included within the reserve on account of population of Merriwa. It is submitted that the application be favourably entertained and the land permanently dedicated, and that the portions of land referred to, fronting Smith's or Merriwa Rivulet, with the unalienated land within the population reserve of Merriwa, be devoted to Temporary Commonage until required for sale, and placed in trust with the 1,000 acres for all freeholders and householders within the boundaries of the village of Merriwa.

Appendix A.

A tracing,* showing the portions of land referred to, is enclosed.

W. R. DAVIDSON.

B.C., 27 September, 1867.

APPENDIX A.

Temporary Common Reserve.

COUNTY of Brisbane, parish of Merriwa, at Merriwa, 2,700 acres: The Crown Lands within the following boundaries: Commencing on Merriwa or Smith's Rivulet, at the south-west corner of J. M. Blaxland's 903 acres; and bounded thence on the north by the south boundary of that land, bearing easterly to the south-eastern corner; thence by part of the east boundary of that land, northerly, to the south-western corner of 1,000 acres, appropriated for Permanent Common; and thence by the south boundary of that 1,000 acres, bearing east 120 chains to the east boundary of the reserve on account of population of town of Merriwa; on the east by part of that boundary, bearing south about 116 chains 55 links to the north boundary of G. Wyndham's 2,560 acres; on the south by the north boundary of that land west to Merriwa or Smith's Rivulet; and on the west by that rivulet upwards to the point of commencement. And the Crown Lands in the county of Brisbane, parishes of Watt and Howard, containing about 980 acres within the following boundaries: Commencing on the south boundary of A. K. Mackenzie's 5,000 acres, at the north-west corner of J. H. Bettington's 776 acres, and bounded on the north by a part of the south boundary of the 5,000 acres aforesaid, westerly, about 30 chains; on the west by part of the west boundary of the reserve on account of population of the town of Merriwa, bearing south 200 chains; on the south by part of the south boundary of the reserve aforesaid, bearing east 31 chains to the west boundary of C. Blaxland's 996 acres; on the east by the west boundary of that land, bearing north to its north-west corner; again on the south by the north boundary of that 996 acres, bearing east to C. Blaxland's 320 acres, thence again on the east by the west boundary of that land, bearing north, and the south and the west boundaries of C. Blaxland's northern 320 acres westerly and northerly, and the south and the west boundaries of J. H. Bettington's 776 acres aforesaid, westing and northing to the point of commencement.

Proposed Permanent Common at Merriwa.

COUNTY of Brisbane, parish of Merriwa, at Merriwa, 1,000 acres: Commencing on the south boundary of J. Blaxland's 7,680 acres, at the north-eastern corner of J. M. Blaxland's 903 acres; and bounded thence on the west by part of the eastern boundary of that 903 acres, bearing southerly 83 chains and 45 links; on the south by a line bearing east 120 chains; on the east by part of the eastern boundary of the reserve on account of population of the town of Merriwa, bearing north 83 chains and 45 links; and on the north by part of the south boundary of J. Blaxland's 7,680 acres aforesaid, westing 120 chains to the point of commencement.

Temporary Common, county of Brisbane, parish of Merriwa, at Merriwa.

No. 3.

MINUTE PAPER FOR THE EXECUTIVE COUNCIL.

Department of Lands,
Sydney, 21 October, 1867.

It is recommended to His Excellency the Governor and the Executive Council, that the portion of land within described, containing 1,000 acres, and situated near Merriwa, be dedicated for a Permanent Common, under the 5th clause of the Crown Lands Alienation Act of 1861; and that the within described portions, 2,700 acres and 980 acres, situated within the parishes of Merriwa, Watt, and Howard respectively, be set apart for Temporary Commonage, under clause 29 of the Crown Lands Occupation Act of 1861.

It is further recommended to His Excellency and the Council that the boundaries, of which a description is enclosed, shall be those the freeholders and householders within which shall have the use of the Permanent and Temporary Commonages of Merriwa, subject to the reservations provided by clause 52 of the Regulations under the Alienation Act, and clause 87 of the Regulations under the Occupation Act.

J. BOWIE WILSON.

Minute 61/46, 25th October, 1867.—Confirmed 5th November.

THE Executive Council advise, as herein recommended, that the portions of land described in the accompanying schedules be dedicated for Permanent and Temporary Commonages, respectively, at Merriwa, in terms of the Crown Lands Alienation and Occupation Acts of 1861.

The Council further advise that the boundaries herein described be those within which freeholders and householders shall have the use of the said Commonages, subject to the reservations herein referred to.

ALEX. C. BUDGE,
Clerk of Council.

6th November, 1867. Approved.—J.Y.

No. 4.

PETITION FROM INHABITANTS OF MERRIWA.

[Left by Mr. White, 17 January, 1868.]

THE Petition of the undersigned inhabitants of Merriwa humbly sheweth, that in the opinion of your Petitioners the appointment of Trustees to manage the Merriwa Commonage is very necessary and would be beneficial to those concerned therein.

That it is desirable that such appointment be made at as early a date as possible.

That in the absence of some authority entitling them to deal with the Commonage in question it is comparatively useless to your Petitioners. That on the 10th August instant a public meeting of the inhabitants was held for the purpose of initiating the steps necessary to compass the object above stated. That at and by such meeting the following gentlemen were duly nominated as fit and proper persons for appointment to the office of "Trustees of the Merriwa Commonage," namely:—Messrs. James B. Bettington, Esq., J.P., James M. White, Esq., William Tuite, William Gallagher, senr., and William Gallagher, junr.

Your Petitioners therefore pray that you will be pleased take this their Petition into your favourable consideration, and grant their request.

And your Petitioners, as in duty bound, will ever pray,—

Jas. B. Bettington.	W. L. Bettington.
Chas. Andrews.	Frank B. M. Brown.
Peter Andrews.	John T. White, M.L.A.
Jas. White.	W. Tuite, senr.
Jas. Cape.	Robert Tuite.
M. Spratt.	William Tuite, senr.
William Sheppard, J.P.	Henry Tuite.
Thos. Roach.	Edward Murry.
W. Gallagher.	Thos. Morgan.
Chas. Malone.	William Wilson.
John Simmons.	Alex. Bowie.
Thos. Gallagher.	Joseph Bumite.
William Simmons.	Willm. Walmsley.
W. M. White.	Joseph Murphy.
William Gallagher, junr.	P. Cronin.
Patk. Lawless.	W. Hall.
Danl. Gallagher.	Jas. Bumite.
Owen Lawless.	John M'Naught.
John Lawless.	M. Boyle.
C. Spratt.	D. M. Scott.
Thos. Burke.	Edwin Hazill.
P. Doyle.	John Price.
Henry Whitney.	Michael Blake.
William Munro.	Geo. M. Winter.
George Dilforce.	Evan James.
William Sheppard, J.P.	

No. 5.

THE UNDER SECRETARY FOR LANDS to J. B. BETTINGTON, ESQ., AND OTHERS.

Department of Lands,
Sydney, 6 February, 1868.

GENTLEMEN,

In reference to your Petition praying for the appointment, as Trustees for the Commonage at Merriwa, of certain gentlemen nominated at a public meeting held for the purpose, I am directed to inform you that the appointment of Trustees must await the dedication of the land, which will shortly be carried into effect.

I have, &c.,
M. FITZPATRICK.

No. 6.

DEDICATION OF PERMANENT COMMON.

Department of Lands,
Sydney, 19 May, 1868.

HIS Excellency the Governor, with the advice of the Executive Council, has been pleased to dedicate the Crown Lands hereunder described to the several public purposes mentioned in connection therewith, an abstract of such intended dedication having been duly laid before Parliament in accordance with the 5th section of the Crown Lands Alienation Act of 1861.

J. BOWIE WILSON.

EXTRACT from Schedule of Crown Lands authorized to be dedicated to Religious and Public purposes in accordance with the 5th section of the Act 25 Vic., No. 1.

Place.	County.	Allotment.	Section.	Locality.	Area.	To what purpose dedicated.
Merriwa ...	Brisbane ...	.....	.....	Parish of Merriwa, at Merriwa.	1,000 acres...	Permanent Common.

No. 7.

NOTICES IN GOVERNMENT GAZETTE.

*Commons, Merriwa.*Department of Lands,
Sydney, 10 July, 1868.

HIS Excellency the Governor, with the advice of the Executive Council, directs it to be notified, that all freeholders and householders within the undermentioned boundaries will be entitled to the use of the Permanent and Temporary Commonage at Merriwa.

J. BOWIE WILSON.

County of Brisbane, parish of Merriwa, at Merriwa: Commencing on Merriwa or Smith's Rivulet, at the south-west corner of J. B. Blaxland's 7,680 acres, and bounded thence on the north by part of the south boundary of that land easterly about $65\frac{1}{2}$ chains; and on the east by the west boundary of J. M. Blaxland's 903 acres, bearing south 40 chains; on the south by a north boundary of that 903 acres, bearing west to Merriwa or Smith's Rivulet; and on the west by that rivulet, upwards, to the point of commencement.

[No. 7A.]

*Temporary Commonage, Merriwa.*Department of Lands,
Sydney, 10 July, 1868.

HIS Excellency the Governor, with the advice of the Executive Council, directs it to be notified, that in pursuance of the provisions contained in the Regulations under the Crown Lands Occupation Act of 1861, the land described hereunder shall be devoted to Temporary Commonage.

J. BOWIE WILSON.

County of Brisbane, parish of Merriwa, at Merriwa, 2,700 acres. The Crown Lands within the following boundaries: Commencing on Merriwa or Smith's Rivulet, at the south-west corner of J. M. Blaxland's 903 acres; and bounded thence on the north by the south boundary of that land easterly to its south-eastern corner; thence by part of the east boundary of that land northerly to the south-west corner of 1,000 acres appropriated for Permanent Common; and then by the south boundary of that 1,000 acres, bearing east 120 chains to the east boundary of the reserve on account of population of the town of Merriwa; on the east by part of that boundary, bearing south about 116 chains 55 links to the north boundary

boundary of G. Wyndham's 2,560 acres; on the south by the north boundary of that land westerly to Merriwa or Smith's Rivulet; and on the west by that rivulet upwards to the point of commencement. And the Crown Lands in the County of Brisbane, parishes of Watt and Howard, containing about 980 acres, within the following boundaries: Commencing on the south boundary of A. K. Mackenzie's 5,000 acres, at the north-west corner of J. H. Bettington's 776 acres; and bounded on the north by part of the south boundary of the 5,000 acres aforesaid westerly about 30 chains; on the west by part of the west boundary of the reserve on account of population of the town of Merriwa, bearing south 200 chains; on the south by part of the south boundary of the reserve aforesaid, bearing east 31 chains to the west boundary of C. Blaxland's 996 acres; on the east by the west boundary of that land, bearing north to the north-west corner; again on the south by north boundary of that 996 acres, bearing east to C. B. Blaxland's 320 acres; thence again on the east by the west boundary of that land, bearing north, and the south and the west boundaries C. Blaxland's northern 320 acres westerly and northerly, and the south and the west boundaries of J. H. Bettington's 776 acres aforesaid westerly and northerly, to the point of commencement.

No. 8.

J. H. BETTINGTON AND G. STABLER to THE SURVEYOR GENERAL.

Brindley Park, Merriwa,
13 August, 1868.

SIR,

We have the honor to request that you may be pleased to issue instructions to the District Surveyor resident at Merriwa to survey for sale all that parcel of Crown lands situate on west side of Merriwa Creek, about $1\frac{1}{2}$ mile distant, and adjoining J. H. Bettington's grant of 776 acres on south and west side,—also adjoining M'Kenzie's grant of 5,000 acres on south side, as we and others are desirous of purchasing, in order to enable us to complete the fencing of our runs. The land alluded to has lately been gazetted as a portion of the Temporary Reserve for Commonage at Merriwa.

We have, &c.,
JAS. H. BETTINGTON,
GEO. STABLER,
Trustees of the late J. B. Bettington.

No. 9.

THE UNDER SECRETARY FOR LANDS to THE POLICE MAGISTRATE, SCONE.

Department of Lands,
Sydney, 11 September, 1868.

SIR,

His Excellency the Governor, with the advice of the Executive Council, having approved of the application of certain land at Merriwa as a Permanent Common, I am directed to call your attention to the notice in the *Government Gazette* of the 10th July last, and to request that you will convene a meeting of persons entitled to use the Common, for the purpose of electing five Trustees in accordance with the 54th clause of the Regulations under the Crown Lands Alienation Act of 1861.

I have, &c.,
M. FITZPATRICK.

No. 10.

THE UNDER SECRETARY FOR LANDS to J. B. BETTINGTON AND G. STABLER.

Department of Lands,
Sydney, 2 October, 1868.

GENTLEMEN,

In reference to your letter of the 13th August, I am directed to inform you that the Honorable the Minister for Lands has approved of the portion of Crown land situated on the west side of Merriwa Creek about $1\frac{1}{2}$ mile distant, and adjoining J. H. Bettington's grant of 776 acres, being withdrawn from the Temporary Commonage and measured for auction sale.

I have, &c.,
M. FITZPATRICK.

No. 11.

MR. G. H. YATES to THE SURVEYOR GENERAL.

Merriwa, 14 October, 1868.

SIR,

I have the honor to request that you will cause instructions to be issued to the District Surveyor here to survey for sale that portion of the Merriwa Commonage situate as under described:—

About 1,200 acres: Bounded on the west by Merriwa or Smith's Rivulet, on the north by J. M. Blaxland's 903 acres, on the east by Crown lands, on south by G. Wyndham's 2,560 acres.

I have, &c.,
G. H. YATES,

No. 12.

No. 12.

MR. J. COOPER to THE SURVEYOR GENERAL.

Cullingral, Merriwa,
16 October, 1868.

SIR,

I have the honor to request that you will cause instructions to be given to the Surveyor resident at Merriwa, to survey for sale, in blocks of 320 acres, or as the Government may direct, all that portion of land known as a portion of the Merriwa Temporary Commonage, and situated as under described:—

County of Brisbane, parish of Merriwa, about 1,000 acres, between J. M. Blaxland's 903 acres on the north, and G. Wyndham's 2,560 acres on the south, and by Merriwa or Smith's Rivulet on the west.

Your compliance with this request will much oblige—

Yours, &c.,
J. COOPER.

No. 13.

MR. H. O. HEWITT to THE SURVEYOR GENERAL.

Brindley Park, Merriwa,
16 October, 1868.

SIR,

I have honor to request that you will issue instructions to the surveyor at Merriwa to survey for sale that portion of the Merriwa Temporary Commonage as under described:—

About 1,000 acres: Bounded on the west by Merriwa Creek, on the south by G. Wyndham's 2,560 acres, and on the east by Crown lands.

I have, &c.,
H. O. HEWITT.

No. 14.

J. H. BETTINGTON AND G. STABLER to THE SURVEYOR GENERAL.

Brindley Park, Merriwa,
16 October, 1868.

SIR,

We have the honor to request that you will cause instructions to be issued to the surveyor resident at Merriwa to survey for sale, in blocks of 320 acres, or as the Government may direct, all that portion of land known as part of the Merriwa Temporary Commonage, and situated as under:—

County of Brisbane, parish of Merriwa, about 1,000 acres, and bounded on the west side by Merriwa Rivulet, on the north by J. M. Blaxland's 903 acres, on the west by Crown lands, and on the south by northern boundary of G. Wyndham's 2,560 acres.

We have, &c.,
JAS. H. BETTINGTON,
GEO. STABLER,
Trustees for the Estate of J. B. Bettington.

No. 15.

PETITION OF TRUSTEES OF MERRIWA COMMON AND OTHERS.

To His Excellency the Right Honorable Somerset Richard, Earl of Belmore, a Member of Her Majesty's Most Honorable Privy Council of Ireland, Governor and Commander-in-Chief of the Colony of New South Wales, and Vice-Admiral of the same.

The humble Petition of the undersigned Trustees of the Merriwa Common and of the Temporary Common of Merriwa, and of the inhabitants of the Town of Merriwa,—

Nos. 7 and 7A.

1st. Showeth unto your Excellency that, by a notice contained in the *Government Gazette*, dated 10th day of July last, a Permanent and Temporary Commons were granted by Your Excellency, with the advice of your Executive Council, for the use of the inhabitants of the Town of Merriwa.

2. That the Temporary Common so dedicated by Your Excellency, containing 2,700 acres, is the portion of land adjacent to the Town most desirable for the purpose of Commonage for the use of the inhabitants, owing to the fact that it is in closer proximity to the Town than the Permanent Commonage and the temporary one of 980 acres; and because the same is partly bounded by the only permanent water in the town or near to the same; and also because most of the inhabitants who would require the use of the Common reside nearer to the same than they do to the Permanent Common dedicated by Your Excellency; because the same is better and more permanently supplied with water than that portion of the land which Your Excellency has dedicated as a Permanent Common, or than that portion of 980 acres dedicated as a Temporary Common.

Your Petitioners therefore humbly pray that Your Excellency will be pleased to grant to us, in lieu of the present Permanent Common and of the 980 acres Temporary Common, the one now dedicated to us as a Temporary one, containing 2,700 acres.

And Your Petitioners will ever pray, &c.

JOHN WALKER, WILLIAM GALLAGHER, CHARLES SPRATT, HENRY WHITNEY, JOHN ISAAC,	}	Trustees Elected.
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Presented by Mr. Wisdom.
Surveyor General, B.C., 14 October, 1868.—J.B.W.

And about sixty others.

7

No. 16.

THE POLICE MAGISTRATE, SCONE, to THE UNDER SECRETARY FOR LANDS.

Police Office, Scone,
17 October, 1868.

SIR,

Referring to your letter of the 11th ultimo, I now do myself the honor to inform you that at a public meeting of the persons entitled to use the Common granted for the use of the inhabitants of Merriwa, such meeting being duly called and presided over by me, the following persons were elected as Trustees of the said Common, namely:—

John Walker,	Henry Whitney,
William Gallagher,	Charles Spratt, and
John Isaac.	

I have, &c.,
JAMES SMITH P.M.

No. 17.

THE SURVEYOR GENERAL'S REPORT.

Commons, Merriwa.

REFERRING to the late Minister for Lands' Minute, 14th October, the Schedule of Lands dedicated under the 5th section of the Crown Lands Alienation Act, dated 19th May, 1868, 1,000 acres appears for Permanent Common at Merriwa. And by notice 10th July, 1868, about 3,680 acres has been devoted to Temporary Commonage for Merriwa, about 2,700 acres of which fronts Smith's Rivulet, and is bounded by Mr. Blaxland's 903 acres on the north and G. Wyndham's 2,560 acres on the south, and the population reserve boundary of Merriwa on the east, and the remainder portion of the 3,680 acres is back land lying between Blaxland's and Bettington's lands and the western boundary of the population reserve.

The 1,000 acres, referred to as dedicated, was asked for and described as the most suitable for the purpose by J. White, M.L.A., in a letter to the Minister for Lands of the 23rd September, 1867; and whilst under B.C. 27th September, 1867, the late Surveyor General submitted that the application should be favourably entertained and the land dedicated, it was at the same time represented that a similar area was noted as a reserve for town pasturage on the office maps, with frontage to Smith's Rivulet.

It is now represented in the enclosed Petition to His Excellency that the portion of land fronting Smith's Rivulet, and last referred to, is the most desirable for the purpose, from its close proximity to the town and having the only permanent water, and desire that the same may be granted in lieu of the 980 acres dedicated, and that the dedicated land should be devoted to Temporary Commonage.

The land dedicated is shown on the enclosed tracing by red edging, and the notified Temporary Commonage by green tint, and the portion of land now applied for in lieu of the dedicated is marked thus *, and includes a frontage to Smith's Creek of about 1 mile and 26 chains.

The 1,000 acres dedicated is stated in the Schedule laid before Parliament and in the published notice of dedication to be situate at Merriwa, Parish of Merriwa, County of Brisbane, boundaries undefined; but in the notice of the Temporary Commonage it is shown to be on the eastern boundary of J. Blaxland's land, the Temporary Commonage being bounded by it; and it would appear to me a question whether the application can now be entertained without the consent of Parliament.

Four applications have been received for the subdivision of the land applied for, namely, from Messrs. Bettington and Webber (*sic.*), Trustees of the late J. B. Bettington, of Brindley Park, J. Cooper, of Cullingral, H. O. Hewitt, of Brindley Park, and G. H. Yates. Complying with these applications will now depend on the decision of the Honorable the Minister for Lands respecting the commonage application. Probably the Petition may be referred for the consideration of the Crown Law Officers. The names set out for Trustees in Police Magistrate J. Smith's letter of 17th October, 1868, appear among names in the Petition.

P. F. ADAMS.

Under Secretary for Lands, B.C., 17 November, 1868.

I should like to have the opinion of the present Member of the Upper Hunter on this matter.—
W.F.—3rd Dec.

No. 18.

MR. J. B. BETTINGTON to THE SECRETARY FOR LANDS.

Brindley Park, Merriwa,
25 November, 1868.

SIR,

It has come to my knowledge that a few of the inhabitants of the town of Merriwa have applied to the Government for the addition to their Permanent Common of certain lands upon which are valuable improvements effected by me.

I do not wish in any way to prevent the applicants obtaining any land that may be necessary to render their Common of greater use to them; but I confidently expect that the land upon which my improvements are, to the value of over £500, may not be granted or promised to the people, seeing that my application to purchase this land has now been a length of time unattended to.

There is the less necessity for alienating this land, as the portion which I have applied to purchase (about 1,000 acres), will still leave to the applicants any land you may choose to grant them for access to water, which I understand is the plea put forward for an extension of the Permanent Common here.

I have, &c.,
JAS. B. BETTINGTON.

No. 19.

No. 19.

MINUTE OF THE SECRETARY FOR LANDS.

MR. A. BELL, M.P. for the Upper Hunter, placed in my hands the annexed papers. Mr. Bell's opinion is that it would be a great hardship to Mr. Bettington to deprive him of the opportunity of securing the improvements on the land in question, and that the inhabitants of Merriwa have already sufficient land for Commonage purposes.

W.F., 9 Dec., 1868.

A portion of 1,000 acres has been dedicated for a Permanent Common, and two portions, containing respectively 2,700 acres and 980 acres, have been set apart for Temporary Commonage, and the proposition of certain of the residents at Merriwa, including the Trustees elected for the Permanent Common, is to surrender the Permanent Common and the portion of 980 acres in exchange for a grant of the 2,700 acres as a Permanent Common.

The Trustees of a Common have now power under the Act to make such an arrangement as that to which Mr. Bettington alludes. The land in question is wholly within the Merriwa population reserve, and Mr. Bettington can consequently have no claim to purchase without competition. Whether the land containing his improvements should be brought to auction will depend on the decision which may be come to on the Petition for an exchange of Commonage, which is about to be referred for the opinion of the Member for the Upper Hunter.

11 December.

No. 20.

THE UNDER SECRETARY FOR LANDS to A. BELL, Esq., M.L.A.

Department of Lands,
Sydney, 14 December, 1868.

SIR,

I am directed to enclose the copy of a Petition which has been received from certain of the residents of Merriwa, praying that in lieu of the 1,000 acres near that township dedicated for a Permanent Common, and the two portions, containing respectively 2,700 acres and 980 acres, set apart for Temporary Commonage, the portion of 2,700 acres (which, with the other land referred to, is shown on the enclosed tracing) may be dedicated as a Permanent Common; and I am to request that I may be favoured with your opinion as to whether the prayer of the Petition should be complied with.

I have, &c.,
M. FITZPATRICK.

No. 21.

A. BELL, Esq., M.L.A., to THE UNDER SECRETARY FOR LANDS.

Civil Service Club,
Sydney, 16 December, 1868.

SIR,

I have the honor to acknowledge the receipt of your letter dated 14th instant, enclosing a Petition from certain residents at Merriwa, praying that the 2,700 acres, portion of the Temporary Common, be dedicated as a Permanent Common in lieu of the present Temporary and Permanent Common; and in reply I beg to state that I consider the question of these reserves was fairly settled by the decision of the Government upon Mr. Bettington's application, supported by the late Member for the Upper Hunter, Mr. White, which decision, I am of opinion, ought not to be disturbed.

I have, &c.,
A. BELL.

I concur with Mr. Bell, and decline to recommend any interference with the arrangement made.—
W.F., 24 December, 1868.

No. 22.

THE UNDER SECRETARY FOR LANDS to THE TRUSTEES AND OTHER PETITIONERS.

Department of Lands,
Sydney, 12 January, 1869.

GENTLEMEN,

In reference to your Petition, praying that the portion of 2,700 acres at Merriwa, set apart as a Temporary Common, may be permanently dedicated in lieu of the present Permanent and Temporary Commons, I am directed to inform you that the Minister for Lands is of opinion that the question of the commonage has been settled, and declines to recommend any interference with the arrangements already made.

I have, &c.,
MICHAEL FITZPATRICK.

No. 23.

No. 23.

THE TRUSTEES OF MERRIWA COMMON to THE COLONIAL SECRETARY.

Merriwa, 14 January, 1869.

SIR,

In reference to the 2,700 acres set apart as a Temporary Common, we beg to state that there is a gentleman occupies it at present with sheep, which of course drives our stock away, and they have no other place for water; so therefore they must encroach, and the moment they do so they are immediately impounded by the same gentleman who is occupying the Common with his sheep. We wish you to take notice that this gentleman has washed and shore upwards of 35,000 sheep on the Common, and in doing so he had to make use of the Permanent and Temporary Common, which has left it like a desert, and of no avail to the township, this season, whatsoever. Every one is—of our Petitioners—complaining to us, for not pushing it forward; so therefore we humbly pray that you will take it in hands, and get it for us as soon as possible, as we are badly in need of it. You would greatly oblige if you would get the appointed Trustees' names gazetted, as we are quite powerless in exercising our rights for the use of the inhabitants of Merriwa.

We remain, &c.,

JOHN WALKER,
WM. GALLAGHER,
CHAS. SPRATT,
JOHN ISAACS,
HENRY WHITNEY,

} Trustees appointed.

No. 24.

THE TRUSTEES OF MERRIWA COMMON to THE COLONIAL SECRETARY.

Merriwa, 14 January, 1869.

SIR,

We, the undersigned elected Trustees of the Common for Merriwa, and inhabitants, forwarded a Petition, through Mr. Wisdom, M.L.A., to His Excellency the Governor, praying that the 2,700 acres, set apart as a Temporary Common, be proclaimed a Permanent Common, in lieu of the 1,000 acres already dedicated as a Permanent Common, which is no benefit whatever to the township, it being 2 miles from any water. The 2,700 acres is bounded on the west by the river, in which part there is a never-failing supply of water. We enclose copy of Petition, also letter received from the Minister for Lands. Will you kindly take the matter in hand and get our prayer granted, as it is the only boon we have, is the water, especially in such seasons as this.

We have, &c.,

JOHN WALKER,
WM. GALLAGHER,
CHARLES SPRATT,
JOHN ISAACS,
HENRY WHITNEY,

} Trustees appointed.

The Secretary for Lands, B.C., 8 March, 1869.—JOHN R.

Surveyor General, B.C., 8 March, 1869.—M.F.

The exchange cannot be recommended. (*Vide* Mr. Secretary Forster's Memorandum on Mr. Bell's letter of 16 December, 1868.)

No. 25.

THE UNDER SECRETARY FOR LANDS to A. BELL, Esq., M.L.A.

Department of Lands,

Sydney, 18 January, 1869.

SIR,

In reference to your letter of the 16th ultimo, I am directed to inform you that the Petitioners for the exchange of the Permanent and Temporary Commons at Merriwa have been apprised that the Minister for Lands declines to recommend any interference with the arrangement already made.

I have, &c.,

M. FITZPATRICK.

No. 26.

MR. J. B. BETTINGTON to THE SECRETARY FOR LANDS.

Brindley Park,

Merriwa, 30 January, 1869.

SIR,

I have the honor to call your attention to an application, made by me in November last, to purchase a portion of the Merriwa Temporary Commonage upon which stand some improvements effected by me to the extent of £500.

I have again to request that you will see fit to have surveyed and permit me to purchase all that portion of land upon which these improvements stand.

I have, &c.,

JAS. B. BETTINGTON.

I have received instructions to measure the land herein applied for, for auction sale, and the measurement will be proceeded with at first opportunity.

JAMES LOUDON,

Licensed Surveyor.

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No. 27.

THE TRUSTEES OF MERRIWA COMMON to THE SECRETARY FOR LANDS.

Merriwa, 2 March, 1869.

SIR,

On the 10th October, 1868, Mr. Smith, Police Magistrate for our district, held a meeting in the Court House of Merriwa, for the purpose of electing Trustees over Commonages granted to that place. Whereas we wish to know if ever he forwarded our names down to be gazetted or approved, as we have never heard anything about it since; moreover, we beg to state that there is a gentleman now running sheep all over the Commonage granted to the town, which certainly drives the town stock off the Common, and this same gentleman has men employed to do nothing else but impound; so you see the chance we have of living in this little town. You have heard further particulars which we trust you will please look into.

We remain, &c.,

JOHN ISAACS.
HENRY WHITNEY.
CHAS. SPRATT.
WM. GALLAGHER.
JOHN WALKER.

No. 28.

MINUTE OF THE SECRETARY FOR LANDS.

THE Temporary and Permanent Commons for Merriwa were selected with due deliberation by the late Government with the consent of all parties concerned, and the sanction of both late and present Members; I cannot therefore, without more cogent reasons than any assigned, recommend interference.

W.F., 23 March, 1869.

No. 29.

THE UNDER SECRETARY FOR LANDS to THE TRUSTEES OF MERRIWA COMMON.

Department of Lands,

Sydney, 3 April, 1869.

GENTLEMEN,

In reference to your letter of the 10th January last, addressed to the Honorable the Colonial Secretary, respecting the Commonage at Merriwa, I am directed to inform you that as both the Permanent and Temporary Commons were selected with due deliberation by the late Government, with the consent of all parties concerned, and with the sanction of both the late and present Member for the District, the Minister for Lands cannot, without more cogent reasons than any assigned, recommend interference therewith.

I have, &c.,

M. FITZPATRICK.

No. 30.

THE UNDER SECRETARY FOR LANDS to MR. J. B. BETTINGTON.

Department of Lands,

Sydney, 5 April, 1869.

SIR,

In reference to your letter of the 30th January, calling attention to your application for the measurement for sale of a portion of the Temporary Commonage at Merriwa, I am directed to inform you that instructions for the measurement of the land in suitable areas for auction sale have issued to Mr. Licensed Surveyor Loudon, who will proceed with the survey at the first opportunity.

I have, &c.,

M. FITZPATRICK.

No. 31.

THE TRUSTEES OF MERRIWA COMMON to THE SECRETARY FOR LANDS.

Merriwa, 7 April, 1869.

SIR,

Yours of the 5th instant to hand, and in reply we the undersigned Trustees of the Merriwa Common respectfully beg to request (on behalf of the inhabitants of Merriwa) that you would forward at once an exact copy of the first Petition that was sent in to your office (about one or two years ago) with reference to the Commons, as the whole of the persons signing the Petition sent in by us on the 10th October, 1868, deny ever signing any other Petition, therefore showing that it was done by two or three interested parties which we wish to prove.

We are also informed that the Surveyor has instructions to measure out 1,000 acres out of the 2,700 acres Temporary Common, for Mr. Bettington, which if done will deprive the township of access to the only permanent water available; we therefore request you would be kind enough to delay the survey until this matter is settled. The 1,000 acres Permanent Common has no water at all on it and no access except through other parties' land; therefore, all stock going to it are liable to be impounded. The prosperity of Merriwa depends entirely on this 2,700 acres. Your reply will oblige

Yours, &c.,

JOHN WALKER.
W. GALLAGHER, JUNR.
CHAS. SPRATT.
H. WHITNEY.
JOHN H. ISAACS.

Surveyor General, B.C., 29 April, 1869.—M.F.

Indorsed on letter from Trustees of the Merriwa Common, dated 7 April, 1869.

Referred to Mr. Loudon, who will be careful to leave access to the water if it is the only permanent water in the locality. P. F. ADAMS, 30 April, 1869.

No. 32.

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No. 32.

THE UNDER SECRETARY FOR LANDS to THE TRUSTEES OF MERRIWA COMMON.

Department of Lands,
Sydney, 29 April, 1869.

GENTLEMEN,

I am directed to forward, in compliance with the request contained in your letter of the 7th instant, a copy of the first Petition received in this office relative to the Commons at Merriwa.

I have, &c.,
M. FITZPATRICK.

No. 33.

THE TRUSTEES OF MERRIWA COMMON to THE SECRETARY FOR LANDS.

Merriwa, 3 May, 1869.

SIR,

In reply to yours of the 29th April last, No. 69-1788, we beg to enclose the copy of the Petition* sent by you—also certificate of the majority of the inhabitants alleged to have signed the same, certifying that they have no knowledge whatever, or ever signed it or any other Petition concerning the Merriwa Common, except the one sent in of October 10th, 1868, thereby showing that it has been done in an underhand manner to benefit certain parties. We sincerely hope that the enclosed will have some weight on behalf of our Petition of 10th October, 1868, and that you will grant us the 2,700 acres as a Permanent Common, in lieu of the 1,000 acres already proclaimed as a Permanent Common which is useless to us. *For Petition, see No. 4.

Would you kindly inform us if our names are gazetted as Trustees of the Merriwa Common, if not when is it likely to be done.

We have, &c.,

JOHN WALKER, WILLIAM GALLAGHER, JUNR., HENRY WHITNEY, CHAS. SPRATT, JOHN HENRY ISAACS,	}	Trustees.
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[Enclosure in No. 33.]

To the Secretary for Lands.

Sir,

We, the undersigned, hereby certify that we have no knowledge of the attached Petition, neither did we sign or consent to have our signatures attached thereto; the only Petition we ever signed (with reference to the Merriwa Commonage) was the one sent in on the 10th October, 1868.

William Gallagher, junr.,
William Gallagher, senr.,
W. Tuite,
Thomas Gallagher,
Daniel Gallagher,
C. Spratt,
Mrs. Spratt,
Joseph Bennett,
James Bennett,
Charles Andrews,
Edward Murry,
Mrs. Malsley,
Geo. Dilforce,
William Munro,

Philip Doyle,
Geo. M. Winter,
William Tuite, junr.,
Robert Tuite,
Henry Tuite,
Edwin Hazell,
James Cape,
John M'Naught,
W. Nelson,
W. M. White,
A. Witney,
M. Boyle,
Patrick Lawless,
John Lawless.

No. 34.

MR. LICENSED SURVEYOR DRUMMOND to THE SURVEYOR GENERAL.

Merriwa, 15 June, 1869.

SIR,

I have the honor to transmit herewith the plan* of a portion of land contained within the Merriwa Temporary Common, measured for auction sale on the application of James Brindley Bettington and others, in accordance with your letter of instruction [69, 10, and 11 to Loudon] of the 2nd February, 1869. The total area of land subdivided amounts to 721½ acres, marked to suit a general design, a road of access being left to a most permanent pool on the Merriwa Rivulet, which has been proposed as a water reserve. *Appendix B.

Portion No. 8 contains Mr. Bettington's dam and washpool, and portion No. 9 embraces the rest of his improvements consisting of a woolshed and hut. The road shown through portions Nos. 11 and 9 is the proclaimed road from Muswellbrook to Merriwa, but has never yet been used at this point,—the crossing at Wyndham's Springs being impracticable in its present state, and where it traverses portions 11 and 9 the soil is deep sand. As adherence to this road for a boundary would have forced these measurements to extend on the whole of the remaining frontage of the creek, and thereby render the Common useless, it has been made a reserved road. The present road from the Wappinguy lies about 30 chains to the east of the east boundary of portion 9, and thence bears away to the north-east corner of portion 11.

I have, &c.,

WILLIAM DRUMMOND,
Licensed Surveyor.

No. 35.

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No. 35.

THE UNDER SECRETARY FOR LANDS to THE TRUSTEES OF MERRIWA COMMON.

Department of Lands,
Sydney, 21 June, 1869.

GENTLEMEN,

In reference to your letter of the 3rd ultimo, on the subject of the Commons at Merriwa, and in which you forward a memorandum signed by certain persons, stating that their names were without their knowledge attached to the Petition, a copy of which was forwarded to you with my letter of the 29th April last, I am directed to call your attention to the fact that this Petition has no reference to the appropriation of the land, but merely nominates Trustees who were not elected in accordance with the regulations, and I am to add that Mr. Secretary Forster sees no reason for further interference in the matter.

I have, &c.,
M. FITZPATRICK.

No. 36.

MEMORANDA ON NO. 26.

MEMORANDA indorsed on Mr. Bettington's letter, dated 30th January last, addressed to the Honorable the Secretary for Lands:—

The survey referred to, viz., portions 8, 9, 10, and 11, parish of Merriwa, has been received, and is now with Mr. Johnson for auction sale, in pursuance of decision of the Honorable the Minister for Lands. See No. 25.

As Mr. Bettington, by this application, appears to think he can purchase the land under the 8th clause, if he has not already been informed to the contrary he should now be so possibly.

G.L., 31/7/69.

Inform Mr. Bettington, if he has not already been given to understand, that the land, not being under lease to him, can be sold only at auction.—10 August.

Mr. Bettington was informed on the 5th April that instructions for the measurement of the land, in suitable areas for auction sale, had issued to Mr. Licensed Surveyor Loudon.—23rd August.

Mr. Bettington should be informed of the day of sale, when this has been fixed.—23rd August.

No. 37.

THE UNDER SECRETARY FOR LANDS to MR. J. B. BETTINGTON.

Department of Lands,
Sydney, 30 August, 1869.

SIR,

The land situated at Merriwa, applied for by you, will be offered for sale by auction, on the 30th September next, at the Crown Lands Sales Office, Merriwa.

I am, Sir,
Your obedient Servant,
G. J. ARMITAGE.
(For the Under Secretary.)

No. 38.

THE UNDER SECRETARY FOR LANDS to THE TRUSTEES OF MERRIWA COMMON.

Department of Lands,
Sydney, 30 August, 1869.

GENTLEMEN,

The land situated at Merriwa, applied for by Messrs. J. B. Bettington and others, will be offered for sale by auction, on the 30th September next, at the Crown Lands Sales Office, Merriwa.

I am, Sir,
Your obedient servant,
G. J. ARMITAGE.
(For the Under Secretary.)

[Two plans.]

APPENDIX A.

TRACING

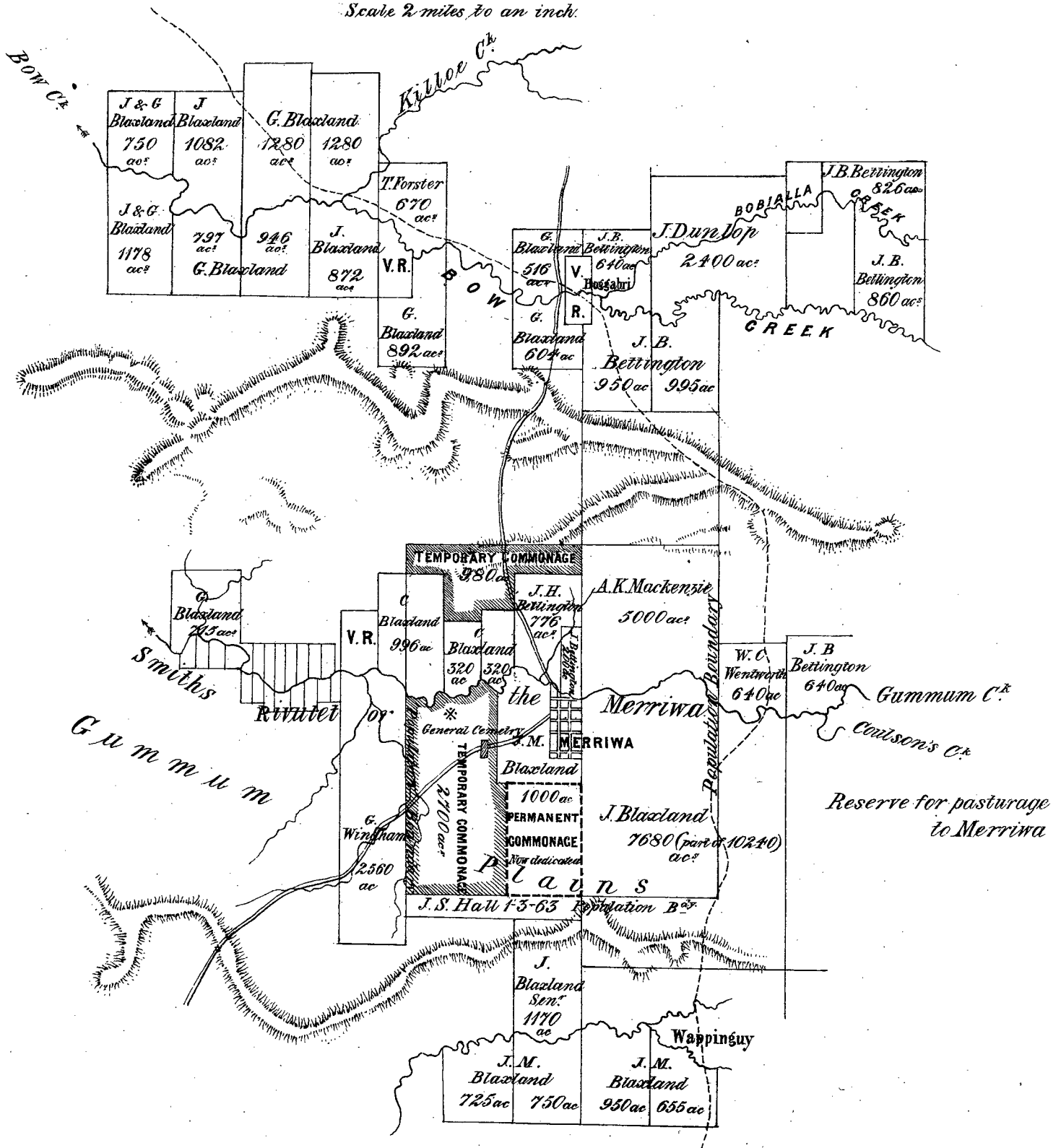
Shewing by a dotted line 1000 ac^s Proposed Permanent Commonage
and by a Shaded edging Proposed Temporary Commonage.

for the

TOWN OF MERRIWA

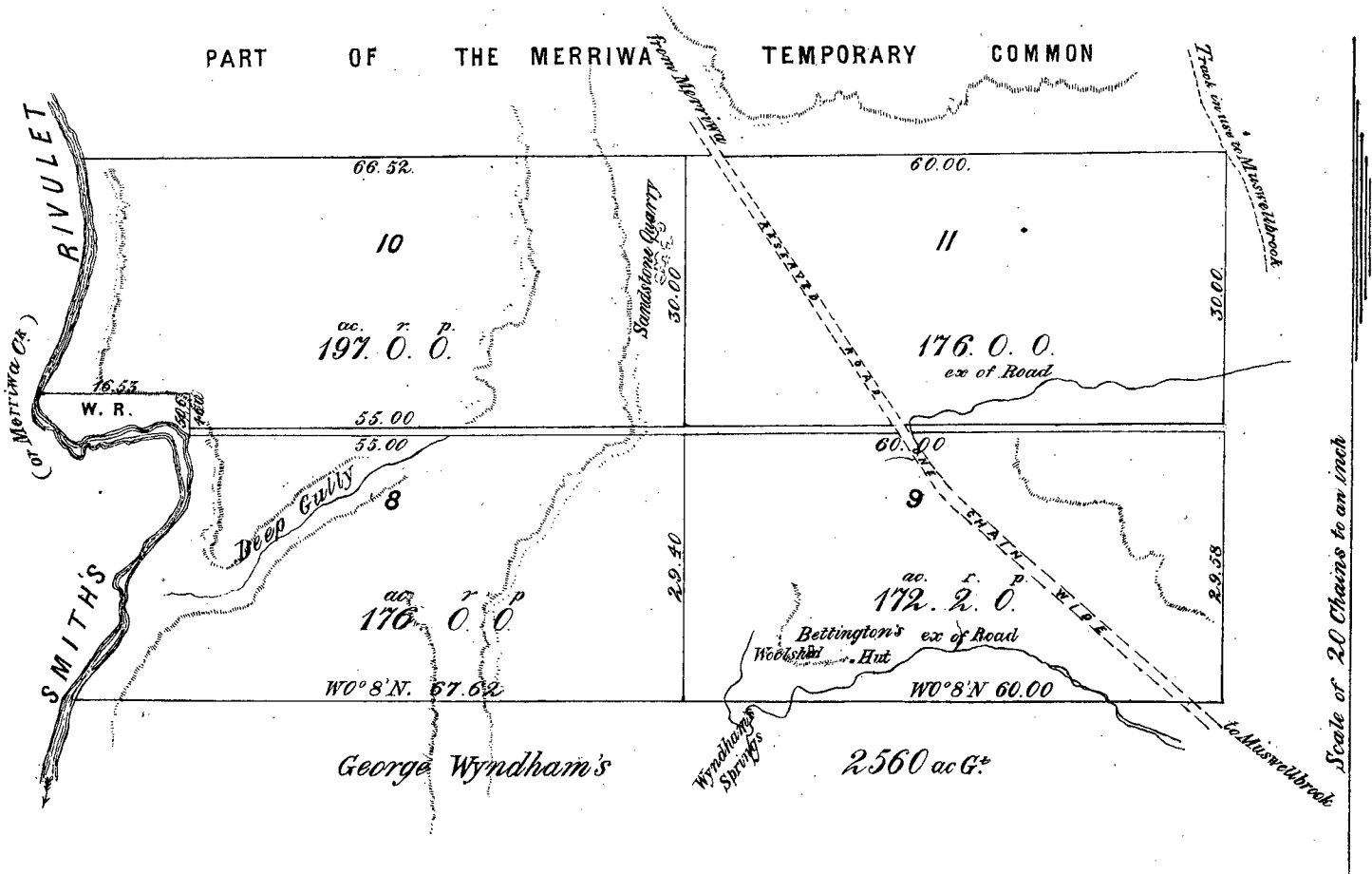
County of Brisbane, N.S.W.

Scale 2 miles to an inch.



APPENDIX B.

TRACING of 4 Portions in the Parish of Merriwa Co. BRISBANE



(Sig. 88)

1869.

NEW SOUTH WALES.

GOLD FIELDS ACT OF 1866.

(REGULATIONS UNDER.)

Presented to Parliament, pursuant to Act 30 Vict., No. 8, sec. 13.

Department of Lands,
Sydney, 24th September, 1869.

REGULATIONS—GOLD FIELDS.

His Excellency the Governor, with the advice of the Executive Council, has been pleased to approve of the following new Regulations made in pursuance of the Gold Fields Act of 1866.

WILLIAM FORSTER.

GOLD FIELDS REGULATIONS.

Former Regulations repealed.

1. All Regulations hitherto in force for the management of the Gold Fields of New South Wales are hereby repealed: Provided that any existing interest or privilege shall not be affected by these Regulations.

Explanation of terms.

2. The following terms in inverted commas, except where the context may otherwise indicate, shall bear the meanings set against them respectively:—

“Commissioner”—The Commissioner residing nearest to any claim, share, or other matter or thing which shall be the subject of any question or dispute, or of anything required to be done under these Regulations.

“Commissioner in charge”—Any Commissioner intrusted with the general superintendence of a Gold Field, whether Northern, Southern, or Western.

“Registrar”—The Mining Registrar residing nearest to any claim, share, or other matter or thing which shall be the subject of any question or dispute, or of anything required to be done under these Regulations.

“Claim”—Any authorized holding whatsoever, unless otherwise specified.

“Amalgamated Claim”—One or more claims of which the labour, otherwise necessary for each, is concentrated upon one or more of such claims, subject to these Regulations.

“Prospecting”—Searching for gold in any new or untried locality.

“Protection Area”—Additional ground authorized to be temporarily occupied for purposes of prospecting.

“Prospecting Claim”—A claim allotted by way of reward for the discovery of gold in a protection area.

“Frontage System”—A mode of working and occupation in regard to deep sinking, declared by the Commissioner in charge to be in operation within a certain area.

“Frontage Area”—Ground allotted by the Commissioner in charge for the frontage system.

“Frontage Claim”—A claim within a frontage area, and subject to the frontage system.

“Block Claim”—An ordinary claim in a frontage area, not subject to the frontage system.

“New Ground”—Any unoccupied ground in a frontage area, in which it is intended to sink in search of a lead.

“Working party”—Any person or persons actually working and occupying a claim, whether on their own account or as representatives of any other authorized person or persons.

“Old Workings”—Ground on which a number of shafts have been sunk, and the greater part of which has been undermined or worked out.

“Water Right”—The right to convey by means of a race a specified quantity of water to any locality, or the right to a specified quantity of water in its natural place or channel.

“Storm Water”—Water collected by temporary drainage, and not permanent in a creek, river, lagoon, lake, or artificial reservoir.

GENERAL REGULATIONS.

Police Magistrates also Commissioners.

3. Every Police Magistrate shall be *ex officio* a Commissioner under these Regulations.

Clerks of Petty Sessions also Mining Registrars.

4. Every Clerk of Petty Sessions shall be *ex officio* a Mining Registrar under these Regulations.

Registrar to keep books.

5. Each Registrar shall enter in books to be provided for the purpose, all applications, particulars, and other matters by these Regulations required to be registered by such Registrar.

Fees to be paid to Registrar.

6. There shall be paid to the Registrar, in respect of the several registrations and other duties mentioned in these Regulations, the fees set forth in the Schedule hereunto marked A, which fees the Registrar may demand and receive previous to making any registration.

Mode of marking claims.

7. The mode of taking possession of a claim, unless otherwise provided under these Regulations, shall be by defining the boundaries thereof by sinking substantial pegs at each corner of such claim, leaving at least 2 feet of each peg, at all times, exposed to view above the ground.

Spare ground.

8. Where ground is occupied or marked off in excess of the extent authorized by these Regulations, any miner may mark off such excess of ground, and shall be entitled to choose from which end of the claim it shall be taken, and may take possession of the same as a claim in the mode hereinbefore defined: Provided always that the original occupant shall be entitled to retain such part of such ground as contains the shaft.

Number of claims and shares not limited.

9. Any holder of a miner's right may hold one or more shares in any number of claims, provided such shares be represented in accordance with these Regulations.

Principal to appoint agent.

10. Any person holding an interest or share in a claim shall, in case of his absence from the locality, appoint a miner as his agent, whose acts shall be held to be those of his principal, provided the name and address of such agent be first registered with the Registrar.

Claim not forfeited through absence of hired representative.

11. If any agent appointed to represent any interest or share in any claim shall absent himself from the locality, or otherwise neglect to represent such interest or share, the same shall be forfeited, unless, within three days after notice, in writing, of such absence or neglect shall have been served on the owner or his agent, the owner's interest or share be fully represented in conformity with these Regulations.

Claims and shares may be transferred.

12. Claims, and shares in claims and leases, may be transferred to any authorized person by registration.

Claims to be continuously worked.

13. All claims must be continuously worked after the expiration of forty-eight hours from the time of occupation; and any claim, or share in a claim (except

as otherwise provided for under these Regulations), remaining unworked and unregistered for three clear working days, shall be liable to forfeiture.

Amalgamation of claims allowed.

14. The holders of any number of adjacent claims may register such claims as one amalgamated claim, and from and after such registration the said claims may be held and worked as one claim; but unless a number of men, equal to the full number necessary to hold the said claims severally, shall be employed upon or in connection with the said amalgamated claim, such amalgamated claim shall be null and void. And any number of claims, whether adjacent or not, where difficulties of working are occasioned by water or otherwise, may, with consent of the Commissioner, be amalgamated in like manner and subject to the like conditions.

Claims may be held in reserve.

15. Any miner whose claim may be unworkable from any cause whatsoever, or who may himself be unable to work from any reasonable cause, shall be entitled to register his claim as held in reserve, but he must first obtain a certificate of such registry, and keep a copy of the same constantly posted on the ground; and the working of the claim must be recommenced as soon as the Commissioner shall require, or the same shall be considered and treated as abandoned.

Shareholder wilfully absent to be responsible for wages to hired representative.

16. When any shareholder in a claim shall absent himself from his work, the partner or partners of such shareholder may supply his place by a competent miner, and such shareholder shall be responsible for any reasonable wages due to the person so employed.

Work in connection with claims to be deemed working such claims.

17. Any miner or miners performing any work appertaining to or necessary for carrying on mining operations on his or their claim, or attending any Court of law in any suit connected therewith, shall be deemed to be working within the meaning of these Regulations.

Wash-dirt, quartz, stone, &c., may be registered.

18. Any miner or miners may, by registration, retain possession, for any time not exceeding six months, of wash-dirt, cement, tailings, quartz, stone, or other auriferous substances, for the purpose of extracting gold therefrom.

Holidays.

19. Miners may be absent from their claims on all the following days:—From Good Friday to Easter Tuesday, both inclusive; from the 24th December to the 2nd January, both inclusive; on any day on which the Election of a Member of the Legislature may take place, and on any day which shall be proclaimed a Holiday by the Government.

Orders regulating washing at streams and water-holes.

20. The Commissioner may make such temporary orders, not inconsistent with the existing Gold Fields' Act or Regulations, as he may consider necessary to prevent public injury, regulating the mode of washing at any stream or waterhole, or the disposal of sludge, tailings, or refusals.

Orders for facilitating working of river claims.

21. The Commissioner may make such temporary orders for facilitating the working of river or other claims, by combination of labour or otherwise, as the difficulties and circumstances of each case may appear to him to require.

Proportionate cost of works.

22. When any race or tunnel shall have been cut, or other work performed, by which the working of any claim may be facilitated, every person benefited thereby shall pay such proportionate share of the cost of such operation as may be duly assessed by the Commissioner.

Digging-upon authorized holdings prohibited.

23. No person, without first obtaining the consent of the Commissioner, shall dig upon or undermine any land enclosed by any authorized occupant, or occupied by any building or machinery in connection with mining operations, or used as a garden, or a Government camp or police station, or for any public purpose.

Claims not to be taken up in certain cases.—Injury to dams, &c., prohibited

24. No claim will be allowed to be taken up in any position where, by its interference with the supply of water requisite for public use, by undermining or digging up of roads, or by obstructing public thoroughfares, or otherwise, it will tend to public injury or inconvenience; and no person shall sink or drive so near to any race, dam, or reservoir, as to impair its efficiency.

Flood-race to be constructed.

25. Every holder of a claim or a lease in a river or creek shall form and maintain a sufficient flood race through or past such claim, and shall be entitled to maintain the natural level of the water at the head of his claim.

Retention of sludge from machinery to be provided for.

26. Where machinery, either horse or steam, is employed, the owner or owners thereof shall construct an embankment for the purpose of retaining the sludge, not more than 100 yards from the site of such machinery; unless in the opinion of the Commissioner it can be more conveniently carried off by drainage, without causing injury to any private or public interest.

Right to tail-water to cease.

27. No person shall have further right to any tail-water after it shall have passed his works.

Obstructions causing public inconvenience to be removed.

28. The Commissioner may order the removal to a reasonable distance of any tent, dwelling-house, stable, or other obstruction placed so as to cause public inconvenience.

Water-holes, &c., may be reserved for police, &c.

29. The Commissioner may reserve any water-hole or spring for any public purpose.

Springs, water-holes, &c., may be occupied.

30. Any person may occupy springs, water-holes, or wells, for domestic purposes, subject to the same conditions as regards application and registration as prescribed for dams and reservoirs.

Residence area.

31. Any person holding a miner's right may occupy, for the purpose of residence, land not exceeding 1,210 square yards, or 22 yards by 55, where such measurement may be practicable.

Commissioner to make orders.

32. The Commissioner may determine any dispute which may arise upon any matter connected with the working of any claim, or the occupation of any holding, not otherwise in these Regulations provided for; and make such order in respect thereof, not being inconsistent with the Gold Fields' Act or these Regulations, as he may think requisite in the matter; and any claim or share in a claim, or any holding, occupied contrary to such decision or order or to these Regulations, shall be forfeited.

Appeal regulated.

33. Any person may appeal against any decision of a Commissioner within seven days after such decision, by lodging a written notice of appeal, with the prescribed fee of £3, in the hands of the Registrar, who shall forthwith inform the Members of the Court having power to entertain such appeal of such notice having been lodged, in order that the appeal may be heard with as little delay as possible.

Protection area.

34. Any miner or party of miners desirous of prospecting shall be entitled to a protection area, and, on the discovery of payable gold, to a prospecting claim as hereinafter provided.

Protection areas regulated.

35. Every protection area, as well as the name or names of the holders, shall be registered as soon as practicable, and a certificate of such registry issued by the Registrar accordingly.

Other Rules for protection areas.

36. No protection area of any description will be allowed within half a mile of any other of a similar character; and every such protection area must be effectively and continuously worked from the time of registry, or the same will be held to be forfeited; and no protection area shall be held for a longer period than three months.

Prospecting claim.

37. On the discovery of payable gold in a protection area, the holder or holders shall without delay report the same to the Commissioner, by whose authority a prospecting claim will then be marked off, according to the nature of the ground and the distance from other claims or areas, as hereinafter provided.

ALLUVIAL GROUND.

The extent of a protection area in alluvial ground

38. In alluvial ground the extent of a protection area shall not exceed as follows, namely:—

	yds.	yds.
At a distance from any claim then producing gold, not less than half a mile	100	by 100
Exceeding half a mile and not less than 1 mile	200	by 200
Exceeding 1 and not less than 3 miles	300	by 300
Exceeding 3 and not less than 7 miles	400	by 400

Prospecting claim in alluvial ground.

39. In alluvial ground the extent of a prospecting claim shall not exceed as follows:—

	feet.	feet.
At a distance from any claim then producing gold, not less than half a mile	80	by 120
Exceeding half a mile and not less than 1 mile	120	by 120
Exceeding 1 mile and not less than 3 miles	150	by 150
Exceeding 3 miles and not less than 7 miles	200	by 200

After the claim shall have been so marked off, no fewer than four men must be kept continuously employed.

Protection area in rivers and creeks.

40. On any untried river or creek, or portion of a river or creek, distant upwards of half a mile from a locality where payable gold is obtained, a protection area having a frontage not exceeding 300 yards may be taken up in like manner, and on the same conditions as prescribed in other cases; provided that when payable gold shall have been discovered, the claim shall be allotted, allowing an additional claim for each man in the working party, so long as the total measurement shall not exceed that of twelve claims. When the claim shall have been finally allotted, it must be worked by the whole working party for whom it shall have been laid off, or it will be liable to a proportionate reduction.

Protection area on quartz reefs.

41. On any unoccupied quartz reef, or vein, the extent of a protection area shall not exceed as follows:—

	yds.	yds.
At a distance not less than half a mile from any then existing quartz workings	200	200
Exceeding half a mile, and not less than 1 mile	300	200
Exceeding 1, and not less than 3 miles	400	200
Exceeding 3, and not less than 7 miles	500	200

Prospecting claim on quartz reef.

42. In a quartz reef or vein a prospecting claim shall be subject to the same conditions as in the case of river claims.

ALLUVIAL OTHER THAN RIVER CLAIMS.

Size of alluvial claims.

43. The extent of a claim in new alluvial ground shall not exceed as follows:—

	feet.	feet.
One miner	40	40
Two miners	40	80
Three miners	60	80
Four miners	80	80

Such claim, when practicable, shall be marked off in a rectangular form, and no claim shall exceed in extent the area allowed for four men. When from any cause it shall be impracticable to take the claims in the form above mentioned, a departure from that form may be sanctioned, and such area of ground may be allotted by the Commissioner as will give to each miner or working party the prescribed or any less area: Provided that in no instance shall a claim exceed in length twice its breadth. The claims for any one working party shall be contiguous.

RIVER CLAIMS.

Size of claims in rivers and creeks.

44. Thirty feet frontage in beds of rivers and creeks, extending across the whole bed, will be allotted as a claim to each miner. No working party shall take up more than six of such claims, which must be contiguous.

QUARTZ CLAIMS.

Size of quartz claims, how marked.

45. The claim allotted to each miner on any quartz reef or vein shall not exceed thirty feet along the line or course of the reef or vein, and 100 yards in width; and the total number of claims to be allowed to any one working party shall not exceed six. Provided that until such party shall have commenced crushing, only one-half of their number need be employed. No less extent than two claims shall be allotted, unless in the case of spare ground, or ground held in excess by any working party, which may be taken up according to the extent available. The boundaries of each claim shall be marked at each end of the line or reef, and at each corner by substantial pegs securely sunk into the ground, and leaving at least 2 feet of each of them at all times exposed to view.

Base-line.

46. All quartz claims shall be marked upon a base-line, the direction of which in case of dispute shall be determined by the Commissioner; such base-line shall be altered only by the consent of a majority of the shareholders and the order of the Commissioner, and the width of the claims shall be measured at right angles to the base-line. The holders of such claims shall be entitled to work all reefs or veins within their defined boundaries. In the case of convergence of reefs the preference, at and onwards from the junction, shall be given to the claim holders on the line first laid off by the Commissioner.

Quartz claims to be numbered and registered.

47. Claims on quartz reefs or veins shall be numbered consecutively, and registered within four days after occupation. All transfers and subdivisions of shares shall be registered in like manner.

OLD WORKINGS.

Size of claims in old workings.

48. The size of claims in old workings shall not exceed as follows:—

	feet.	feet.
One miner	70	70
Two miners	100	100
Three miners	120	120
Four miners	150	150

but a Commissioner may, in any case, under special circumstances, permit a different form of measurement, and allot a less area.

WATER-RIGHTS.

Mode of application for water-rights. Objections to be determined on the ground.

49. Every application for permission to cut a race for the conveyance of water must be made in writing to the Registrar, describing the proposed course, width, and extremities of such race, together with the width of land proposed to be held on each side thereof; notice of such application having been made must also be posted at the described extremities. If within fourteen clear days from the time when such application was lodged and notice posted as aforesaid, no valid objection shall have been made and upheld, the Registrar shall issue the necessary certificate of registry, specifying the nature and extent of the right or privilege granted. In the event of objection having been made, the Commissioner shall in due course inquire into and determine the matter on the ground.

Water-rights—how gauged.

50. Each water-right shall entitle the holder or holders thereof to a volume of water 3 inches by 12 inches, and shall be gauged in the following manner:— A box 6 feet in length and 12 inches in width, with a scale of inches marked on the inner side at the lower end, shall be placed as nearly as practicable to the head of the race, having a fall or inclination of 6 inches in the entire length of it, and the gauge of water as above specified (3 inches by 12 inches) shall be taken at the mouth of the box where the water is discharged. When the race shall exceed a mile in length, the width of the box may be increased half an inch for each mile.

Water-rights—when forfeited.

51. All water-rights not used and upheld for a period of one month shall be considered forfeited, except when the supply of water is insufficient.

Priority of water-rights determined.

52. The priority of water-rights shall be determined by the date of registration; and in case of failure of water supply the person lastly registered shall forego his rights during such failure of water as against the person previously registered, and so on in rotation as the supply diminishes. One sluice-head of water shall at all times be allowed to flow in the natural course of any river or creek, if required for mining purposes.

No race to be cut near an existing race.

53. Any person cutting a race so close to an existing race, or to the properly defined line of an intended race in actual and *bona fide* course of formation, as to cause drainage or other damage, shall be responsible for such damage as for a trespass.

Extending or altering the heads of races.

54. The extension of any race, or alteration of the head or course thereof, shall be subject to the same conditions as the formation of a new race.

Races to be kept in repair.

55. Proprietors of races shall keep them in good repair, and make efficient bridges, at least (12) twelve feet in width, in places where the race crosses roads in ordinary use.

DAMS AND RESERVOIRS.

Mode of applying for dams and reservoirs.

56. Any person wishing to construct a dam or reservoir, shall lodge with the Registrar a written application for permission to do so, and post a notice of such application on a conspicuous part of the ground intended to be so occupied. The application shall set forth the area of ground required for such dam or reservoir, and the source of watershed from which it is proposed to obtain the water supply. If at the expiration of seven clear days from the date of application no objection shall have been lodged and upheld, the Registrar shall issue a certificate of registry.

Objections to construction of dams and reservoirs.

57. All objections to the erection and construction of dams and reservoirs shall be, at the option of such Commissioner, heard by the Commissioner, with or without assessors, on the ground; and, should it be found that any other dam, or reservoir, or holding whatever, could or might be injuriously affected by the dam or reservoir applied for, such application shall be refused.

58. Any person having obtained authority to construct a dam or reservoir, who shall fail to commence its construction in a *bonâ fide* manner within seven days after such authority shall have been granted, shall forfeit the same; and any person who, having so commenced to construct any dam or reservoir, shall suspend the completion thereof for seven consecutive working days, or having completed the same shall cease to use or uphold it for a period of three months, shall forfeit such dam or reservoir unless he can show such cause for the delay, as the Commissioner shall think sufficient.

Races in connection with dams and reservoirs.

59. The owner of a dam or reservoir may cut and construct races for the purpose of intercepting storm water to supply such dam or reservoir; and such races and their sources of water supply shall be subject to the same conditions as to application and registration as in the case of water-rights.

BUSINESS ALLOTMENTS.

Business allotments to be applied for.

60. Any holder of a business license, who may desire to occupy lands thereunder, must make application for such authority to the Commissioner; and the holding must, when allotted, be registered in the Office of the Registrar. Any allotment not obtained and occupied in strict accordance with these Regulations will not be recognized.

Extent of business allotments.

61. The extent of land to be occupied under each business license shall be $\frac{1}{4}$ th of an acre, and the form of measurement 22 yards frontage to any street or roadway by 55 yards in depth. When the land may be situated in a position detached from any tents or buildings and from the line of any street or roadway, the area to be allotted shall be 1 acre. A Commissioner may, in any case, under special circumstances, permit a different form of measurement, and allot a less area.

Number of business allotments to be held by one person limited.

62. No more than two allotments shall be allotted to the same person; and no occupant of a business allotment shall be permitted to alienate or sublet any portion thereof, except with the consent of the Commissioner.

Business allotments—when forfeited.

63. If, at the expiration of seven working days from the date of registry of a business allotment, the same shall not have been improved to a value not less than £16 per acre for town lands, £5 for suburban, and £2 for other lands, it shall become liable to forfeiture and may be re-allotted to any other person.

Persons not holding business licenses prohibited from taking up business allotments.

64. Any part of an area marked out for business purposes shall only be occupied by persons holding business licenses, except in the case of ground held prior to the time of such marking.

Permission to search for gold on business allotments.

65. Whenever any business allotment, or miner's residence allotment, may be supposed to contain deposits of gold, any miner may enter upon such allotment, for purposes of searching, upon payment to the holder of the allotment of such amount, by way of compensation for injury to the holding, as may be duly determined by the Commissioner.

Land may be reserved for public purposes.

66. The Commissioner may, for public purposes, temporarily withhold any land from occupation.

MACHINERY.

Sites for machinery to be applied for.

67. Every application for permission to erect machinery must be in writing, and lodged with the Registrar; and a notice of such application must also be posted on the proposed site. If at the expiration of seven clear days from the date of such application no objection shall have been lodged and upheld, the Registrar shall issue a certificate of registry. The extent of land which may be occupied for such purpose shall be $\frac{1}{4}$ th of an acre, and the form of measurement 22 yards frontage to any street or roadway by 55 yards in depth. Provided that the Commissioner may in any case, under special circumstances, permit a different form of measurement and allot a less area.

WATER RACES.

Races through private lands.

68. In all cases where application is made to the Government, to authorize the passage of water for gold mining purposes, or the passage of any water or liquid discharge from gold mining operations, through freehold land, the party making such application shall pay into the hands of the Commissioner in charge the amount of compensation to be paid to the possessor of such lands, before the authority applied for shall be granted.

Mode of arbitration.

69. The amount of compensation in any case of application for authority to cut a water-race through freehold land shall be determined as follows:—The party applying for such authority shall cause a notice, in writing, to be served upon the possessor of the land, setting forth with reasonable certainty the direction of the proposed race, cutting, or other means of effecting the passage of water—the quantity of land proposed to be taken or used—the time for which the same will be required—and the amount of compensation which such applicant is willing to pay; and shall require the possessor of such land, if dissatisfied with the amount offered, to appoint, within seven days from the service thereof, by writing, an arbitrator on his behalf to assist in determining the amount which shall be paid as such compensation, and within the same period to forward the said appointment to the Commissioner in charge; and the party giving such notice shall, within the same period, by writing under his hand, appoint an arbitrator on his behalf, and forward such appointment to the Commissioner in charge; and

every such appointment shall be deemed to be a submission to arbitration on the part of the person signing the same, and the award of the arbitrators so appointed shall be final.

After consent, arbitration to proceed.

70. After the appointment of arbitrators in any case, neither party shall have power to revoke the same without the consent of the other, nor shall the death of either party operate as a revocation; and if either party shall neglect, within the said period of seven days after the service of the said notice, to appoint an arbitrator, the other party, having himself appointed an arbitrator, may appoint such arbitrator to act on behalf of both parties, and such arbitrator may proceed to hear and determine the matters so referred, and his award shall be final.

Provision in certain cases.

71. When each party shall have appointed an arbitrator, and either of such arbitrators shall, before the determination of the matters so referred to them, die, or refuse or become incapable to act, the party by whom such arbitrator was appointed may, by writing under his hand, appoint another person in his stead; and if he fail so to do for the space of seven days after notice from the other party requiring him so to do, the surviving arbitrator may proceed *ex parte*.

Umpire to be appointed.

72. When each of the parties shall appoint an arbitrator, such arbitrators shall, before entering upon the consideration of the matters referred to them, by writing under their hand, appoint an umpire; and in case the said arbitrators shall fail to make their award, in writing, within fourteen days after the day on which the last of them was appointed, the matters referred shall be determined by such umpire, whose award shall be final.

Costs of arbitration.

73. The costs of arbitration and award shall be in the discretion of the arbitrator, arbitrators, or umpire, as the case may be.

Arbitration to commence *de novo* in certain cases.

74. If a single arbitrator, or an umpire, die, or refuse or become incapable to act, before he shall have made his award, or shall fail to make such award within ten days after his appointment, then the matters referred to him shall be again referred to arbitration as if no former reference had been made.

Award to be in writing.

75. The award shall in all cases be in writing, and shall be delivered to the Commissioner in charge within fourteen days from time of making the same, and may be made a Rule of Court on the application of either party.

Permission to carry water through Crown Lands, to be used on private lands.

76. Application for permission to carry through Crown Lands, on any gold field, water for gold mining purposes, to be used upon alienated lands, may be made to the Commissioner, by any holder of a miner's right, in like manner as prescribed in respect to the conveyance of water for use upon Crown Lands; and if the Secretary for Lands sanction such application, the Commissioner in charge shall issue the necessary "permit," which shall have in all respects the like effect as if granted in connection with the working of Crown Lands; and any holding thereunder shall be deemed to be a "claim" within the meaning of the Act.

LEASED TRACTS.

Leases—extent and duration thereof.

77. Leases of auriferous tracts will be granted of from 1 to 50 acres of alluvial ground and quartz reefs, and from 200 to 1,000 yards of a river bed, for a period not exceeding 15 years, at an annual rent of £2 per acre, or £2 per 100 yards of a river bed.

Alluvial and quartz reef tracts shall be measured in a rectangular form; and such measurement in the case of the former shall in no instance exceed in length twice its breadth, and in the case of the latter the width shall be as prescribed in the Schedule hereto annexed marked B.

Mode of obtaining leases.

78. Any holder of a miner's right desirous of obtaining a lease of auriferous land shall, previously to making application for the same, as hereinafter directed, and on the same day on which such application shall be made, erect at each angle of the land proposed to be leased a post not less than 3 inches square, and standing, at least, 3 feet in height above the surface of the ground, and shall affix upon each post a board with the words "Applied for Lease," together with the date of such application, the name and address of the applicant, or names and addresses of the applicants, and the extent of the area applied for, legibly painted or otherwise marked thereon; and such posts shall be maintained at the expense of such applicant or applicants until the application shall have been granted or refused. The applicant or applicants, as the case may be, will also be required on the same day to post copies of such notices on the nearest Post, Police, and Mining Registrar's Offices, and apply in writing to the Commissioner in charge for such lease, setting forth the boundaries and area of the ground proposed to be taken up, the machinery intended to be used, and describing the proposed method of working, the extent and nature of preparatory work to be performed, and, if the application is made in behalf of a company, the constitution of the company, the number of shares, and the names of the shareholders, must also be specified.

Rent for leased tracts.

79. The rent for each year must be paid in advance, and the application for lease must be accompanied by a deposit of £5 when the extent of ground does not exceed 10 acres, and £5 for every additional 10 acres or portion of 10 acres; or £2 for every 100 yards of a river bed, together with the fee for survey, as per Schedule annexed marked C—such deposit to be forfeited by the applicant should the lease not be taken out within one month after the granting of the same shall have been duly notified.

Chief Commissioner to forward applications to Government.

80. The Commissioner in charge shall forward to the Government every such application, with his report thereon, and may issue the lease whenever duly authorized; and if the notices required in such case shall have been duly posted, and after the expiration of fourteen days from the day when the same were so posted, no objection shall have been preferred to the Commissioner in charge and upheld respecting the lease of such land, he may permit its immediate occupation, subject to the decision of the Government as to the granting of such lease.

Conditions of leases.

81. Leases under these Regulations will be granted subject to the following conditions:—

1. That the ground applied for is not required for any public purpose, or is not in the authorized occupation of any person.
2. That labour shall be employed upon the ground as follows:—

Upon the Commissioner in charge granting permission to the applicant or applicants to occupy such ground—one man for each acre, and in a river bed two men for every 100 yards, shall be immediately employed thereon; and within one month from the issue of the lease, an additional man for each acre; and in a river bed, two additional men for each 100 yards: Provided

always that while steam or water power is employed, each horse-power of the machinery shall be computed as equal to four men; and when other works of an expensive nature, such as dams, reservoirs, or races, have been constructed, a diminution in the number of men required to be employed will be allowed at the rate of two men for every £100 so expended, to be determined, in case of dispute, by the Commissioner, in due course.

Leases, when forfeited.

82. The infraction of any condition of a lease will involve the forfeiture thereof.

FRONTAGE SYSTEM.

Commissioner in charge to proclaim frontage system.

83. The Commissioner in charge may declare any gold field, or division of a gold field, as regards alluvial workings, to be under the operation of the "Frontage System."

Extent of frontage claim.

84. A frontage claim shall have a width of one mile, until gold shall have been struck therein; but the Commissioner in charge may, in any particular locality, declare a reduction of such width.

Claims to be marked on frontage system.

85. On new ground, within a frontage area, all claims must, in the first instance, be marked on the frontage system.

Ground under 100 feet in depth to be taken up in block claims.

86. When the sinking in new ground shall be found not to reach a depth of 100 feet, of which the bottoming of one or more shafts on the supposed line of lead shall be a sufficient test, unless the Commissioner shall specially sanction a further testing, all markings on the supposed line of lead shall be null, and the ground shall then be open for taking up block-claims; provided that each miner shall have the right to include in his block-claim any shaft which had actually been commenced by him, taking such shaft for the centre.

Mode of marking claims.

87. The mode of marking a claim on an undeclared lead shall be by the erection of a post not less than 3 feet in height at either end of the claim.

Frontage system when to be deemed to be in operation.

88. When any person shall strike payable gold at a depth not less than 100 feet, the frontage system shall be deemed to be in operation and the lead declared. And all claims previously held on such lead shall be cancelled, and the holders thereof shall be entitled to occupy claims according to their priority of occupation on the lead, excepting where any claim-holder may have sunk a shaft at least 20 feet in depth, in which case he shall be entitled to the claim in which his shaft is situated.

Base-line to be marked.

89. A base-line shall be laid down by the Commissioner, and registered within four days, from either boundary of the prospecting claim, along the supposed course of such lead, on which line the length of the claims shall be marked; and such claims shall be taken up according to priority of occupation on the lead. Cross-lines shall also be laid down, as nearly as possible at right angles with the base-line, at each boundary.

Base-line may be altered.

90. If the actual course of the lead be found to differ materially from the course of the base-line, and the majority of claim-holders affected thereby desire it, a new base-line may be laid down by the Commissioner, and claims on the new line may be taken up according to their order on the former line.

Fresh claims, how marked.

91. The occupation of a fresh claim on a declared lead shall be taken by marking the same in like manner as on an undeclared lead, but in continuation of the base-line; and so soon as the cross-line shall have been laid, the claim shall be marked by similar posts at either end of such cross-lines. When the claim shall be reduced in width, the further posts must be withdrawn and placed at each corner of the block-claim selected.

Frontage system, when to cease.

92. When on any declared lead the sinking shall have been found to have diminished in depth, so as not to reach 100 feet, the frontage system shall cease, and block-claims thereafter shall thereupon be taken according to priority of occupation on the frontage.

Claim to be marked in continuance of line.

93. All claims taken up in advance of any line of declared lead, and which would by extension of the line come within the wings of such lead, must be marked in continuance of the line, and will be held to be claims on such declared lead.

Prospecting claim on declared lead.

94. Any person desiring to take up a prospecting claim on a declared lead, may do so at a distance not less than half a mile in advance of the last paying shaft, by registering the same; and he may mark out and hold on such prospecting claim an additional claim for each man employed therein, so long as the entire extent of claim shall not exceed eight claims, or 160 feet. On any undeclared supposed lead, double claims may in like manner be marked out and registered, so long as the entire extent shall not exceed twelve claims, or 240 feet. All prospecting claims must be effectively and continuously worked. Any number of claims taken up for the purpose of prospecting may be amalgamated; but the additional claims, by way of reward, will only be allowed (on the discovery therein of payable gold) to the registered prospecting claim. No prospecting claim on any declared or undeclared lead shall be taken up within half a mile of any other prospecting claim.

Length of frontage claims.

95. The length of frontage claims shall not exceed as follows:—

	feet.
Two men	40
Four men	80

No claim shall be taken up for other numbers than as above stated.

Width of frontage claims.

96. The width finally to be allotted for a frontage claim, after the gold shall have been struck, shall not exceed 80 feet, unless when the depth of sinking shall be found to exceed 200 feet, after which an additional width not exceeding 20 feet shall be allotted for every 100 feet in depth. And the depth of sinking for any lead, or portion of a lead, shall be determined without reference to the depth of any particular shaft.

Convergence of leads.

97. In the case of a convergence of leads, the preference at and onwards from the junction shall be given to the claim-holders on the lead first declared.

Amalgamation of claims permitted.

98. Whenever machinery is employed, or other sufficient reason exists, any number of claims may be amalgamated. And while steam machinery is employed, each horse-power of the machinery shall be computed as equal to four men, in representing the labour required to hold such amalgamated or any other claim.

Effective working of claim required.

99. The working of all claims shall be effectively commenced and carried forward continuously after the expiration of three clear days from the time of taking possession. But in the case of a duly declared lead, the registered claims shall not be required to be so worked, except the twenty-five claims, whether amalgamated or not, on either line of lead next onwards from the prospect claim, and afterwards in advance of the last payable shaft.

Shareholders to be present from 9 till 11 a.m.

100. On the other claims upon a declared lead the position of which does not require them to be so worked, every shareholder, or his representative, to the full number required by the dimensions of the claim, must be present from 9 till 11 o'clock a.m. daily.

Period allowed for proving claim.

101. The holder of any claim bottoming on the lead shall be allowed fourteen days to prove the breadth of his claim. The claim shall then be reduced to the prescribed width and marked off. In case the shaft and the drive of the holders shall be without the block claim chosen, they may retain such shaft and drive for the working of the claim, and such shaft or drive shall not be taken possession of except by consent of the original holder or holders.

Flag to be hoisted when gold is struck.

102. Upon gold being struck in any claim, the claim-holders shall cause a red flag to be hoisted on the last claim on the lead, to indicate the course of the gutter. The holder of such claim must give every information as to the course of the gutter, and the holder of a shaft must allow it to be entered in like manner by any person having the written authority of a Commissioner.

Declaration of lead to be rescinded when abandoned.

103. When any declared lead shall have been abandoned for fourteen clear days, the declaration of lead shall be deemed to be rescinded. The declaration of a lead on which the number of shafts actually at work during the twenty-one preceding days shall not exceed ten, shall also be deemed to be rescinded; but the holders of any claims then working on such lead shall be entitled to retain their frontage.

Frontage claims to be regulated as ordinary claims.

104. The holding of frontage claims will, with reference to any question not herein provided for, come within the terms of the general regulations for ordinary claims.

SCHEDULE A.

	s.	d.
Transfers of shares and subdivisions of shares—per transfer	1	0
Registration of protection areas, for any number of persons not exceeding four, and certificate	2	6
For every additional four or portion of four.....	2	6
Registration of quartz claims, for any number of persons not exceeding six.....	2	6
Registration of water-right and certificate	2	6
Registration of dams and reservoirs	2	6
" spring, well, or waterhole	2	6
" business allotment	2	6
" machinery site.....	2	6
" claim as held in reserve.....	2	6
" amalgamation of any number of persons not exceeding eight.....	2	6
For every additional eight or portion of eight	2	6
Registration of cement, quartz, stone, &c.....	2	6
" agents	2	6
" frontage claims, for any number of persons not exceeding four, and certificate.....	2	6

SCHEDULE B.

Breadth of the Quartz Reef Leases.

For every area not exceeding 5 acres.....	100	yds.
" over 5, and not exceeding 20 acres....	150	"
" exceeding 20 acres	200	"

SCHEDULE C.

Survey Fees.

	£	s.	d.
For survey lease, under 10 acres	2	0	0
" " 20 " and over 10	2	10	0
" " 30 " " 20	3	0	0
" " 40 " " 30	3	10	0
" " 50 " " 40	4	0	0

1869.

LEGISLATIVE ASSEMBLY.
NEW SOUTH WALES.

GOLD FIELDS LAWS AND REGULATIONS.

(PETITION—MINERS, ETC., ADELONG.)

Ordered by the Legislative Assembly to be Printed, 7 October, 1869.

To the Honorable House of Assembly.

The Petition of the undersigned Miners, Merchants, Traders, and others, of Adelong,—

RESPECTFULLY SHOWETH:—

That your Petitioners are suffering seriously from the injurious effects the present Mining Laws are inflicting upon the mining community and public generally.

That the present code of Laws and Regulations for the management of the Gold Fields, more especially relating to the leasing of auriferous tracts, are at present causing great depression and distress on the Gold Fields of this Colony.

That the regulations relating to the granting of leases of auriferous tracts are unjust to the practical miner and open to much monopoly—thereby destroying labour.

That, in the opinion of your Petitioners, the present system of granting leases of auriferous tracts is opposed to the general benefit of the miners, inasmuch as it diminishes the employment of labour and gives rise to a system of monopoly; and that such a system should at once be repealed.

That, in consideration of the injurious effects the present leasing system has occasioned, we are of opinion that leases should only be granted for previously worked and abandoned ground.

That when leases may be required, all applications for the same should be made to some local authority, whose duty it should be to inquire into the matter and make a report thereon to the Minister for Lands.

Your Petitioners humbly pray you will take these presents into your serious and early consideration.

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

[*Here follow 110 Signatures.*]

1869.

NEW SOUTH WALES.

REAL PROPERTY ACT.

(RETURNS FOR 1868.)

Presented to both Houses of Parliament, by Command.

RETURN of the Number of Applications, with amount of Fees, &c., under the Real Property Act, from 1st January to 31st December, 1868.

MONTHS.	No. OF APPLI- CATIONS.	No. OF PROPER- TIES.	AREA.		VALUE.	FEES.			TOTAL.
			Town and Suburban.	Country.		Assurance.	Commis- sioners.	Certificates and other dealings.	
			a. r. p.	a. r. p.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
January ...	19	32	34 1 15	274 0 30	10,374 0 0	21 2 3	21 5 0	89 12 8	131 19 11
February ...	17	17	7 2 14 $\frac{3}{4}$	3,593 0 0	8,900 0 0	18 10 11	24 15 0	111 0 4	154 6 3
March	20	36	3 2 13 $\frac{1}{4}$	10,111 0 3	19,830 0 0	41 4 8	20 10 0	145 6 8	207 1 4
April	23	27	35 1 37 $\frac{1}{4}$	426 3 0	9,421 0 0	19 2 3	34 10 0	118 7 0	171 19 3
May	26	29	31 2 36	1,772 1 19	19,712 0 0	36 1 1	28 0 0	176 14 4	240 15 5
June.....	30	66	25 1 5 $\frac{1}{2}$	15,879 3 14	19,037 0 0	18 17 7	30 0 0	183 1 0	231 18 7
July	28	44	22 3 20 $\frac{3}{4}$	930 0 17	8,590 0 0	12 3 10	17 0 0	161 3 8	190 7 6
August.....	28	44	30 0 37 $\frac{1}{2}$	4,981 0 16	12,462 0 0	25 7 1	28 5 0	157 8 8	211 0 9
September..	34	74	25 0 37 $\frac{1}{2}$	15,926 1 38	28,172 0 0	58 10 5	49 15 0	157 14 4	265 19 9
October ...	26	63	37 0 5 $\frac{1}{4}$	2,706 2 23	33,301 0 0	68 17 11	28 10 0	179 14 8	277 2 7
November ..	33	36	49 1 36 $\frac{1}{4}$	816 0 2	13,566 0 0	28 5 6	40 15 0	122 14 0	191 14 6
December...	20	27	127 1 20 $\frac{1}{4}$	805 2 8	31,448 0 0	65 1 2	27 5 0	155 12 0	247 18 2
TOTALS	304	495	430 0 39 $\frac{1}{4}$	58,223 0 10	214,813 0 0	413 4 8	350 10 0	1,758 9 4	2,522 4 0

NOTE.—The above Return is exclusive of seventeen applications which have been withdrawn.

RETURN of Crown Grants registered under the Real Property Act, from 1st January to 31st December, 1868.

MONTHS.	NO. OF GRANTS.	AREA.		VALUE.	ASSURANCE.
		Town and Suburban.	Country.		
		a. r. p.	a. r. p.	£ s. d.	£ s. d.
January	934	285 2 31 $\frac{1}{2}$	40,608 2 24 $\frac{1}{2}$	48,697 15 1	101 3 10
February.....	7	.....	963 0 0	963 0 0	2 0 2
March	763	133 0 37 $\frac{1}{2}$	44,544 3 7	48,936 16 9	102 9 7
April	248	230 1 13 $\frac{1}{2}$	17,501 2 17 $\frac{1}{2}$	18,816 10 6	39 5 5
May.....	161	117 0 16 $\frac{1}{2}$	4,132 1 20	5,447 10 9	11 11 6
June	262	18 2 10	16,488 3 1 $\frac{1}{2}$	20,324 10 8	42 18 7
July.....	67	15 3 29 $\frac{1}{2}$	4,774 0 0	4,774 0 0	9 18 7
August	196	77 0 6 $\frac{1}{2}$	20,154 3 31	21,220 17 3	44 10 1
September	497	241 0 11	29,453 3 33 $\frac{1}{2}$	30,389 3 8	63 14 9
October	533	327 3 14 $\frac{1}{2}$	39,816 1 7	42,419 11 5	88 8 2
November	208	61 1 4	13,884 1 36	15,608 9 10	33 4 10
December	240	140 3 33	12,906 1 16	13,560 1 11	28 7 1
	4,116	1,649 0 7 $\frac{1}{2}$	245,229 0 34	271,158 7 10	567 12 7

NOTE.—Amount of Consideration Money for Transfers under the Act, for the year 1868 £111,135 7 8
Amount secured by Mortgage under the Act, for the year 1868 254,610 17 7
Total area of land under the Act—850,345 acres and 33 $\frac{1}{2}$ perches. Total value of land under the Act, £2,661,484 1s. 5d.

Registrar General's Department,
Land Titles Office,
Sydney, 20 April, 1869.

THEO. JAS. JAQUES,
Registrar General.

1869.

LEGISLATIVE ASSEMBLY.

NEW SOUTH WALES.

REAL PROPERTY ACT.

(CORRESPONDENCE RESPECTING PROPOSED AMENDMENT OF.)

Ordered by the Legislative Assembly to be Printed, 21 October, 1869.

RETURN to an *Order* made by the Honorable the Legislative Assembly of New South Wales, dated 1st October, 1869, That there be laid upon the Table of this House,—

“Copies of Letters addressed to the Colonial Secretary by the Senior
“Examiner of Titles in August, 1863, and April, 1866, suggesting amend-
“ment of the Real Property Act; together with Drafts therein referred
“to.”

(*Mr. J. Stewart.*)

N.B.—No official letter appears to have been received with these Amendments; but the reasons for their submission will be found in the "Preliminary Remarks" and "Explanatory Remarks" which accompany the Bill.

THE REAL PROPERTY ACT.

(26th VICTORIA, No. 9.)

Showing the Amendments submitted by the EXAMINER OF TITLES, with their Explanatory Minutes.
AUGUST, 1863.

An Act for the Declaration of Titles to Land and to facilitate its Transfer.

Preamble.

WHEREAS it is expedient to provide for the declaration of Titles to land and to facilitate the transfer of land Be it therefore enacted by 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 Parliament assembled and by the authority of the same as follows:—

Preliminary.

Repeal of previous Acts.

1. All laws statutes Acts ordinances rules regulations and practice whatsoever relating to freehold and other interests in land so far as inconsistent with the provisions of this Act are hereby repealed so far as regards their application to land under the provisions of this Act or the bringing of land under the operation of this Act.

Short title.

2. This Act may be cited for all purposes as the "Real Property Act."

Interpretation.

3. In the construction and for the purposes of this Act and in all instruments purporting to be made or executed thereunder (if not inconsistent with the context and subject matter) the following terms in inverted commas shall bear the respective meanings set against them:—

"Land"—Land messuages tenements and hereditaments corporeal and incorporeal of every kind and description or any estate or interest therein together with all paths passages ways water-courses liberties privileges easements plantations gardens mines minerals and quarries and all trees and timber thereon or thereunder lying or being unless any such are specially excepted.

"Grant"—Any Crown grant of land.

"Proprietor"—Any person ~~seized or possessed of~~ [entitled to] any freehold or other estate or interest in land at law or in equity in possession in futurity or expectancy.

"Transfer"—The passing of any estate or interest in land under this Act whether for valuable consideration or otherwise.

"Transmission"—The acquirement of title to or interest in land consequent on the death will intestacy bankruptcy insolvency or marriage of a proprietor.

"Mortgage"—Any charge on land created merely for securing a debt.

"Mortgagor"—The proprietor of land or of any estate or interest in land pledged as security for a debt.

"Mortgagee"—The proprietor of a mortgage.

"Encumbrance"—Any charge on land created for the [any] purpose ~~of securing the payment of an annuity or sum of money other than a debt~~ [whatever inclusive of mortgage unless expressly distinguished.]

"Encumbrancer"—The proprietor of any land or of any estate or interest in land ~~charged with any annuity or sum of money other than a debt~~ [subject to any encumbrance.]

"Encumbrancee"—The proprietor of an encumbrance.

"Lunatic"—Any person who shall have been found to be a lunatic upon inquiry by the Supreme Court or by any Judge thereof or upon a commission of inquiry issuing out of the Supreme Court in the nature of a writ *de lunatico inquirendo*.

"Person of unsound mind"—Any person not an infant who not having been found to be a lunatic shall be found upon like inquiry to be incapable from infirmity of mind to manage his own affairs.

"Consular Officer"—Consul General Consul and Vice Consul and any person for the time discharging the duties of Consul General Consul or Vice Consul.

"Instrument"—Any grant certificate of title conveyance assurance deed map plan will probate or exemplification of will or any other document in writing relating to the transfer or other dealing with land or evidencing title thereto.

"Sworn valuator"—Any person appointed by the Governor with the advice of the Executive Council to value land under this Act.

The describing any person as a proprietor transferrer transferee mortgagor mortgagee encumbrancer encumbrancee lessor or lessee or as trustee or as seised of having or taking any estate or interest in any land shall be deemed to include the heirs executors administrators and assigns of such person [according to the nature of any transferrable or transmissible interest or obligation to which such description shall relate.]

And

The matter proposed to be omitted is ruled through; that to be inserted is printed in brackets and underlined.

And generally unless the contrary shall appear from the context whenever a form in any schedule hereto is directed to be used such direction shall apply equally to any form to the like effect signed by the Registrar General or stamped with his seal or which for the same purpose may be authorized in conformity with the provisions of this Act and any variations from any such form not being in matter of substance shall not affect its validity or regularity but it may be used with such alterations as the character of the parties or the circumstances of the case may render necessary.

PART I.—*Appointment Powers and Functions of Employés.*

4. The department of the Registrar General shall be the department authorized to carry into execution the provisions of this Act and the Registrar General and other officers and clerks of the said department at the time of this Act coming into operation shall perform all the duties of their respective offices under this Act. Existing officers to perform duties under this Act.

5. The Governor with the advice of the Executive Council may appoint to the said department such Deputy Registrars General and other officers and clerks as may be necessary for carrying out the provisions of this Act and may likewise appoint two or more persons being barristers or solicitors to be "Examiners of Titles" hereinafter styled "Examiners" to advise and assist in carrying out the said provisions. Appointment of Examiners of Titles officers and clerks.

6. The Governor with the advice aforesaid may appoint three or more persons of whom the Registrar General shall be one *ex officio* to be Commissioners for investigating and dealing with applications for bringing land under the provisions of this Act and for other purposes hereinafter appointed. The style of such Commissioners shall be "The Land Titles Commissioners" hereinafter styled "Commissioners". The unofficial members shall be remunerated by fees specified in the Schedule hereunto marked P and at all meetings two shall form a quorum. Appointment of Commissioners.

7. The Registrar General shall have and use a seal of office bearing the impression of the Royal Arms of England and having inscribed in the margin thereof the words "Registrar General of New South Wales" and every instrument bearing the imprint of such seal and purporting to be signed or issued by the Registrar General or by any Deputy Registrar General shall be received in evidence and shall be deemed to be signed or issued by or under the direction of the Registrar General without further proof unless the contrary be shown. Registrar's seal of office.

8. Whenever by any law for the time being in force in the Colony anything is appointed to be done by the Registrar General the same may be lawfully done by any Deputy Registrar General. Functions of Deputy Registrar General.

9. It shall not be lawful for any person whilst holding the [any] office of ~~Examiner of Titles or of Land Titles Commissioner~~ under this Act to engage in private practice as a barrister or as an attorney or solicitor or be in partnership with or employed by any attorney or solicitor. Examiners and Commissioners not to practice.

10. The oath following shall be taken before one of the Judges of the Supreme Court by the persons at present holding the offices of Registrar General or Deputy Registrar General respectively and by every Registrar General and Deputy Registrar General hereafter appointed before entering upon the execution of his office under this Act— Oaths of office.

I A. B. do solemnly swear that I will faithfully and to the best of my ability execute and perform the office and duties of Registrar General or Deputy Registrar General for the Colony of New South Wales So help me God.

11. The Registrar General may exercise the following powers that is to say—

- (1.) He may require [and summon] the proprietor or other person making [or interested in any] application to have any land brought under the provisions of this Act or the proprietor or mortgagee or other person interested in any land under the provisions of this Act in respect of which any transfer lease mortgage encumbrance or other dealing or any release from any mortgage or encumbrance is about to be transacted or in respect of which any transmission is about to be registered or registration abstract granted under this Act to produce [before the Registrar General or any Examiner of Titles at the Registrar General's Office] any grant certificate of title conveyance deed mortgage lease will or other instrument in his possession or within his control affecting such land or the title thereto [and he may in like manner require such production from any person who has entered into or is under any liability derivative or otherwise to perform any covenant or agreement in writing to produce any such instrument as aforesaid in support or manifestation of the title of any person interested in any such application dealing or transaction as aforesaid. Provided that any person so summoned not being the applicant proprietor or a party to the dealing or transaction under enquiry shall be entitled to his reasonable charges and expenses the amount whereof shall if disputed be determined by the Registrar General and shall if so demanded be paid by the person at whose instance the summons shall be issued before the giving or producing the evidence required and in case such summons shall be disobeyed it shall be lawful for any Judge of the Supreme Court upon such application as hereinafter provided to enforce by attachment either of the summons already issued by the Registrar General or any renewed summons to be issued by such Judge and also to require and by the like means to compel the payment by the person guilty of such disobedience of any costs thereby occasioned. But no such application or proceeding shall prejudice any right of action upon breach of covenant which would otherwise subsist for damages in excess of such costs.] Powers of Registrar. To inspect documents. And require production of deeds under covenant.
- (2.) [He may mark or stamp any instrument produced to him with a memorandum indicating such production and the number distinguishing the application in reference whereto the same was produced.]
- (2. 3.) He may summon any such proprietor mortgagee or other person [making application or interested in the subject of any application or dealing] as aforesaid to appear [before the Registrar General or any Examiner of Titles at the Registrar General's Office] and give any explanation. To summon and examine witness.

explanation respecting such land or the instruments affecting the title thereto and if upon requisition in writing made by the Registrar General such proprietor mortgagee or other person refuses or neglects to produce any such instrument or to allow the same to be inspected or refuses or neglects to give any explanation which he is hereinbefore required to give or knowingly misleads or deceives any person hereinbefore authorized to demand any such explanation he shall for each such offence incur a penalty not exceeding one hundred pounds and the Registrar General if the instrument or information so withheld appears to him material shall not be bound to proceed with the bringing of such land under the provisions of this Act or with the registration of such transfer or other dealing or with the issuing of such registration abstract as the case may be.

To administer oaths.
To correct errors.

- (3. 4.) He may administer oaths or may take a statutory declaration in lieu of administering an oath.
(4. 5.) He may upon such evidence as shall appear to him and the Land Titles Commissioners sufficient in that behalf [so far as practicable without prejudicing the rights conferred by this Act upon transferees for value] correct errors in certificates of title or in the Register Book or in entries made therein respectively and may supply entries omitted to be made under the provisions of this Act Provided always that in the correction of any such error he shall not erase or render illegible the original words and shall affix the date on which such correction was made or entry supplied with his initials and every certificate of title so corrected and every entry so corrected or supplied shall have the like validity and effect as if such error had not been made or such entry omitted ~~except as regards any entry made in the Register Book prior to the actual time of correcting the error or supplying the omitted entry.~~

To enter caveats.

- (5. 6.) He may enter caveat on behalf of any person who shall be under the disability of infancy coverture lunacy unsoundness of mind or absence from the Colony or on behalf of Her Majesty Her Heirs or Successors to prohibit the transfer or dealing with any land belonging or supposed to belong to any such persons as hereinbefore mentioned and also to prohibit the dealing with any land in any case in which it shall appear to him that an error has been made by misdescription of such land or otherwise in any certificate of title or other instrument or for the prevention of any fraud or improper dealing.

PART II.—*Procedure in bringing Land under the provisions of this Act.*

Land alienated in fee from the Crown after this Act to be subject to its provisions.

12. All waste lands and all lands set apart for public purposes remaining unalienated from the Crown on the day on which this Act shall come into operation shall when alienated in fee be subject to the provisions of this Act The grants of such land shall be in duplicate [and the registration of one part thereof although the same may not be bound up in the Register Book until afterwards shall be deemed an enrolment of record of such grant and such enrolment shall relate back to the day of the date of the grant and the other part of the grant when marked in the manner required by the thirty-fourth section of this Act shall be sufficient evidence of a duly enrolled grant of the land therein described to the person therein named on the day of the date of such other part] and every such grant in addition to proper words of description shall contain a diagram of the land thereby granted on such scale as the Governor with the advice aforesaid may from time to time direct and shall be delivered to the Registrar General who shall register the same in manner hereinafter directed.

Lands granted prior to this Act may be brought under its operation.

13. Land alienated from the Crown in fee prior to the day on which this Act shall come into operation (whether such land shall constitute the whole or only part of the land included in any grant) may be brought under the provisions of this Act in the following manner that is to say—The Registrar General shall receive applications in form A of the Schedule hereto if made by any of the following persons:—

By any person claiming to be the person in whom the fee simple is vested in possession either at law or in equity [or claiming a power of disposition over the fee simple] Provided that wherever trustees seised in fee simple have no express power to sell the land which they may seek to bring under the operation of this Act the person claiming to be beneficially entitled for the first life estate or other greater estate than a life estate in the said land shall join in such application.

By any person claiming a life estate in possession or a leasehold for a life or lives or having a term of not less than twenty-five years then current. Provided that except in the case of an application by a lessee as regards the concurrence of his lessor all persons claiming to be beneficially entitled in reversion or remainder shall join in such application.

Undivided share and mortgaged lands may not be brought under Act except conditions.

Provided always that no such application shall be received from any person claiming to be entitled to an undivided share of any land unless the [each] person who shall appear to be entitled to the [any] other undivided share of the said land shall join in such application with a view to bringing the entirety under the provisions of this Act nor from the mortgagor of any land unless the mortgagee shall join in such application nor from the mortgagee of any land except in the exercise of a power of sale contained in the mortgage deed nor for any land subject to the lien of any judgment or execution creditor unless such creditor shall consent to such application [affected by caveat issued in pursuance of any writ of execution as hereinafter provided unless in furtherance thereof] nor from a married woman [otherwise than in the exercise of a power of sole appointment] unless her husband shall join in such application [and she be also separately examined as hereinafter provided] Provided also that the father or if the father be dead the mother or other guardian of any infant or the committee or guardian of any lunatic or person of unsound mind may make such application in the name of such infant lunatic or person of unsound mind.

Applicant to surrender instruments of title and to furnish abstract if required.

14. Every such applicant shall when making his application deposit with the Registrar General all instruments in his possession or under his control constituting or in any way affecting his title and in the case of a leasehold a duplicate or certified copy of the lease and of any other instrument under which the applicant claims title and shall furnish a schedule of such instruments and also if required an abstract of his title and shall in his application state the nature of his estate or interest and of every estate or interest held therein by any other person whether at law or in equity in possession or in futurity or expectancy and whether

whether the land be occupied or unoccupied and if occupied the name and description of the occupant and the nature of his occupancy and whether such occupancy be adverse or otherwise and shall state the names and addresses of the occupants and proprietors of all lands contiguous to the land in respect to which application is made so far as known to him and that the schedule so furnished includes all instruments of title to such land in his possession or under his control and shall make and subscribe a declaration to the truth of such statement and such applicant may if he think fit in his application require the Registrar General at the expense of such applicant to cause personal notice of his application to be served upon any person whose name and address shall for that purpose be therein stated.

15. Upon the receipt of such application the Registrar General shall cause the title of the applicant to be examined and reported upon by the Examiners and shall thereafter refer the case to the Lands Titles Commissioners for their consideration and if it shall appear to such Commissioners that the applicant proprietor is the original grantee from the Crown of the land in respect to which application is made and that no sale mortgage or other encumbrance or transaction affecting the title of such land has at any time been registered in the Colony and that such applicant has not required notice of his application to be served personally upon any person then in such case it shall be lawful for the Commissioners to direct the Registrar General to bring such land under the provisions of this Act forthwith by issuing to the applicant proprietor or to such person as he or [if thereunto duly authorized] the person applying in his behalf may by writing under his hand direct a certificate of the title for the same as hereinafter described [And in every case in which the applicant shall be entitled to dispose of the land by appointment such direction in writing shall operate as a valid appointment for the purpose of giving effect to such direction notwithstanding the omission of any sealing or special mode of attestation or other formality prescribed by the power.]

Application how to be dealt with. When applicant is original grantee and no transactions registered.

*[15A. After an application shall have been made to have any land brought under the provisions of this Act a Judge of the Supreme Court may require all persons having any deeds or instruments of title relating to or affecting the subject of such application (whether liable to be summoned by the Registrar General under the powers conferred on him by this Act or not) to produce the same at the Registry Office to the Registrar General or an Examiner of Titles for inspection and perusal on such terms and subject to such conditions and for such charge or fee as the Judge making such order shall think just and shall fix. And all applications to be made to a Judge under this provision may be made by summons in Chambers by the applicant proprietor or by the person to whom he shall have directed a certificate of title to be issued. And disobedience of any such order shall be punishable by attachment as for a contempt of Court and any damage sustained in consequence thereof shall be recoverable in an action at law by the person sustaining the same.]

Judge may order production of deeds to Registrar General or Examiners.

[15B. It shall be lawful for the Judge making any such order as aforesaid to revoke or amend the same at any time in case the person upon whom such order is made shall satisfy the Judge of the existence of any objection to a compliance therewith which would be valid on the trial of an issue in any Court of law or equity touching the same matter. And it shall be lawful for any such Judge on the like grounds or on the ground of exceeding the limit of the authority hereinbefore conferred to set aside any summons issued by the Registrar General for the appearance of any witness or production of any deed or writing. And in every such case the costs of all the proceedings connected therewith shall be in the discretion of the Judge and payable as he shall direct by any or either of the parties thereto.]

Judge may revoke order or set aside summons of Registrar General on cause shown.

16. If it shall appear to the satisfaction of the Commissioners that the land in respect to which application has been made is held by the applicant for the estate or interest described in such application free from mortgage encumbrance or other beneficial interest affecting the title thereto or if any such mortgage encumbrance or interest remain unsatisfied that the parties interested therein are also parties to such application and that the applicant has not required notice of his application to be served personally on any person then and in any such case the Commissioners shall direct the Registrar General to cause notice of such application to be advertised once in the *Gazette* and ~~three times~~ [once at least] in at least one daily newspaper published in Sydney and shall further limit and appoint a time not less than ~~one month~~ [fourteen days] nor more than twelve months from the date of the advertisement in the *Gazette* upon or after the expiration of which the Registrar General shall unless he shall in the interval have received a caveat forbidding him so to do proceed to bring such land under the provisions of this Act.

When applicant is not original grantee or any transactions registered.

17. If it shall appear to the satisfaction of the Commissioners that any parties interested in any unsatisfied mortgage or encumbrance affecting the title to such land or beneficially interested therein are not parties to such application or that the evidence of title set forth by the applicant is imperfect or that the applicant has required notice of his application to be served personally upon any person then and in such case it shall be lawful for the Commissioners to [may] reject such application altogether or at their discretion to [may] direct the Registrar General to cause notice of such application to be served in accordance with such requirement upon all persons who shall appear to them to have any interest in the land which is the subject of such application and to be advertised three times in at least one daily newspaper published in Sydney and in such newspapers published elsewhere as to such Commissioners may seem fit and to be published in the *Government Gazette* and in the *London Gazette* and in the official *Gazettes* of each of the Colonies of Victoria South Australia Queensland Tasmania and New Zealand or in any one or more of such *Gazettes* and the Commissioners shall specify the number of times and at what intervals such advertisements shall be published in each or any of such *Gazettes* and shall also limit and appoint a time not less than two months nor more than two years from the date of the first of such advertisements in the *Gazette* upon or after the expiration of which it shall be lawful for the Registrar General to bring such land under the provisions of this Act unless he shall in the interval have received a caveat forbidding him to do so.

When evidence of title is imperfect.

18.

* It is thought more convenient thus to number additional sections at present. When the Bill is finally prepared for submission to the Legislature all the sections will of course be placed in consecutive numbers.

Notice of application to be published.

18. The Registrar General shall under such direction as aforesaid or under any order of the Supreme Court cause notice to be published in such manner as by such direction or order may be prescribed that application has been made for bringing the land therein referred to under the provisions of this Act and shall also cause copy of such notice to be posted in a conspicuous place in his office and in such other places as he may deem necessary and shall forward by registered letter marked outside "Lands Titles Office" through the post office copy of such notice addressed to the persons if any whom the Commissioners shall have directed to be served with such notice and to the persons if any stated in the declaration by the applicant proprietor to be in occupation of such land [otherwise than as weekly tenants] or to be occupiers or proprietors of land contiguous thereto so far as his knowledge of the addresses of such persons may enable him and in case such applicant shall have required any such notice to be personally served upon any person named in his application then and in such case the Registrar General shall cause copy of such notice to be so served upon such person.

Land brought under Act.

19. If within the time limited in such direction or under any order of the Supreme Court any notice forwarded by registered letter as aforesaid shall not be returned to him by the Postmaster General and if within the time so limited he shall not have received a caveat as hereinafter described forbidding him so to do and in any case in which personal notice may be required as aforesaid if he shall have received proof to his satisfaction that such notice has been served the Registrar General shall pursuant to such direction of the Commissioners bring the land described in such application under the provisions of this Act by issuing to the applicant proprietor or to such person as he or [if thereunto authorized as aforesaid] the person applying in his behalf may by any writing under his hand direct a certificate of title for the same as hereinafter described.

Postmaster General to return notices on failure of service without delay.

20. ~~The Registrar General whenever any letter containing any notice shall be returned to him by the Postmaster~~ [The Postmaster General shall cause any such registered letter which shall not be delivered in due course to be returned to the Registrar General as soon as practicable after failure in such delivery without any such intervening delays and notifications as are or may be required by any law or regulation applicable in other cases And whenever any such letter shall be so returned the Registrar] General shall refer the case to the Commissioners for their further direction and whenever he shall be made aware that any notice required by any applicant to be served personally has failed to be or cannot be so served he shall notify the same to such applicant who if he think fit may by writing under his hand withdraw such requirement and the Registrar General shall thereupon report the case to the Commissioners who in either such case may reject the application altogether or direct the Registrar General to bring the land therein described under the provisions of this Act forthwith or after such further interval of notification or advertisement as they may deem fit.

On a return of notices or failure of personal service Registrar General to apply to Commissioners.

Parties interested may enter caveat.

21. Any person having or claiming an interest in any land so advertised as aforesaid or the attorney of any such person may within the time by any direction of the Commissioners for that purpose limited lodge a caveat with the Registrar General in form B of the Schedule hereto forbidding the bringing of such land under the provisions of this Act and every such caveat shall particularise the estate interest lien or charge claimed by the person lodging the same and the person lodging such caveat shall if required deliver a full and complete abstract of his title.

If caveat be received within time limited proceedings stayed.

22. The Registrar General upon receipt of any such caveat within the time limited as aforesaid shall notify the same to such applicant proprietor and shall suspend further action in the matter and the lands in respect of which such caveat may have been lodged shall not be brought under the provisions of this Act until such caveat shall have been withdrawn or shall have lapsed from any of the causes hereinafter provided or until a decision shall have been obtained from the Court having jurisdiction in the matter.

Caveats lapse unless proceedings taken within three months.

23. After the expiration of three months from the receipt thereof every such caveat shall be deemed to have lapsed unless the person by whom or on whose behalf the same was lodged shall within that time have taken proceedings in any [some] Court of competent jurisdiction to establish his title to the estate interest lien or charge therein specified and shall have given written notice thereof to the Registrar General or shall have obtained from the Supreme Court an order or injunction restraining the Registrar General from bringing the land therein referred to under the provisions of this Act [And during the said period of three months it shall be lawful either for the caveator or for any person interested in maintaining the application against which the caveat shall have been lodged respectively to apply to the Supreme Court or to a Judge thereof for a summons to the other party to show cause why the caveat shall not be further continued or be wholly removed as the same may be And it shall be lawful for such Court or Judge to make such order in the premises as with reference to the claim of the caveator and the time required for obtaining with due diligence an adjudication thereon by a competent Court shall seem just And if by such Order the caveat shall be continued in force beyond the said period of three months it shall at any time and from time to time thereafter be lawful for either party to apply to the said Court or Judge either for an additional continuance or a removal thereof respectively And for the said Court or Judge to make such further order in the premises as shall appear to be just And the costs of all such applications shall be in the discretion of such Court or Judge and paid by such of the parties as by any such order as aforesaid shall be determined And in the event of any caveat being wholly removed by such order such removal shall have the like effect in extinguishing any claim of the caveator as if such caveat had been withdrawn or had lapsed.]

Caveat may be removed or extended by order of a Judge.

Qualified certificates issuable in certain cases.

[23A. If it appear to the Commissioners that the evidence of title set forth by the applicant is satisfactory in all respects other than certain particulars admitting of exception or reservation and the applicant shall be willing to accept a certificate qualified in regard to such particulars it shall be lawful for the Commissioners to direct the Registrar General to grant such certificate accordingly and thereupon to specify or define any exception qualification or condition affecting the whole of the interests registered or any of them and also to reserve expressly the right of any person or class of persons and to describe any outstanding right or possibility of claim or interest subject to which such registration is made and if there be any disputed question of boundary between the applicant and any proprietor of adjoining land which shall not have been determined by any competent authority it shall be competent either for the applicant or any such proprietor of adjoining land to object to the determination of such question by the

the Commissioners and if any such objection shall be made the Registrar General shall specify upon the certificate of title the existence of such disputed question of title and that the registration is subject thereto.]

[23B. It shall be lawful for the holder of any qualified certificate which shall be issued under the next preceding section to make application at any future time for the removal of the qualification and if such application be grounded on the happening of any subsequent event or producing of sufficient evidence of any fact which if the same had happened or been established before the issuing of the certificate would have rendered the qualification inapplicable then such application may be made upon payment of an office fee of *ten shillings* to the Registrar General who may if satisfied as to the grounds of the application either cancel the qualification by a memorandum on the existing certificate or issue upon a surrender thereof a new and unqualified certificate. But if the application be grounded on any question of law or fact which any adverse claimant may be interested in disputing the same shall be made to a Judge of the Supreme Court who may if he see fit grant a rule to shew cause before the said Court why such qualification shall not be cancelled and such rule shall be served upon the Registrar General and such other parties as the Judge shall direct and after such hearing and upon such evidence as shall be satisfactory to the said Court it shall be lawful for the said Court to make such order in the premises as shall appear to be just and such order shall be sufficient authority to the Registrar General to make such alterations in the certificate or issue such new certificate as may thereby be directed and the said Court may if it see fit direct any issue of fact to be tried in relation to the application and all costs attendant on the application and upon any proceedings arising thereunder shall be paid by the applicant unless or so far as the said Court shall direct that the same or any part thereof be paid by any other person.]

Qualification may be removed afterwards on cause shewn.

24. Any applicant proprietor may withdraw his application at any time prior to the issuing of the certificate of title and the Registrar General shall in such case upon request in writing signed by such applicant proprietor return to him or to the person if any notified in such application as having a lien upon such instruments the abstract and all instruments of title deposited by such proprietor for the purpose of supporting his application.

Applicant proprietor may withdraw his application.

25. Upon issuing a certificate of title bringing land under the provisions of this Act the Registrar General shall stamp as cancelled every instrument of title deposited by the proprietor when making his application and in case of a leasehold shall indorse upon the lease so deposited a memorandum stating that such lease has been brought under the provisions of this Act and shall certify such memorandum under his hand and seal and shall return such lease to the applicant annexing thereto the certificate of title as aforesaid and shall file in his office the duplicate or certificate [certified] copy of such lease hereinbefore directed to be furnished by such applicant. Provided that if any such instrument [or any instrument produced in support of any application] shall relate to or include any property whether personal or real other than the land included in such certificate of title then the Registrar General shall indorse thereon [or on the last in order of such instruments as he shall see fit] a memorandum cancelling the same in so far only as relates to the land included in such certificate of title and shall return such instrument to such proprietor otherwise he shall retain the same in his office and no person shall be entitled to the production of such instrument so stamped except upon the written order of the applicant proprietor or of some person claiming through or under him or upon the order of a Judge of the Supreme Court.

Instruments of title how to be dealt with.

[25A. Instruments which have been or shall be retained under the preceding section shall be deemed deeds or documents deposited within the meaning of the twenty-fifth section of the Titles to Land Act of 1858.]

Instruments retained under this Act to satisfy 22 Vic. No. 1 s. 25.

[25B. No such cancellation of any instrument whether wholly or partially shall operate as an extinguishment of any covenant for title therein contained nor shall the protection against loss derived under this Act by the covenantee or any person claiming under him be any valid defence to an action for such damages as but for such protection he would have sustained. And such action may be maintained either in the name of the covenantee or the person claiming under him or in the name of the Registrar General. And in either case for the purpose of relieving the assurance fund to the extent of the damages recoverable thereunder from any loss consequent on the defect of title to which the covenant is applicable notwithstanding that such loss shall result from compensation to the person whose right of action is barred by this Act and not directly to the covenantee or any person claiming under him. And the bringing of land under this Act shall not in any case operate to release any bond of indemnity or guarantee affecting the title thereto but the same may if deposited with the Registrar General be enforced in like manner in aid of the assurance fund as hereinbefore is provided in respect to covenants.]

Covenants for title to remain in force for protection of the assurance fund.

26. In case an applicant proprietor or the person to whom an applicant proprietor may have directed certificate of title to be issued shall die in the interval between the date of his application and the date appointed for the certificate of title to issue in accordance with the provisions hereinbefore contained the certificate of title shall be issued in the name of such applicant proprietor or in the name of the person to whom he may have directed it to be issued as the case may require and such land shall devolve in like manner as if the certificate of title had been issued prior to the death of such applicant proprietor or person so named by him.

How certificate of title to issue in case of previous death of applicant.

27. Upon the first bringing of land under the provisions of this Act whether by the alienation thereof in fee from the Crown or consequent upon the application of the proprietor as hereinbefore provided and also upon the registration of the title to an estate of freehold in possession in land under the provisions of this Act derived through the will or intestacy of a previous proprietor or under any settlement there shall be paid to the Registrar General the sum specified in the Schedule hereto marked P and in the case of land brought under the provisions of this Act by alienation in fee from the Crown the price paid for such land shall be deemed and taken to be the value thereof for the purpose of levying such sum and in all other cases as aforesaid such value shall be ascertained by the oath or solemn affirmation [declaration] of the applicant proprietor or person deriving such land by transmission. Provided always that

Per centage in the pound to be levied for assurance of title.

that if the Registrar General shall not be satisfied as to the correctness of the value so declared or sworn to it shall be lawful for him to require such applicant proprietor or person deriving such land to produce a certificate of such value under the hand of a sworn valuator ~~which~~ [whose fee shall be paid by the applicant and whose] certificate shall be received as conclusive evidence of such value for the purpose aforesaid.

[27A. Whenever the title of any applicant shall be imperfect only in particulars involving no greater risk than may be reasonably met by an addition to the ordinary amount of assurance fee it shall be lawful for the Commissioners instead of rejecting the application or noting any contingent or doubtful claim on the certificate to require as a condition or compliance with such application the payment of such amount in addition to the assurance fee specified in Schedule P as they shall consider just and it shall in that case be at the option of the applicant either to pay the amount so required or to withdraw his application.]

28. All sums of money so received shall be paid to the Colonial Treasurer who shall from time to time invest such sums together with all interest and profits which may have accrued thereon in New South Wales Government securities to constitute an Assurance Fund for the purposes hereinafter provided.

29. The bringing of land under the provisions of this Act shall not be held to extinguish the reversion expectant on any lease [in the reversion expectant thereon] and the person named in any certificate of title as entitled to the land therein described shall be held in every Court of Law and Equity to be seised of the reversion expectant upon any lease that may be noted by memorial thereon and to have all powers rights and remedies to which a reversioner is by law entitled and shall be subject to all covenants and conditions therein expressed to be performed on the part of the lessor.

PART III.—Register Book—Mode of Registering and effect of Registration.

30. The Registrar General shall keep a book to be called the "Register Book" and shall bind up therein the duplicates of all grants and of all certificates of title and each grant and certificate of title shall constitute a separate folium of such book and the Registrar General shall record thereon the particulars of all instruments dealings and other matters by this Act required to be registered or entered on the Register Book affecting the land included under each such grant or certificate of title distinct and apart.

31. Every certificate of title shall be in duplicate in the form C of the Schedule hereto and shall set forth the nature of the estate of freehold in respect to which it is issued and the Registrar General shall note thereon in such manner as to preserve their priority the particulars of all unsatisfied mortgages or other encumbrances and of any dower lease or rent charge to which the land may be subject and if such certificate of title be issued to a minor or to a person otherwise under disabilities he shall state the age of such minor or the nature of the disability so far as known to him and shall cause one original of each certificate of title to be bound up in the Register Book and deliver the other to the proprietor entitled to the land described therein.

32. Before bringing under the provisions of this Act an estate in fee simple or in fee tail in any land in respect to which a certificate of title has been issued for any leasehold estate or interest the Registrar General shall ~~else~~ [enter upon] the folium of the Register Book constituted by the certificate of title of such leasehold and shall ~~carry forward upon~~ [a reference to the folium of] the certificate of title issued in respect to such estate in fee [and shall enter upon such last-mentioned certificate and folium a] memorials of such leasehold estate or interest and of all mortgages or other interests affecting the same then registered and still current and the memorials of all future dealings with such leasehold estate or interest hereinafter directed to be registered shall be entered upon the folium of the Register Book constituted by the certificate of title representing the fee [a like reference shall be entered on the duplicate certificate of such leasehold whenever produced for the purpose and shall be continued in all future certificates or memorials affecting the same hereby directed to be registered.]

33. Every certificate of title duly authenticated under the hand and seal of the Registrar General shall be received in all Courts of Law and Equity as evidence of the particulars therein set forth and of their being entered in the Register Book and shall [except in the cases hereinafter expressly excepted] be conclusive evidence that the person named in such certificate of title or in any entry thereon as seised of or as taking estate or interest in the land therein described is seised or possessed of or entitled to such land for the estate or interest therein specified and that the property comprised in such certificate of title has been duly brought under the provisions of this Act and no certificate of title shall be impeached or defeasible on the ground of want of notice or of insufficient notice of the application to bring the land therein described under the provisions of this Act or on account of any error omission or informality in such application or in the proceedings pursuant thereto by the Commissioners or by the Registrar General [nor shall the same be so impeached or defeasible to the prejudice of any *bonâ fide* transferee for value on account of any fraud error or omission in such application.]

34. Every land grant and certificate of title shall be deemed and taken to be registered under the provisions and for the purposes of this Act so soon as the same shall have been marked by the Registrar General with the folium and volume as embodied in the Register Book and every memorandum of transfer or other instrument purporting to transfer or in any way to affect land under the provisions of this Act shall be deemed to be so registered so soon as a memorial thereof as hereinafter described shall have been entered in the Register Book upon the folium constituted by the existing grant or certificate of title of such land and the person named in any grant certificate of title or other instrument so registered as seised of or taking any estate or interest shall be deemed to be the registered proprietor thereof.

35. Except as in hereafter otherwise provided every grant or other instrument presented for registration shall be in duplicate and shall unless a Crown grant be attested by a witness and shall be registered in the order of time in which the same is produced for that purpose and instruments registered in respect to or affecting the same estate or interest shall notwithstanding any express implied or constructive notice be entitled in priority the one over the other according to the date of registration and not according to the date of each instrument itself and the Registrar General upon registration thereof shall file one original in his office and shall deliver the other to the person entitled thereto and so soon as registered every instrument drawn in any of the several forms provided in the Schedule hereto or in any form which for the same purpose may be authorized in conformity with the provisions of this Act shall for the purposes of this Act be deemed and taken to be embodied in the Register Book as part and parcel thereof and such instrument

when

Special assurance fees chargeable in certain cases.

Moneys levied to form assurance fund.

Reversion expectant on lease not to be extinguished.

Registrar General to keep register book.

Certificate of title to be in duplicate and bound up in register.

If issued to person under disability such disability to be stated.

Registration where certificate of leasehold issued.

Certificate to be conclusive evidence of title and that the land has been duly brought under the Act.

Grants and certificates of title registered when embodied in Register Book.

Instruments registered when memorial entered in Register Book.

Definition of registered proprietor.

Instruments to be in duplicate.

Instruments entitled to priority according to date of registration.

And when registered to be deemed embodied in Register Book and to have the effect of a deed.

when so constructively embodied and stamped with the seal of the Registrar General shall have the effect of a deed duly executed by the parties signing the same.

36. In every instrument creating or transferring any estate or interest in land under the provisions of this Act there shall be implied the following covenant by the party creating or transferring such estate or interest that is to say That he will do such acts and execute such instruments as in accordance with the provisions of this Act may be necessary to give effect to all covenants conditions and purposes expressly set forth in such instrument or by this Act declared to be implied against such party in instruments of a like nature.

General covenants to be implied in instruments.

37. Every memorial entered in the Register Book shall state the nature of the instrument to which it relates the day and hour of the production of such instrument for registration the names of the parties thereto and shall refer by number or symbol to such instrument and shall be signed by the Registrar General.

Memorial defined.

38. Whenever a memorial of any instrument has been entered in the Register Book the Registrar General shall except in the case of transfer or other dealing indorsed upon any grant certificate or other instrument as hereinafter provided record the like memorial on the duplicate grant certificate or other instrument evidencing title to the estate or interest intended to be dealt with or in any way affected unless the Registrar General shall as hereinafter provided dispense with the production of the same and the Registrar General shall indorse on every instrument so registered a certificate of the date and hour on which the said memorial was entered in the Register Book and shall authenticate each such certificate by signing his name and affixing his seal thereto and such certificate shall be received in all Courts of Law and Equity as conclusive evidence that such instrument has been duly registered.

Memorial to be recorded on duplicate grant or other instrument.

39. No instrument until registered in manner hereinbefore prescribed shall be effectual to pass any estate or interest in any land under the provisions of this Act or to render such land liable as security for the payment of money but upon the registration of any instrument in manner hereinbefore prescribed the estate or interest specified in such instrument shall pass or as the case may be the land shall become liable as security in manner and subject to the covenants conditions and contingencies set forth and specified in such instrument or by this Act declared to be implied in instruments of a like nature and should two or more instruments executed by the same proprietor and purporting to transfer or encumber the same estate or interest in any land be at the same time presented to the Registrar General for registration and indorsement he shall register and indorse that instrument under which the person claims property who shall present to him the grant or certificate of title of such land for that purpose.

Certificate of registration to be evidence.
Instruments not effectual until entry in Register Book.

[39A. The land included in any certificate of title registered instrument or entry on the register shall by implication and without any special mention be deemed to be subject to any subsisting reservations exceptions conditions and powers contained in the original grant thereof from the Crown also to any right of way or other easement howsoever created also to any unpaid municipal road water or other rates or taxes affecting such land and to any conditions now or hereafter to be imposed by law for the alignment of streets.]

Certain incidents of to be applied in certificates.

40. Notwithstanding the existence in any other person of any estate or interest whether derived by grant from the Crown or otherwise which but for this Act might be held to be paramount or have priority the registered proprietor of land or of any estate or interest in land under the provisions of this Act shall except in case of fraud [wherein he shall have participated or colluded] hold the same subject [in addition to the incidents implied by virtue of the next preceding section] to such encumbrances liens estates or interests as may be notified on the folium of the Register Book constituted by the grant or certificate of title of such land but absolutely free from all other encumbrances liens estates or interests whatsoever except the estate or interest of a proprietor claiming the same land under a prior certificate of title or under a prior grant registered under the provisions of this Act and except as regards the omission or misdescription of any right of way or other easement created in or existing upon any land and except so far as regards any portion of land that may by wrong description of parcels or of boundaries be included in the grant certificate of title lease or other instrument evidencing the title of such registered proprietor not being a purchaser or mortgagee thereof for value or deriving from or through a purchaser or mortgagee thereof for value [and except the estate or interest of a proprietor claiming the same land under a prior certificate of title or under a prior grant registered under the provisions of this Act and which priority shall in favor of any person in possession of land be computed with reference to the grant or earliest certificate of title under which he or any person through whom he derives title shall have held such possession notwithstanding the surrender of such grant or certificate in exchange for a new certificate upon any transfer or dealing.]

Estate of registered proprietor [how far] paramount.

41. The Registrar General shall not register any instrument purporting to transfer or otherwise to deal with or affect any estate or interest in land under the provisions of this Act except in the manner herein provided nor unless such instrument be in accordance with the provisions hereof.

Instruments not to be registered unless in accordance with prescribed forms.

[41A. Before the delivery of any duplicate grant or of any certificate of title a receipt for it in the handwriting of the proprietor or person entitled to the land therein mentioned shall be required to be signed by him when practicable (so as to prevent as far as may be personation) and this enactment shall also extend to requiring when practicable the signature of any transferee lessee mortgagee or encumbrancee of any transfer lease memorandum of mortgage or of encumbrance.]

Receipts may be required for duplicate grants and certificates.

[41B. No instrument affecting land of which any person shall be registered as proprietor under this Act or any memorial of any such instrument shall be registered under any Act passed by the Legislature of New South Wales concerning the registration of instruments relating to or in any manner affecting land and if such registration be made the same shall have no effect and every such Act so far as it relates to any land which shall be under the provisions of the *Real Property Act* shall be and is hereby repealed and if registered shall have no effect.]

Previous registration Acts repealed so far as relates to land under the *Real Property Act*.

PART IV.

PART IV.—Dealings.

- Transfer.** 42. When land under the provisions of this Act or any estate or interest in such land is intended to be transferred or any right of way or other easement is intended to be created or transferred the registered proprietor may execute a memorandum of transfer in form D or E of the Schedule hereto which memorandum shall for description of the land intended to be dealt with refer to the grant or certificate of title of such land or shall give such description as may be sufficient to identify the same and shall contain an accurate statement of the estate interest or easement intended to be transferred or created and a memorandum of all leases mortgages and other encumbrances to which the same may be subject and such memorandum of transfer if it purports to deal with an estate in respect to which a certificate of title is by this Act authorized to be issued or if it be indorsed on the instrument evidencing the title of the transferee need not be in duplicate.
- Easements and incorporeal rights to be registered.** 43. Whenever any easement or any incorporeal right ~~other than an annuity or rent charge~~ in or over any land under the provisions of this Act is created for the purpose of being annexed to or used and enjoyed together with other land under the provisions of this Act the Registrar General shall enter a memorial of the instrument creating such easement or incorporeal right upon the folium of the Register Book constituted by the existing grant or certificate of title of such other land.
- If estate of freehold be transferred certificate of title to be delivered up and cancelled so far as regards the land transferred.** 44. If the memorandum of transfer purports to transfer an estate of freehold in possession in the whole or in part of the land mentioned in any grant or certificate of title the transferee shall deliver up the grant or certificate of title of the said land and the Registrar General shall after registering the transfer enter on such grant or certificate of title a memorandum cancelling the same either wholly or partially according as the memorandum of transfer purports to transfer the whole or part only of the land mentioned in such grant or certificate of title and setting forth the particulars of the transfer.
- Fresh certificate to be issued to purchaser.** 45. The Registrar General upon cancelling any grant or certificate of title either wholly or partially pursuant to any such transfer shall make out to the transferee a certificate of title to the land mentioned in such memorandum of transfer and every such certificate of title shall refer [if practicable] to the original grant of such land and to the memorandum or other instrument of transfer and the Registrar General shall retain every such memorandum of transfer and cancelled or partially cancelled grant or certificate of title and whenever required thereto by the proprietor of an unsold portion or balance of land included in any such partially cancelled grant or certificate of title or by a registered transferee of such portion or of any part thereof shall make out to such proprietor or transferee a certificate of title for such portion or for any part thereof of which he is the proprietor or transferee.
- A certificate for any untransferred portion to be issued to proprietor or to registered transferee.** 46. In every instrument transferring an estate or interest in land under the provisions of this Act subject to mortgage or encumbrance there shall be implied the following covenant by the transferee that is to say that such transferee will pay the interest or annuity or rent charge secured by such mortgage or encumbrance after the rate and at the times specified in the instrument creating the same and will indemnify and keep harmless the transferee from and against the principal sum [or other moneys] secured by such instrument and from and against all liability in respect of any of the covenants therein contained or by this Act implied on the part of the transferee.
- Transfer of mortgage and of encumbrance and of lease.** 47. Upon the registration of any transfer [of mortgage lease or encumbrance] the estate or interest of the transferee as set forth in such instrument with all rights powers and privileges thereto belonging or appertaining shall pass to the transferee and such transferee shall thereupon become subject to and liable for all and every the same requirements and liabilities to which he would have been subject and liable if named in such instrument originally as mortgagee encumbrancee or lessee of such land estate or interest.
- Transfer of mortgage or lease transfers right to sue.** 48. By virtue of every such transfer the right to sue upon any memorandum of mortgage or other instrument and to recover any debt sum of money annuity or damages thereunder (notwithstanding the same may be deemed or held to constitute a chose in action) and all interests [subsisting at the time of transfer] in any such debt sum of money annuity or damages shall be transferred so as to vest the same at law as well as in equity in the transferee thereof Provided always that nothing herein contained shall prevent a Court of Equity from giving effect to any trusts affecting the said debt sum of money annuity or damages in case the transferee shall hold the same as a trustee for any other person.
- Saving to Courts of Equity as to trusts.** 49. When any land under the provision of this Act is intended to be leased or demised for a life or lives or for any term of years exceeding three years the proprietor shall execute a memorandum of lease in form F of the Schedule hereto and every such instrument shall for description of the land intended to be dealt with refer to the grant or certificate of title of the land or shall give such other description as may be necessary to identify such land and a right for or covenant by the lessee to purchase the land therein described may be stipulated in such instrument and in case the lessee shall pay the purchase money stipulated and otherwise observe his covenants expressed and implied in such instrument the lessor shall be bound to execute a memorandum of transfer to such lessee of the said land and the fee simple thereof and to perform all necessary acts by this Act prescribed for the purpose of transferring to a purchaser the said land and the fee simple thereof Provided always that no lease of mortgaged or encumbered land shall be valid and binding against the mortgagee or encumbrancee unless such mortgagee or encumbrancee shall have consented to such lease prior to the same being registered.
- Lands under the provisions of this Act—how leased.** 50. Whenever any lease or demise which is required to be registered by the provisions of this Act is intended to be surrendered and the surrender thereof is effected otherwise than through the operation of a surrender in law or than under the provisions of any law at the time being in force in the Colony relating to insolvent estates there shall be indorsed upon such lease or on the counterpart thereof the word "surrendered" with the date of such surrender and such endorsement shall be signed by the lessee and by the lessor as evidence of the acceptance thereof and shall be attested by a witness and the Registrar General thereupon shall enter in the register book a memorandum recording the date of such surrender and shall likewise indorse upon the lease a memorandum recording the fact of such entry having been made in the register book and upon such entry having been so made in the register book the estate or interest of the lessee in such land shall revert in the lessor or in the person in whom having regard to intervening circumstances (if any) the said land would have vested if no such lease had ever been executed and production of such lease or counterpart bearing such indorsement and memorandum shall be sufficient evidence that such lease had been so surrendered Provided that no lease subject to mortgage or encumbrance shall be so surrendered without the consent of the mortgagee or encumbrancee.
- Lease may be surrendered by indorsement by lessee with concurrence of lessor.**

51. In every memorandum of lease there shall be implied the following covenants against the lessee that is to say—

Covenants to be implied in every lease against the lessee.

- (1.) That he will pay the rent thereby reserved at the times therein mentioned and all rates and taxes which may be payable in respect of the demised property during the continuance of the lease.
- (2.) That he will at all times during the continuance of the said lease keep and at the determination thereof yield up the demised property in good and tenantable repair accidents and damage from fire storm and tempest and reasonable wear and tear excepted.

52. In every memorandum of lease there shall also be implied the following powers in the lessor that is to say—

Powers to be implied in lessor.

- (1.) That he may by himself or his agents twice in every year during the term at a reasonable time of the day upon giving to the lessee two days previous notice enter upon the demised property and view the state of repair thereof and may serve upon the lessee or leave at his last or usual place of abode in this Colony or upon the demised property a notice in writing of any defect requiring him within a reasonable time to be therein prescribed to repair the same.
- (2.) That in case the rent or any part thereof shall be in arrear for the space of ~~six~~ [one] calendar months or in case default shall be made in the fulfilment of any covenant whether expressed or implied in such lease on the part of the lessee and shall be continued for the space of ~~six~~ [one] calendar months or in case the repairs required by such notice as aforesaid shall not have been completed within the time therein specified it shall be lawful for such lessor to re-enter upon and take possession of such demised premises.

53. In any such case [in which a memorandum of lease shall be executed under this Act] the Registrar General upon proof to his satisfaction of lawful re-entry and recovery of possession by a lessor shall note the same by entry in the register book and the estate of the lessee in such land shall thereupon determine but without releasing him from his liability in respect of the breach of any covenant in such lease expressed or implied and the Registrar General shall cancel such lease if delivered up to him for that purpose.

Registrar General to note particulars of re-entry in register book.

54. Whenever any land or estate or interest in land under the provisions of this Act is intended to be charged or made security in favor of any mortgagee the mortgagor shall execute a memorandum of mortgage in form G of the Schedule hereto [or as near thereto as circumstances will admit] and whenever any such land estate or interest is intended to be charged with or made security for the payment of an annuity rent charge or sum of money in favor of any [other] encumbrancee the encumbrancer shall execute a memorandum of encumbrance in form H [1 or H 2] of the Schedule hereto [or one of them or as near thereto as circumstances will admit] and every such instrument shall contain an accurate statement of the estate or interest intended to be mortgaged or encumbered and shall for description of the land intended to be dealt with refer to the grant or certificate of title of the land in which such estate or interest is held or shall give such other description as may be necessary to identify such land together with a statement of all [prior] mortgages and other encumbrances affecting the same if any.

Lands under this Act how mortgaged or encumbered.

55. Mortgage and encumbrance under this Act shall have effect as security but shall not operate as a transfer of the land thereby charged and in case default be made in the payment of the principal sum interest annuity or rent charge or any part thereof thereby secured or in the observance of any covenant expressed in any memorandum of mortgage or of encumbrance registered under this Act or that is hereinafter declared to be implied in such instrument and such default be continued for the space of one calendar month or for such other period of time as may therein for that purpose be expressly limited the mortgagee or encumbrancee may give to the mortgagor or encumbrancer notice in writing to pay the money then due or owing on such memorandum of mortgage or of encumbrance or to observe the covenants therein expressed or implied as the case may be and that sale will be effected unless such default be remedied or may leave [and it shall be sufficient if] such notice [be left] on the mortgaged or encumbered land or [be left or addressed through the Post Office] at the usual or last known place of abode in the Colony of the mortgagor or encumbrancer or other person claiming to be then entitled to the said land or with his known agent.

Mortgage or encumbrance not to operate as transfer.

Procedure in case of default.

56. After such default in payment or in observance of covenants continuing for the further space of one calendar month from the service of such notice or for such other period as may in such instrument be for that purpose limited such mortgagee or encumbrancee [unless and except so far as restrained by the express terms of the registered memorandum of mortgage or encumbrance] is hereby authorized and empowered to sell the land so mortgaged or encumbered or any part thereof and all the estate and interest therein of the mortgagor or encumbrancer and either altogether or in lots by public auction or by private contract or both such modes of sale and subject to such conditions as he may think fit and to buy in and resell the same without being liable for any loss occasioned thereby and to make and execute all such instruments as shall be necessary for effecting the sale thereof all which sales contracts matters and things hereby authorized shall be as valid and effectual as if the mortgagor or encumbrancer had made done or executed the same and the receipt or receipts in writing of the mortgagee or encumbrancee shall be a sufficient discharge to the purchaser of such land estate or interest or of any portion thereof for so much of his purchase money as may be thereby expressed to be received and no such purchaser shall be answerable for the loss misapplication or non-application or be obliged to see to the application of the purchase money by him paid nor shall he be concerned to inquire as to the fact of any default or notice having been made or given as aforesaid [nor be affected by express notice to the contrary] and the purchase money to arise from the sale of any such land estate or interest shall be applied first in payment of the expenses occasioned by such sale secondly in payment of the moneys which may then be due or owing to the mortgagee or encumbrancee thirdly in payment of subsequent mortgages or encumbrances if any in the order of their priority and the surplus if any shall be paid to the mortgagor or encumbrancer as the case may be.

Power to sell.

Appropriation of proceeds.

57. Upon proof to his satisfaction by statutory declaration that such default has been made and continued as aforesaid [Unless prevented by sufficient caveat or judicial proceeding] the Registrar General shall register any memorandum or instrument of transfer executed by a mortgagee or encumbrancee for the purpose

Registrar General to give effect to sale by mortgagee or encumbrancee.

purpose of such sale as aforesaid [if the same shall contain in addition to the usual form of transfer an allegation to the effect that the sale had been made in conformity to the conditions of the memorandum of mortgage or encumbrance taken in connection with this Act in regard to default and notice] and upon such registration the estate or interest or the mortgagor or encumbrancer as therein described to be conveyed shall pass to and vest in the purchaser freed and discharged from all liability on account of such mortgage or encumbrance registered subsequent thereto and if such memorandum of transfer purports to pass an estate of freehold in possession not being a life leasehold the purchaser shall be entitled to receive a certificate of title for the same.

In case of default entry and possession or distress ejection or foreclosure.

58. The mortgagee or encumbrancee upon default in payment of the principal sum or any part thereof or of any interest annuity or rent charge [or other moneys] secured by any mortgage or encumbrance may enter into possession of the mortgaged or encumbered land by receiving [and make any lease or accept the surrender of any lease or tendency thereof and may receive] the rents and profits thereof or may distress upon the occupier or tenant of the said land under the power to distress hereinafter contained [in exercise of any power which the mortgagor or encumbrancer might otherwise have exercised] for the rent then due or may bring an action of ejection to recover the said land either before or after entering into the receipt of the rents and profits thereof or making any distress as aforesaid and either before or [the purchaser may exercise the like powers] after any sale of such land shall be effected under the power of sale given or implied in his memorandum of mortgage or of encumbrance in the same manner in which he might have made such entry or distress [might have been made] or [action] brought such action if the principal sum or annuity were secured to him by a conveyance of the legal estate in the land so mortgaged or encumbered [were vested in the mortgagee or encumbrancee] and any such registered mortgagee shall be entitled to foreclose the right of the mortgagor to redeem the said mortgaged or encumbered lands in manner hereinafter provided.

Notice by mortgagee to tenant to pay rent to him to suspend mortgagor's right as landlord. Mortgagee's receipts to be absolute discharges.

59. Whenever a mortgagee or encumbrancee shall give notice of his demanding to enter into receipt of the rents and profits of the mortgaged or encumbered land to the tenant or occupier or other person liable to pay or account for the rents and profits thereof all the powers and remedies of the mortgagor or encumbrancer in regard to receipt and recovery of and giving discharges for such rents and profits shall be suspended and transferred to the said mortgagee or encumbrancee until such notice be withdrawn or the mortgage or encumbrance shall be satisfied and a discharge thereof duly registered and in every such case the receipt in writing of the mortgagee or encumbrancee shall be a sufficient discharge for any rents and profits therein expressed to be received and no person paying the same shall be bound to inquire concerning any default or other circumstance affecting the right of the person giving such notice beyond the fact of his being duly registered as mortgagee or encumbrancee of the land. Provided that nothing herein contained shall interfere with the effect of any rule order or judgment of the Supreme Court in regard to the payment of rent under the special circumstances of any case nor shall prejudice any remedy of the mortgagor or encumbrancer against the mortgagee or encumbrancee for wrongful entry [or sale] or for an account.

Mortgagee of leasehold entering into possession liable to lessor.

60. Any mortgagee or encumbrancee of leasehold land under the provisions of this Act or any person claiming the said land as a purchaser or otherwise from or under such mortgagee or encumbrancee after entering into possession of the said land or the rents and profits thereof shall during such possession and to the extent of any rents and profits which may be received by him become and be subject and liable to the lessor of the said land or the person for the time being entitled to the said lessor's estate or interest in the said land to the same extent as the lessee or tenant was subject to and liable for prior to such mortgagee encumbrancee or other person entering into possession of the said land or the rents and profits thereof.

Discharge of mortgages and encumbrances.

61. Upon the production of any memorandum of mortgage or of encumbrance having thereon an indorsement signed by the mortgagee or encumbrancee and attested by a witness discharging the land estate or interest from the whole or part of the principal sum or annuity [moneys or liability] secured or discharging any part of the land comprised in such instrument from the whole of such principal sum or annuity [moneys or liability] the Registrar General shall make an entry in the register book noting that such mortgage or encumbrance is discharged wholly or partially or that part of the land is discharged as aforesaid as the case may require and upon such entry being so made the estate or interest or the portion of land mentioned or referred to in such indorsement as aforesaid shall cease to be subject to or liable for [be released from] such principal sum or annuity [moneys or liability] or as the case may be for [from] the part thereof noted in such entry as discharged.

Entry of satisfaction of annuity.

62. Upon proof of the death of the annuitant or of the occurrence of the event or circumstance upon which in accordance with the provisions of any memorandum of encumbrance the annuity or sum of money thereby secured shall cease to be payable and upon proof that all arrears of the said annuity and interest or money have been paid satisfied or discharged the Registrar General shall make an entry in the register book noting that such annuity or sum of money is satisfied and discharged and shall cancel such instrument and upon such entry being made the land estate or interest shall cease to be subject to or liable for such annuity or sum of money and the Registrar General shall in any or either such case as aforesaid indorse on the grant certificate of title or other instrument evidencing the title of the mortgagor or encumbrancer to the land estate or interest mortgaged or encumbered a memorandum of the date on which such entry as aforesaid was made by him in the register book whenever such grant certificate of title or other instrument shall be presented to him for that purpose.

Mortgage money may be paid to Colonial Treasurer if mortgagee be absent from the Colony and mortgage discharged.

63. In case the registered mortgagee shall be absent from the Colony and there be no person authorized to give a receipt to the mortgagor for the mortgage money at or after the date appointed for the redemption of any mortgage it shall be lawful for the Colonial Treasurer to receive such mortgage money with all arrears of interest then due thereon in trust for the mortgagee or other person entitled thereto and thereupon the interest upon such mortgage shall cease to run or accrue and the Registrar General shall upon the receipt of the said Treasurer for the amount of the said mortgage money and interest make an entry in the Register Book discharging such mortgagee stating the day and hour on which such entry is made and such entry shall be a valid discharge for such mortgage and shall have the same force and effect as hereinbefore given to a like entry when made upon production of the memorandum

of

of mortgage with the receipt of the mortgagee and the Registrar General shall indorse on the grant certificate of title or other instrument as aforesaid and also on the memorandum of mortgage whenever those instruments shall be brought to him for that purpose the several particulars hereinbefore directed to be indorsed upon each of such instruments respectively.

64. In every memorandum of such mortgage there shall be implied against the mortgagor a covenant that he will repair and keep in repair all buildings or other improvements erected and made upon the land and that the mortgagee may at all convenient times until such mortgage be redeemed be at liberty with or without surveyors or others to enter into and upon such land to view and inspect the state of repair of such buildings or improvements.

65. Such of the covenants hereinafter set forth as shall be expressed in any memorandum of lease or mortgage as to be implied shall if expressed [or encumbrance] in the form of words hereafter appointed and prescribed for the case of each such covenant respectively be so implied as fully and effectually [shall be construed and take effect by implication] as if such covenants were set forth fully and in words

at length in such instrument that is to say the words "will insure" shall imply as follows—that the lessee or mortgagor [or encumbrancer] will insure and so long as the principal money and interest secured by mortgage [or encumbrance] shall remain unpaid or the term expressed in the said mortgage or lease shall not have expired will keep insured in the name of such mortgagee or lessor in some public insurance office to be approved by such mortgagee or lessor [or encumbrancee] against loss or damage by fire to the full amounts specified in such instrument or if no amount be specified then to their full value all buildings tenements or premises erected on such land which shall be of a nature or kind capable of being insured against loss or damage by fire and that the mortgagor or lessee [or encumbrancer] will at the request of the mortgagee or lessor [or encumbrancee] hand over to and deposit with him the policy of every such insurance and produce to him the receipt or receipts for the annual or other premiums payable on account thereof and also that all moneys to be received under or by virtue of any such insurance shall in the event of loss or damage by fire be laid out and expended in making good such loss or damage [or in payment of the moneys secured at the option of the mortgagee or encumbrancee] provided also

that if default shall be made in the observance or performance of the covenant last above-mentioned it shall be lawful for the mortgagee or lessor [or encumbrancee] without prejudice nevertheless to and concurrently with the powers granted him by his memorandum of mortgage or lease [or encumbrance] or by this Act provided to insure such building and the costs and charges of such insurance shall until such mortgage [or encumbrance] be redeemed [released or satisfied] or such lease shall have expired be a charge upon the said land recoverable in like manner as rent or interest in arrear The words "paint outside every alternate

year" shall imply as follows viz.—and also will in every alternate year during the currency of such lease paint all the outside woodwork and ironwork belonging to the hereditaments and premises mentioned in such lease with two coats of proper oil-colors in a workmanlike manner The words "paint and paper

inside every third year" shall imply as follows viz.—and will in every third year during the currency of such lease paint the inside wood iron and other works now or usually painted with two coats of proper oil-colors in a workmanlike manner and also re-paper with paper of a quality as at present such parts of the said premises as are now papered and also wash or top-whiten or color such parts of the said premises as are now whitened or colored respectively The words "will fence" shall imply as follows viz.—and

also will during the continuance of the said lease erect and put up on the boundaries of the land therein mentioned or upon such boundaries upon which no substantial fence now exists a good and substantial fence The word "cultivate" shall imply as follows viz.—and will at all times during the said lease cultivate use and manage all such parts of the land therein mentioned as are or shall be broken up or converted into tillage in a proper and husbandlike manner and will not impoverish or waste the same The words "that the lessee will not use the said premises as a shop" shall imply as follows viz.—and also that

the said lessee will not convert use or occupy the said hereditaments and premises mentioned in such lease or any part thereof into or as a shop warehouse or other place for carrying on any trade or business whatsoever or permit or suffer the said hereditaments and premises or any part thereof to be used for any such purpose or otherwise than as a private dwelling-house without the consent in writing of the said lessor The words "will not carry on offensive trades" shall imply as follows—and also that no noxious noisome or offensive art trade business occupation or calling shall at any time during the said term be used exercised carried on permitted or suffered in or upon the said hereditaments and premises above-mentioned and that no act matter or thing whatsoever shall at any time during the said term be done in or upon the said hereditaments and premises or any part thereof which shall or may be or grow to the annoyance nuisance grievance damage or disturbance of the occupiers or owners of the adjoining lands and hereditaments The words "will not without leave assign or sublet" shall imply as follows viz.—and also that

the said lessee shall not nor will during the term of such lease assign transfer demise sublet or set over or otherwise by any act or deed procure the lands or premises therein mentioned or any of them or any part thereof to be assigned transferred demised sublet or set over unto any person whomsoever without the consent in writing of the said lessor first had and obtained The words "will not cut timber" shall imply as follows—and also that the said lessee shall not nor will cut down fell injure or destroy any growing or living timber or timber-like trees standing and being upon said hereditaments and premises above-mentioned without the consent in writing of the said lessor The words "will carry on the business of a publican and conduct the same in orderly manner" shall imply as follows viz.—that the said lessee will at all times during the currency of such lease use exercise and carry on in and upon the premises therein mentioned the trade or business of a licensed victualler or publican and retailer of spirits wines ale beer and porter and keep open and use the messuage tenement or inn and buildings standing and being upon the said land as for an inn or public-house for the reception accommodation and entertainment of travellers guests and other persons resorting thereto or frequenting the same and manage and conduct such trade or business in a quiet and orderly manner and will not do commit or permit or suffer to be done or committed any act matter or thing whatsoever whereby or by means whereof any license shall or may be forfeited or become void or liable to be taken away suppressed or suspended in any manner howsoever The words "will apply for renewal of license" shall imply as follows viz.—and also shall and will from time to time during the continuance of the said term at the proper times for that purpose apply for and endeavour to obtain at his own expense all such licenses as are or may be necessary for carrying on the said trade or business of a licensed victualler or publican in and upon the said hereditaments and premises and keeping the said messuage tenement or inn open and as for an inn or public-house as aforesaid The words "will facilitate

the said messuage tenement or inn open and as for an inn or public-house as aforesaid The words "will facilitate

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Covenants to be implied in every memorandum of mortgage.

Abbreviated forms of words for covenants.

Insure.

Paint outside.

Paint and paper inside.

Fence.

Cultivate.

Not use as a shop.

Offensive trades.

Assign or sublet.

Cut timber.

Business of publican in orderly manner.

Apply for renewal of license.

Facilitate the transfer of license.

facilitate the transfer of license" shall imply as follows viz.—and also shall and will at the expiration or other sooner determination of the said lease sign and give such notice or notices and allow such notice or notices of a renewal or transfer of any license as may be required by law to be affixed to the said messuage tenement or inn to be thereto affixed and remain so affixed during such time or times as shall be necessary or expedient in that behalf and generally to do and perform all such further acts matters and things as shall be necessary to enable the said lessor or any other person authorized by him to obtain the renewal of any license or any new license or the transfer of any license then existing and in force.

No notice of trusts to be entered in Register Book.

Instrument declaring trusts may be deposited but not entered.

66. The Registrar General shall not make any entry in the Register Book of any neties [particulars] of trusts whether expressed implied or constructive but trusts may be declared by any instrument or deed which instrument or deed may include as well lands under the provisions of this Act as land which is not under the provisions thereof. Provided that the description of the several parcels of land contained in such instrument or deed shall sufficiently distinguish the land which is under the provisions of this Act from the land which is not under the provisions thereof and a duplicate or an attested copy of such instrument may be deposited with the Registrar General for safe custody and reference but shall not be registered [nor shall any reference which shall be made thereto in any registered instrument operate as notice of the particulars thereof nor shall express notice of such particulars in the absence of caveat interfere with the registration and full effect of any act or dealing of the registered owner which would otherwise be valid.]

How survivorship among trustees may be barred except on Judge's order.

67. Upon the transfer of any land estate or interest under the provisions of this Act to two or more persons as joint proprietors to be held by them as trustees it shall be lawful for the transferrer [or transferres] to insert in the memorandum of transfer or other instrument the words "no survivorship" [which words shall be construed to mean that the survivors or survivor shall have no power to transfer or deal with the land without the sanction of the Supreme Court or a Judge thereof unless for the purpose of transfer to a new trustee as hereafter provided] and the Registrar General shall in such case include such words in the memorial of such instrument to be entered by him in the Register Book as hereinbefore directed and shall also enter the said words upon any certificate of title issued to such joint proprietors pursuant to such memorandum of transfer. And any two or more persons registered as joint proprietors of any land estate or interest under the provisions of this Act held by them as trustees may by writing under their hand authorize the Registrar General to enter the words "no survivorship" upon the grant certificate of title or other instrument evidencing their title to such estate or interest and also upon the duplicate of such instrument in the Register Book or filed in his office and after such entry has been made and signed by the Registrar General in either such case as aforesaid it shall not be lawful for any less number of joint proprietors than the number then registered to transfer or otherwise deal with the said land estate or interest without obtaining the sanction of the Supreme Court or a Judge thereof [Provided further that if it be intended not to apply the said restriction until the trustees be reduced below a certain specified number words indicative of such intention may be entered in like manner and in that case the power of disposition by survivors shall continue until the number be so reduced.]

Survivors may nevertheless perform ordinary duties or transfer to new trustee.

[67A. Nothing contained in the last preceding section shall prevent the survivors or survivor from exercising all the powers and duties of the trust other than in regard to transfers and dealings under this Act nor from so transferring the land as to give effect to any valid appointment of a new trustee and so far as shall be necessary to ascertain the sufficiency of any such appointment it shall be lawful for the Registrar General or any Examiner of Titles to refer to the provisions of any instrument relating to the trust notwithstanding the same be not registered And the Registrar General may if fully satisfied of such sufficiency give effect thereto by registering any transfer made in accordance therewith without requiring any such judicial order as aforesaid.]

Notice to be published before order.

68. ~~Before making any such order as aforesaid the Court or Judge shall if it seem requisite cause notice of intention so to do to be advertised once in the Gazette and three times in at least one newspaper published in Sydney and shall~~ [It shall be lawful for the Registrar General before registering any such transfer or for the Court or Judge before making any order as aforesaid to cause such notice as may be deemed requisite either by public advertisement or otherwise and to] appoint a period of time within which it shall be lawful for any person interested to shew cause why such [transfer shall not be made or such] order ~~should not be issued and thereupon~~ it shall be lawful for the said Court or Judge in such order to give directions for the transfer of such land estate or interest to any new proprietor or proprietors solely or jointly with or in the place of any existing proprietor or to make such order in the premises as the Court [shall] thinks just for the protection of the persons beneficially interested in such land estate or interest or in the proceeds thereof and upon such order being deposited with the Registrar General he shall make such entries and perform [such] acts as in accordance with the provisions of this Act may be necessary for the purpose of giving effect ~~to such order~~ [thereto.]

Powers of Attorney.

69. The [Any application to bring land under the provisions of this Act may be made and signed on behalf of any person entitled to make the same by his attorney or agent authorized by any instrument or writing and any such instrument conferring authority to sell the land shall be held to imply a power to bring the same under this Act and direct to whom the certificate shall issue And any] registered proprietor of any land estate or interest under the provisions of this Act may authorize and appoint any person to act for him or on his behalf in respect to the transfer or other dealing with such land estate or interest in accordance with the provisions of this Act by executing a power in any form heretofore in use for the like purpose or in form I [1 or I 2] of the Schedule hereto and such power of attorney or a duplicate or certified copy thereof shall be filed in the Office of the Registrar General who shall enter in the Register Book a memorandum of the particulars therein contained and the date and hour when it was so filed.

Power of Attorney.

[69A. Every such power of attorney shall if filed within four months after the date thereof be deemed to be in force at the time of filing thereof unless a revocation thereof shall have been previously notified to the Registrar General in which case he shall refuse to file the same And after such filing the same shall remain in force for the purposes of this Act until revocation thereof shall have been notified to the Registrar General and entered in the Registry Book But nothing herein contained shall diminish the force and effect of any such power if filed afterwards.]

70. The Registrar General upon the application of any registered proprietor of land under the provisions of this Act shall grant to such proprietor a registration abstract in the form K of the Schedule hereto enabling him to transfer or otherwise deal with his estate or interest in such land at any place without the limits of the Colony and shall at the same time enter in the Register Book a memorandum recording the issue of such registration abstract and shall indorse on the grant certificate of title or other instrument evidencing the title of such applicant proprietor a like memorandum and from and after the issuing of any such registration abstract no transfer or other dealing in any way affecting the estate or interest in respect of which such registration abstract is issued shall be entered in the Register Book until such abstract shall have been surrendered to the Registrar General to be cancelled or the loss or destruction of such abstract proved to his satisfaction.

Registration abstract for registering dealings without the limits of the Province.

71. Whenever any transfer or other dealing is intended to be transacted under any such registration abstract a memorandum of transfer or such other instrument as the case may require shall be prepared in duplicate in form hereinbefore appointed and shall be produced to some one of the persons hereinafter appointed as persons before whom the execution of instruments without the limits of the Colony may be proved and upon memorial of such instrument being entered upon the registration abstract and authenticated by the signature of such authorized person as aforesaid in manner hereinbefore directed for the entry of memorials in the Register Book such instrument shall be held to be registered and such transfer or other dealing shall be as valid and binding to all intents as if the same had been entered in the Register Book by the Registrar General and whenever a memorial of any instrument which has not been endorsed upon the instrument evidencing title to the estate or interest intended to be dealt with has been entered upon the registration abstract such authorized person as aforesaid shall record the like memorial on the duplicate grant certificate of title lease or other instrument evidencing title as aforesaid and the certificate of registration indorsed on the instrument of which the memorial has been so entered and signed by such authorized person and sealed with his seal shall be received in all Courts of Law or Equity as conclusive evidence that such instrument has been duly registered.

Mode of procedure under registration abstract.

72. Upon the delivery of any registration abstract to the Registrar General he shall record in the Register Book in such manner as to preserve their priority the particulars of every transfer or other dealing recorded thereon and shall file in his office the duplicates of every memorandum of transfer or other instrument executed thereunder which may for that purpose be delivered to him and shall cancel such abstract and note the fact of such cancellation in the Register Book and if a freehold [the] estate in such land or in any part thereof be transferred [of such nature as to entitle the holder to a certificate of title] the grant or certificate of title shall be delivered up to the Registrar General who shall thereupon proceed as is hereinbefore directed for the case of the transfer of an estate of freehold [such nature.]

Proceeding upon delivery of registration abstract to the Registrar General.

73. Upon proof at any time to the satisfaction of the Registrar General that any registration abstract is lost or so obliterated as to be useless and that the powers thereby given have never been exercised or if they have been exercised then upon proof of the several matters and things that have been done thereunder it shall be lawful for the Registrar General as circumstances may require either to issue a new registration abstract as the case may be or to make such entries in the Register Book or do such acts as might have been made or done if no such loss or obliteration had taken place.

Procedure when registration abstract is lost.

74. The registered proprietor of any land in respect of which a power of attorney has been executed may for the purpose of revoking such power execute an instrument in the form L of the Schedule hereto or in any form heretofore in use for the like purpose and the Registrar General shall except in any case where a registration abstract is outstanding enter the particulars thereof in the Register Book and record thereon the date and hour in which such entry was made and shall file the same in his office and after the date of such entry the Registrar General shall not give effect to any memorandum of transfer or other instrument executed pursuant to such power of attorney.

Revocation of power of attorney.

PART V.—*Transmissions.*

75. Upon the bankruptcy or insolvency of the registered proprietor of any land estate or interest under the provisions of this Act the assignees of such bankrupt or insolvent shall be entitled to be registered as proprietors in respect of the same and the Registrar General upon the receipt of an office copy of the appointment of such assignees accompanied by an application in writing under their hand to be so registered in respect to any land estate or interest of such bankrupt or insolvent therein specified and described shall enter in the Register Book upon the folium constituted by the grant or certificate of title of such land a memorandum notifying the appointment of such assignees and upon such entry being made such assignees shall be deemed and taken to be registered proprietors of the estate or interest of such bankrupt or insolvent in such land and shall hold the same subject to the equities upon and subject to which the bankrupt or insolvent held the same but for the purpose of any dealings with such land estate or interest under the provisions of this Act such assignees shall be deemed to be absolute proprietors thereof.

Transmission by bankruptcy or insolvency.

Upon entry of appointment assignees to be deemed proprietors.

But subject to equities.

[75A. Upon the bankruptcy or insolvency of the registered proprietor of any lease the Registrar General unless the same be subject to a mortgage or encumbrance under the provisions of this Act shall upon the application in writing of the lessor or lessee accompanied by a statement in writing signed by the assignees of such bankrupt or insolvent certifying their refusal to accept such lease enter in the Registry Book the particulars of such refusal and such entry shall operate as a surrender of the said lease.]

Refusal of lease by insolvent's assignee to be registered as a surrender.

76. Upon the bankruptcy or insolvency of the registered proprietor of any lease subject to mortgage [or encumbrance] under the provisions of this Act the Registrar General upon the application in writing of the mortgagee [or encumbrancee] accompanied by a statement in writing signed by the assignees of such bankrupt or insolvent certifying their refusal to accept such lease shall enter in the Register Book the particulars of such refusal and such entry shall operate as a foreclosure and the interest of the insolvent in such lease shall thereupon vest in such mortgagee [or encumbrancee] and if such mortgagee [or encumbrancee] shall neglect or decline to make such application as aforesaid the Registrar General upon application by the lessor and proof of such neglect or refusal and of the matters aforesaid shall enter in the Register Book notice of such neglect or refusal of such assignee to accept such lease and such entry shall operate as a surrender of such lease.

Mortgagee [or encumbrancee] of the leasehold interest of an insolvent may be entered as transferee of lease.

Marriage of female proprietor to be certified to the Registrar General.

Particulars to be entered in Register Book and on the instrument evidencing title.

Transmission of mortgage or lease on death of proprietor.

Will or probate or letters of administration or order of Court to be produced.

Heir-at-law or devisee may apply to Registrar General to be registered as proprietor of the land.

Application to be referred to Examiners and the Commissioners. Notice thereof published after.

Applicant may be registered.

But to hold subject to any trusts.

Caveat may be lodged.

Caveat entered by settlor—or with consent of registered proprietor.

77. The Registrar General upon the production of the register or other sufficient proof of the marriage of a female registered proprietor of any land estate or interest under the provisions of this Act accompanied by an application in writing signed by such female proprietor to that effect shall enter on the Register Book and also upon the certificate of title or other instrument evidencing the title of such female proprietor when produced to him for that purpose the name and description of her husband the date of the marriage and where solemnized the day and hour of the production to him of the register or other sufficient evidence of such marriage and the husband of such female proprietor shall unless such land be held [settled] for her separate use [or otherwise] be entitled to be registered as co-proprietor of such land in right of his wife and the Registrar General upon [their joint] application to that effect [and declaration in writing that no settlement has been made of the land] and surrender of the existing certificate of title shall comply with such application.

78. Whenever any mortgage encumbrance or lease affecting land under the provisions of this Act shall be transmitted in consequence of the will or intestacy of the registered proprietor thereof [or any estate in land be transmitted to executors or administrators in consequence of any intestacy in regard thereto of such registered proprietor] probate or an office copy of the will of the deceased proprietor or letters of administration or the order of the Supreme Court authorizing the Curator of Intestate Estates to administer the personal estate of the deceased proprietor of such estate or interest as the case may be accompanied by an application in writing from the executor administrator or curator claiming to be registered as proprietor in respect of such estate or interest shall be produced to the Registrar General who shall thereupon enter in the Register Book and on the ~~lease or other~~ instrument evidencing title to the estate or interest transmitted the date of the will and of the probate or of the letters of administration or order of the Supreme Court as aforesaid the date and hour of the production of the same to him the date of the death of such proprietor when the same can be ascertained with such other particulars as he may deem necessary and upon such entry being made the executors or administrators or the Curator of Intestate Estates as the case may be shall be deemed to be registered proprietors or proprietor of such mortgage encumbrance or lease and the Registrar General shall note the fact of such registration by memorandum under his hand on the letters of administration probate or other instrument as aforesaid.

79. The heir at law [in tail] devisee tenant by the courtesy or other person claiming any estate of freehold [or interest of a nature requiring or admitting of registration under this Act] in the land of a deceased proprietor [or in land whereto the applicant claims to be entitled in remainder or reversion expectant on his decease] may make application in writing to the Registrar General to be registered as proprietor of such estate [or interest] and shall deposit with him the certificate of the death of the will or an office copy or probate of the will of the deceased proprietor or any settlement [or other evidence] under which such applicant claims ~~or in the case of intestacy such evidence of heirship as he may be enabled to produce~~ [to represent the deceased proprietor or to be entitled in remainder or reversion] and such application shall state the nature of every estate or interest held by other persons at law or in equity in such land within the applicant's knowledge and that he verily believes himself to be entitled to the estate [or interest] in such land in respect to which he applies to be registered and the statements made in such application shall be verified by the oath or statutory declaration of such applicant Provided always that the heir at law devisee or other person making such application shall [if the nature of the estate be such as to require the issue to him of a new certificate] surrender the existing grant or certificate of title of the land in respect to which he claims to be registered as proprietor prior to his being entered in the Register Book [and receiving a new certificate] as hereinafter mentioned.

80. The Registrar General shall refer such application to the Examiners for examination and report and thereafter shall submit the same for the consideration of the Commissioners who may either reject such application altogether or direct the Registrar General to cause notice thereof to be published once in the *Gazette* and three times in at least one daily newspaper published in Sydney and to give such further publicity to such application as they may direct whether by advertisement or the serving or posting of notices and shall limit and appoint a time not less than one month from the date of the advertisement in such *Gazette* upon or after which the Registrar General may unless he shall in the interval have received a caveat forbidding him so to do register such applicant as proprietor of such land [or interest] by entering in the Register Book the particulars of the transmission through which such applicant claims and by issuing to such applicant [if he be proprietor of an existing estate of freehold in possession or of a leasehold estate in possession admitting of registration under this Act] a certificate of title for the land so transmitted and the Commissioners may direct any caveat to be entered by the Registrar General for the protection of the interests of such other persons (if any) as may be interested in such land Provided always that the person registered consequent on such direction of the Commissioners or any executor or administrator or the Curator of Intestate Estates when registered in respect of any mortgage encumbrance or lease shall hold such land estate or interest in trust for the persons and purposes to which it is applicable by law but for the purposes of any dealing with such land estate or interest under the provisions of this Act he shall be deemed to be absolute proprietor thereof.

PART VI.—General Provisions.

81. ~~Any settlor of land under the provisions of this Act transferring such land to be held by the transferee as trustee or any beneficiary or other persons claiming estate or interest in such land under any unregistered instrument or by devolution in law or otherwise may by caveat in the form M of Schedule hereto forbid the registration of any instrument affecting such land estate or interest either absolutely or until after notice of the intended dealing given to the caveator as may be required and enjoined in such caveat and~~

[81A. Any proprietor of land registered under this Act transferring the same to be held under the conditions of any trust or unregistered instrument or with his consent any person with whom he shall have agreed to hold the land under any such conditions may for the protection of the equities incident thereto forbid by caveat in form M 1 of Schedule hereto the registration of any instrument affecting such land

land unless in pursuance of an order of the Supreme Court or a Judge thereof without the consent in writing of the caveator or instead of or in addition to such consent that of any other person or persons who shall be therein named for that purpose or such caveat may forbid such registration until such period as thereby fixed shall have elapsed after notice of the intended dealing shall be given to the person whose consent is so required in which case the caveat shall be considered withdrawn unless within that period a further caveat be lodged in continuation thereof by some or one of such persons Provided further that it shall be lawful in any such caveat to substitute contingently the name of any other person in anticipation of death or absence from the Colony of any person originally named also to declare whether in the event of such death or absence of any one or more of several persons the consent of such one or more of them as shall survive or continue resident shall be sufficient and such declaration shall in the absence of any contrary provision be implied also to confer on any person whose consent is thereby required a power of substitution in favour of any other person upon any withdrawal of his own name therefrom.]

[81b. Any person whoever claiming any estate or interest in any land under the provisions of this Act by virtue of any unregistered instrument or by devolution of law or otherwise (whether entitled to enter a caveat pursuant to the preceding section or not) may enter a caveat forbidding the registration of any instrument to the prejudice of such claim in the form M 2 of Schedule hereto.] Caveat entered by other persons.

81c. Every such caveat shall state the name and address of the person by whom or on whose behalf the same is lodged and shall contain a sufficient description to identify the land and the estate or interest therein claimed by the caveator or by the person on whose behalf the caveat is lodged and [except in the case of a caveat lodged by or with consent of a registered proprietor shall name an address in Sydney and in all cases] except in case of caveats lodged by order of the Supreme Court or by the Registrar General as hereinbefore provided shall [name an address within the Colony for each caveator or other person whose consent shall be thereby required and every caveat shall] be signed by the caveator or by his solicitor known agent or attorney and every notice relating to such caveat or to any proceedings in respect thereof if served at the address mentioned in such caveat or at the office of the solicitor known agent or attorney who may have signed the same [or transmitted to such address through the post office] shall be deemed to be duly served And every such caveat may be withdrawn by the caveator [unless in the case of caveats requiring the consent of other persons and in that case may be withdrawn by each such person so far as regards himself respectively.] Caveats to identify land and supply address for service of notices.

82. Upon the receipt of such [any] caveat the Registrar General shall notify the same to the person against whose application to bring land under the provisions of this Act or to be registered as proprietor or as the case may be to the [unless the same be lodged by or with the consent of the] registered proprietor against whose title to deal with land under the provisions of this Act such caveat has been lodged [the Registrar General shall notify the same to him] and such applicant proprietor or registered proprietor may if he think fit summon the caveator or the person on whose behalf such caveat has been lodged to attend before the Supreme Court or a Judge thereof to show cause why such caveat should not be removed and it shall be lawful for such Court or Judge upon proof that such person has been summoned to make such order in the premises either ex parte or otherwise as to such Court or Judge may seem fit And except in the case of a caveat lodged by a settlor or by or on behalf of a beneficiary claiming under any will or settlement [or with the consent of the registered proprietor] or by the Registrar General for the protection of incapable persons or for the prevention of fraud as hereinbefore prescribed every such caveat lodged against a registered proprietor shall unless an order to the contrary be made by the Supreme Court or a Judge thereof be deemed to have lapsed upon the expiration of fourteen days after notice given to the caveator that such registered proprietor has applied for the registration of any transfer or other dealing with such land estate or interest [And during the said period of fourteen days and subsequently in the event of the continuance of the caveat beyond that period it shall be lawful for either party to apply to the Supreme Court or a Judge thereof for continuance or removal respectively of the caveat and for the said Court or Judge to exercise the like jurisdiction in regard thereto as hereinbefore provided in respect to caveats lodged against bringing land under the provisions of this Act.] And may be withdrawn.

[82a. After the lapse of any caveat it shall not be lawful for the same person to lodge a further caveat in relation to the same matter But nothing herein contained shall prejudice the right of the Registrar General to enter or continue any caveat under the powers vested in him for prevention of fraud or improper dealing.] Notice of caveat.

83. So long as any caveat shall remain in force prohibiting the transfer or other dealing with land the Registrar General shall not enter in the Register Book any memorandum of transfer or other instrument purporting to transfer or otherwise deal with or affect the land estate or interest in respect to which such caveat may be lodged. Caveator to show cause.

84. Any person lodging any caveat with the Registrar General without reasonable cause shall be liable to make to any person who may have sustained damage thereby such compensation as may be just and such compensation shall be recoverable in an action at law by the person who has sustained damage from the person who lodged the caveat. When caveat to lapse.

85. The registered proprietor of any land or of any estate or interest in land under the provisions of this Act whether of the nature of real or personal property may by any of the forms of instruments of transfer provided by this Act modified as may be necessary transfer such land estate or interest or any part thereof to his wife or if such registered proprietor be a married woman it shall be lawful for her to make such transfer to her husband or it shall be lawful for such registered proprietor to make such transfer to himself jointly with any other person or persons or to create or execute any powers of appointment or to limit any estates whether by remainder or otherwise without limiting [the limitation of] any use or executing [the intervention of] any re-assignment but [and] upon the registration of such transfer the said land estate or interest shall vest in such registered proprietor jointly with any other person or persons or in the person taking under such limitation or in whose favor any power may have been executed or otherwise Caveat not to be renewed after lapse.

otherwise according to the intent and meaning appearing in such instrument and thereby expressed [And provided that every power created by any registered instrument shall in favor of appointees or transferees claiming thereunder be construed to be absolute and unconditional to the full extent of the estate or value of pecuniary charge or other interest to which the same shall apply notwithstanding the same shall be otherwise qualified or fiduciary and any appointment or dealing thereunder shall be registered and take full effect without any enquiry being necessary into any fact or circumstances on which the right of exercising such power may be made to depend either by the same or by any unregistered instrument.

Qualified or fiduciary powers to be absolute for purposes of registered title.
Provision as to separate estate of married woman.
 [85A. If land be transferred to a married woman under this Act as her separate estate such estate may be designated as such in the certificate of title And in that case she shall be entitled to deal with such estate as a *feme sole* in all respects except as regards separate examination and acknowledgment when required by this Act—also to sue and be sued in all proceedings at law or in equity relating to such estate without regard to any marital rights or liabilities of any present or future husband Provided that the defendant in any such proceedings wherein she shall be plaintiff shall be entitled to demand security for costs in like manner as if the plaintiff were out of the jurisdiction And in all such proceedings whether she be plaintiff or defendant her separate estate (whether that in question in the suit or any other) shall be liable for all damages and costs that shall result or be awarded against her And it shall be in the discretion of any Court in which such proceedings shall be pending to direct in any stage thereof security for the same to be entered on the register of title.]

The like as to restraint upon anticipation.
 [85B. If any land be transferred to a married woman for her own life as her separate estate such estate may likewise be declared to be without power of anticipation and so designated on the certificate of title And in that case no instrument dealing with such estate shall be registered except leases purporting to be for the full annual value at rack rent nor shall such registration render any such lease valid if the same be in fact made in fraud or contravention of the said restriction.]

Registered joint proprietors to be joint tenants. Tenants in common to receive distinct certificates.
 86. Two or more persons who may be registered as joint proprietors of an estate or interest in land under the provisions of this Act shall be deemed to be entitled to the same as joint tenants and shall each receive a separate and distinct certificate of such joint estate marked respectively with the name of the owner to whom the same shall be delivered and in all cases where two or more persons are entitled as tenants in common to undivided shares of or in any land such persons shall also receive separate and distinct certificates of title or other instrument evidencing title to such undivided shares [And that except in cases where the words "no survivorship" shall be entered any joint tenant may with the consent of his co-proprietor or proprietors receive a separate distinct certificate of such joint estate in which case every certificate so issued shall be marked with the name or names of the proprietor or proprietors in respect of whose interest the same shall be issued and held respectively.]

Registration of survivor of joint proprietors.
 87. When any person is registered as joint proprietor with his wife [and in her right] of an estate in fee simple in right of his wife if such person die in the lifetime of his wife and before any transfer of such estate or if such wife die in the lifetime of her husband and the said husband is entitled as tenant by the courtesy or upon the death of any person registered together with any other person as joint proprietor of the same estate or interest in any land or when the life estate in respect to which any certificate of title has been issued has determined and the estate next registered in remainder or reversion has become vested in possession or the person to whom such certificate of title has been issued has become entitled to the said land for an estate in fee simple in possession the Registrar General may upon the application of the person entitled and proof to his satisfaction of any such occurrence as aforesaid register such person as proprietor of such estate or interest in manner hereinbefore prescribed for the registration of a like estate or interest upon a transfer or transmission.

Remainderman or reversioner may be registered as such.
 88. Whenever a certificate of title has been issued in respect of a life estate in any land any person entitled in reversion or remainder to such land may apply to be registered as so entitled and the Registrar General shall cause the title of such applicant to be investigated by the Examiners and thereafter submit the same for consideration by the Commissioners who may either reject such application altogether or direct that the applicant be registered forthwith or be so registered unless caveat be lodged after such notice or advertisement and within such period as they may appoint and the Registrar General shall obey such direction or any order of the Supreme Court in the premises.

Certificate may confer an estate tail to take effect upon intestacy without any restraint on disposition either by will or otherwise.
 [88A. Any person entitled to receive a certificate for an absolute estate may cause the same to pass in case of intestacy to his heir in tail by electing to receive a certificate for an estate tail with the reversion to his legal representatives And to confer such estate and reversion it shall be sufficient in any certificate to describe the estate of the holder thereof as an "estate in fee tail" and such estate may be barred by him not only by any instrument which is by this Act declared to be sufficient to bar an estate tail in other cases but also by any disposition inconsistent therewith which he shall make by will.]

Implied covenants may be modified or negated.
 89. Every covenant and power to be implied in any instrument by virtue of this Act may be negated or modified by express declaration in the instrument or indorsed thereon and in any declaration in an action for a supposed breach of any such covenant the covenant alleged to be broken may be set forth and it shall be lawful to allege that the party against whom such action is brought did so covenant precisely in the same manner as if such covenant had been expressed in words in such memorandum of transfer or other instrument any law or practice to the contrary notwithstanding and every such implied covenant shall have the same force and effect and be enforced in the same manner as if it had been set out at length in such instrument and where any memorandum of transfer or other instrument in accordance with the provisions of this Act is executed by more parties than one such covenants as are by this Act declared to be implied in instruments of the like nature shall be construed to be several and not to bind the parties [severally as well as] jointly.

Forms of instruments may be altered.
 90. The Registrar General may subject to the approval of the Governor with the advice aforesaid from time to time make such alterations in the several form of instruments prescribed in the Schedule hereto as he may deem requisite and shall cause every such form to be stamped with his seal and to be supplied at the General Registry Office free of charge or at such moderate prices as he may from time to time fix or may license any person to print and sell the same.

91. The Registrar General with the consent of the Commissioners in case they shall see reasonable cause for so doing may dispense with the production of any grant certificate of title lease or other instrument for the purpose of entering the memorial by this Act required to be entered upon the transfer or other dealing with land under the provisions of this Act and upon the registration of such transfer or other dealing the Registrar General shall notify in the memorial in the Register Book that no entry of such memorial has been made on the duplicate grant or other instrument and such transfer or other dealing shall thereupon be as valid and effectual as if such memorial had been so entered and the Registrar General may with the like consent dispense with the production of the grant or certificate of title hereinbefore required to be surrendered prior to the registration of devisee or heir at law upon the [estate of any person entitled by] transmission of an estate of freehold Provided always that before registering such transfer transmission or other dealing the Registrar General shall in such case require the transferrer or other party dealing or deriving to make an affidavit that such grant or instrument has not been deposited as security for any loan and shall give at least fourteen days' notice of his intention to register such dealing in the *Gazette* and in at least one daily newspaper published in Sydney.

Duplicates of certificates &c. may be dispensed with after notice in certain cases.

92. No writ of *feri facias* or other writ of execution issued prior to the date on which this Act shall come into operation or thereafter shall bind charge or affect any land estate or interest under the provisions of this Act [or prevent any land from being brought thereunder except as herein provided] but whenever any land or any estate or interest in land under the provisions of this Act shall be seized or sold by the Sheriff or the Registrar or Bailiff of any District Court under any writ or shall be sold under any direction decree or order of the Supreme Court or District Court or whenever any order of such Court shall be made authorizing the Curator of Intestate Estates to take the charge of the real estate of a deceased proprietor the Registrar General on being served with an office copy of the writ direction decree or order as the case may be shall [if the land affected thereby shall not be under the provisions of this Act pay regard thereto as to a caveat entered against any application interfering with the operation thereof but if the land be under the provisions of this Act shall] enter in the Register Book and also upon the instrument evidencing title to the said estate or interest if produced for that purpose the date of the said writ direction decree or order and the date and hour of the production thereof and after such entry as aforesaid the Sheriff or person authorized by the Supreme Court or the Registrar or Bailiff of any District Court shall [subject and without prejudice to the rights of any person by or on whose behalf any caveat may be lodged] do such acts and execute such instruments as under the provisions of this Act may be necessary to transfer or otherwise to deal with the said estate or interest. Provided always that unless and until such entry has been made as aforesaid no such writ shall bind or affect any land under the provisions of this Act or any estate or interest therein nor shall any sale or transfer by the Sheriff Registrar or Bailiff be valid as against a purchaser or mortgagee notwithstanding such writ may have been actually in the hands of the Sheriff Registrar or Bailiff at the time of any purchase or mortgage or notwithstanding such purchaser or mortgagee may have had actual or constructive notice of the issue of such writ and upon production to the Registrar General of sufficient evidence of the satisfaction of any writ so entered as aforesaid he shall enter in the Register Book a memorandum to that effect and such writ shall be deemed to be satisfied accordingly and every such writ shall be deemed to have lapsed unless the same shall be executed and put in force within three months from the day on which it was entered in the Register Book as aforesaid.

Sales by Sheriff or under order of Supreme Court.

93. A Corporation for the purpose of [making application to bring land under the provisions of this Act or of] transferring or otherwise dealing with land under the provisions of this Act [when brought there- under or for the empowering of an Attorney to act for such Corporation for any of such purposes under the 69th section of this Act may] in lieu of signing the proper instrument for such purpose prescribed may affix thereto the common seal of such Corporation with a certificate that such seal was affixed by the proper officer verified by his signature [and any seal purporting to be the common seal of such Corporation may if duly verified as aforesaid be accepted as such common seal.]

Seal of Corporation substituted for signature.

94. Instruments executed pursuant to the provisions of this Act if attested by one witness shall be held to be duly attested [but the Registrar General may require such execution to be proved and the same shall be held to be duly proved by the oath or statutory declaration of the witness attesting the same made or taken if] and the execution thereof may be proved if the parties executing the same be resident within the Colony then before the Registrar General or before a Notary Public Justice of the Peace or a Commissioner for taking Affidavits if the said parties be resident in the United Kingdom then before the Mayor or other chief officer of any Corporation or before a Notary Public if the said parties be resident in any British Possession then before the Registrar General or Recorder of Titles of such Possession or before any Judge or Notary Public or before the Governor Government Resident or Chief Secretary thereof and if the said parties be resident at any foreign place then before the British Consular Officer resident at such place.

Instruments how attested and before whom proved.

95. The execution of any such instrument may be proved before any such person as aforesaid by the [such] oath or statutory declaration of the parties executing the same or of a witness attesting the signing thereof and [shall be sufficient] if such witness shall answer in the affirmative [or embody in his affidavit or declaration the affirmative in regard to] each of the questions following that is to say—

Mode of proving instruments.

Are you the witness who attested the signing of this instrument and is the name or mark purporting to be your name or mark as such attesting witness your own hand-writing ?

Do [or did] you personally know the person signing this instrument and whose signature you attested ?

Is the name purporting to be his signature his own hand-writing—is he [or was he when he so executed] of sound mind—and did he freely and voluntarily sign the same ?

Then [in which case] the Registrar General Justice or other person before whom such witness shall prove such signature as aforesaid shall endorse upon such instrument a certificate in form N of the Schedule hereto and [Provided that] if the person executing such instrument be personally known to the Registrar General Justice or other person as aforesaid and alive and in the Colony he may attend and appear before [and shall sign the same in his presence] such Registrar General Justice or other person and acknowledge that

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he did freely and voluntarily sign such instrument and upon such acknowledgment the Registrar General Justice or other person shall endorse on such instrument a certificate in form O of the Schedule hereto [such instrument shall be held to be duly proved and no other attesting witness shall in that case be necessary] provided that such questions as aforesaid may be varied as circumstances may require in case any person shall sign such instrument by his mark.

How acknowledgment of married women to be taken.

96. The Registrar General shall not register any instrument signed by any married woman purporting to transfer or otherwise to deal with any land under the provisions of this Act in respect to which she may be registered as proprietor either solely or jointly with her husband in her right until such married woman shall have been examined apart from her husband by the Registrar General or other person legally authorized to take the acknowledgments of married women and shall have assented to such proposed dealing after full explanation of her rights in the land and of the effect of the proposed dealing and the Registrar General or other persons taking such acknowledgment shall endorse on the instrument of transfer or other dealing a certificate of such acknowledgment and examination and the date and hour thereof.

Entail to be barred by ordinary transfer &c.

[96. Any transfer will or other dealing under this Act by which a proprietor in fee simple could transfer devise charge or otherwise affect his estate therein shall have the same effect if executed by a tenant in tail as against the issue in tail and any ulterior remainders or reversion.]

Separate examination of married women.

[96A. Whenever a married woman shall make or join in any application or dealing under this Act by means of which her estate or interest in any land may be alienated or diminished it shall be necessary and sufficient in order to give effect thereto that she be separately examined apart from her husband and acknowledge that such application or dealing is made or entered into freely voluntarily and without menace or coercion of her husband and such acknowledgment shall be certified under the hand of some person authorized to receive the same and may be so made and certified either before and by any one of the persons authorized by the Acts of the Colonial Legislature 3 Victoria No. 8 and 20 Victoria No. 27 to take acknowledgments of the Deeds therein mentioned or before and by the Registrar General or before and by any one of the persons designated by section 94 of this Act as those before whom instruments executed pursuant thereto may be proved.]

Dower or courtesy may be released by consent on application or dealing without deed.

[96B. Any woman entitled to dower contingently or otherwise out of any land which shall be the subject of any application or dealing under this Act may release the same for the purpose of such application by any writing under her hand expressing her consent to such application or dealing and duly acknowledged under the last preceding section and any husband may in like manner release his courtesy out of his wife's land by any writing under his hand duly attested expressing his consent to any application or dealing in relation thereto and no other deed or instrument of release shall in any such case be necessary.]

As to dower of out land alienated from the Crown after the *Real Property Act* and before.

[96C. The dower of the widow of any Crown grantee or registered proprietor of land alienated from the Crown on or after the first day of January one thousand eight hundred and sixty-three and the dower of the widow of any registered proprietor of land alienated from the Crown before that day (notwithstanding any such widow shall have been married before the first day of January one thousand eight hundred and thirty-seven but subject as to the last-mentioned land to the provisoes hereinafter contained) shall be barred by the absolute disposition of the land by her husband in his lifetime or by his will and all partial estates and interests and all charges created by any disposition under the said Act or by will of her husband and all encumbrances liens and interests to which any such land shall under the provisions of the said Act be subject or liable shall be valid and effectual as against the right of his widow to dower in or out of the same and her right shall also be subject to such other of the provisions of the Act for the amendment of the law relating to dower as shall be consistent with the *Real Property Act* Provided always that any right or contingent right to dower which may subsist in or out of any land alienated from the Crown before the said first day of January one thousand eight hundred and sixty-three and which shall be mentioned as an encumbrance or interest in the certificate of title or other instrument shall not be prejudiced by this section but no right or contingent right to dower in or out of such land which shall not have arisen before the land is brought under the said Act or which shall be capable of being defeated by the exercise of any power of appointment conferred on the applicant shall be deemed or mentioned as such an encumbrance or interest Provided also that no land alienated from the Crown before the said first day of January one thousand eight hundred and sixty-three and the right or contingent right to dower in or out of which shall have been actually barred before the land is brought under the said Act shall be liable to a new right to dower in favour of the widow of the applicant arising under or by virtue of the certificate of title or entry on the register.]

Subsisting dower if mentioned in the certificate not to be prejudiced.

Barred dower rights not to be revived by the land being brought under this Act.

Upon surrender of existing grants or certificates proprietor may obtain a single certificate or vice versa.

97. Upon the application of any registered proprietor of land held under separate grants or certificates of title or under one grant or certificate and the delivering up of such grant or grants certificate or certificates of title it shall be lawful for the Registrar General to issue to such proprietor a single certificate of title for the whole of such land or several certificates each containing portion of such land in accordance with such application and as far as the same may be done consistently with any regulations at the time in force respecting the parcels of land that may be included in one certificate of title and upon issuing any such certificate of title the Registrar General shall cancel the grant or previous certificate of title of such land so delivered up and shall endorse thereupon a memorandum setting forth the occasion of such cancellation and referring to the certificate of title so issued.

Provision in case of lost grant.

98. In the event of the grant or certificate of title of land under the provisions of this Act being lost mislaid or destroyed the proprietor of such land together with other persons if any having knowledge of the circumstances may make a declaration before the Registrar General or before any of the persons hereinbefore appointed as persons before whom the execution of instruments may be proved stating the facts of the case the names and descriptions of the registered owners and the particulars of all mortgages encumbrances or other matters affecting such land and the title thereto to the best of declarant's knowledge and belief and the Registrar General if satisfied as to the truth of such declaration and the *bona fides* of the

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the transaction may with the consent of the Commissioners issue to such applicant a provisional certificate of title of such land which provisional certificate shall contain an exact copy of the original grant or certificate of title bound up in the Register Book and of every memorandum and indorsement thereon and shall also contain a statement of the circumstances under which such provisional certificate is issued and the Registrar General shall at the same time enter in the Register Book notice of the issuing of such provisional certificate and the date thereof and the circumstances under which it was issued and such provisional certificate shall be available for all purposes and uses for which the grant or certificate of title so lost or mislaid would have been available and as valid to all intents as such lost grant or certificate. Provided always that the Registrar General before issuing such provisional certificate shall give at least fourteen days' notice of his intention so to do in the *Gazette* and in at least one daily newspaper published in Sydney.

99. Upon the production of the receipt of the Colonial Treasurer [or his Deputy or any duly authorized Receiver of Revenue] in full for the purchase money of any lands alienated in fee from the Crown together with a memorandum of transfer mortgage or lease duly executed by the purchaser from the Crown of such land the Registrar General shall indorse upon such receipt such memorial as he is hereinbefore required to enter in the Register Book upon the registration of any dealing of a like nature with land in respect to which a grant or certificate of title has been registered and shall sign such indorsement and stamp the same with his seal and such instrument shall thereupon be held to be duly registered in accordance with the provisions of this Act and the Registrar General shall file such receipt and such instrument in his office and upon the registration of the grant of such land the Registrar General shall enter thereon a memorial of such dealing and shall indorse such instrument with the certificate of registration as hereinbefore prescribed for the registration of instruments generally.

Deals may be registered prior to the issue of grant from the Crown.

100. Any proprietor subdividing any land under the provisions of this Act for the purpose of selling the same in allotments as a township shall deposit with the Registrar General a map of such township provided that such map shall exhibit distinctly delineated all roads streets passages thoroughfares squares or reserves appropriated or set apart for public use and also all allotments into which the said land may be divided marked with distinct numbers or symbols and every such map shall be certified as accurate by declaration of a licensed surveyor before the Registrar General or a Justice of the Peace. Provided that no person shall be permitted to practice as a surveyor under the provisions of this Act unless specially licensed for that purpose by the Surveyor General.

Map of subdivided land.

Surveyors to be licensed.

101. The Registrar General may require the proprietor applying to have any land brought under the provisions of this Act or desiring to transfer or otherwise to deal with the same or any portion thereof to deposit at the Registry Office a map or plan of such land certified by a licensed surveyor in manner aforesaid and if the said land or the portion thereof proposed to be transferred or dealt with shall be of less [an] area [not exceeding] than one statute acre then such map or plan shall be on a scale not less than one inch to two chains and if such land or the portion thereof about to be transferred or dealt with shall be of greater area than one statute acre but not exceeding five statute acres then such map shall be upon a scale not less than one inch to five chains and if such land or the portion thereof as aforesaid shall be of greater area than five statute acres but not exceeding eighty statute acres then such map or plan shall be upon a scale of not less than one inch to ten chains and if such land or the portion thereof as aforesaid shall be of greater area than eighty statute acres then such map or plan shall be upon a scale of one inch to twenty chains and if such proprietor shall neglect or refuse to comply with such requirement it shall not be incumbent on the Registrar General to proceed with the bringing of such land under the provisions of this Act or with the registration of such transfer or lease [other dealing]. Provided always that subsequent subdivisions of the same land may be delineated on the map or plan of the same so deposited if such map be upon a sufficient scale in accordance with the provisions herein contained and the correctness of the delineation of each such subdivision shall be acknowledged in manner prescribed for the case of the deposit of an original map.

Registrar General may require map to be deposited.

102. The Registrar General upon payment of the fee specified in the Schedule P hereto shall furnish to any person applying for the same a certified copy of any registered instrument affecting land under the provisions of this Act and every such certified copy signed by him and sealed with his seal shall be received in evidence in any Court of Justice or before any person having by law or by consent of parties authority to receive evidence as *prima facie* proof of all the matters contained or recited in or indorsed on the original instrument.

Certified copies to be furnished by Registrar General and to be evidence.

103. Any person may upon payment of a fee specified in Schedule P hereto have access to the Register Book for the purpose of inspection during the hours and upon the days appointed for search.

Searches.

104. The Registrar General shall not receive any application for bringing land under the provisions of this Act or any instrument purporting to deal with or affect any land under the provisions of this Act unless there shall be endorsed thereon a certificate that the same is correct for the purposes of this Act signed by the applicant or party claiming under or in respect of such instrument or by his solicitor and any person who shall falsely and negligently certify to the correctness of any such application or other instrument shall incur therefor a penalty not exceeding fifty pounds. Provided always that such penalty shall not prevent the person who may have sustained any damage or loss in consequence of error or mistake in any such certified instrument or any duplicate thereof from recovering damages against the person who shall have certified the same.

Authority to register.

Penalty for certifying incorrect instruments.

105. It shall be lawful for the Registrar General to recover such fees as shall be appointed by the Governor with the advice aforesaid not in any case exceeding the several fees specified in the Schedule hereto marked P [or such other fees not being in excess thereof as the Governor shall with the advice aforesaid at any time and from time to time appoint and notify in the *Gazette* and until payment thereof shall not be bound to receive any document or perform any act in respect whereof they are respectively payable.]

Fees.

106. The Registrar General shall keep a correct account of all such sums of money as shall be received by him in accordance with the provisions of this Act and shall pay the same to the Colonial Treasurer at such times and shall render accounts of the same to such persons and in such manner as may be directed in any regulations that may for that purpose be prescribed by the Governor with the advice aforesaid and the Registrar General shall address to the said Treasurer requisitions to pay moneys received by him or by the said Treasurer in trust or otherwise on account of absent mortgagees or other persons entitled in accordance with the provisions of this Act which requisitions when proved and audited in manner

Registrar General to pay moneys into Treasury and to render accounts.

Parties entitled to be paid by Treasurer upon proper warrant.

manner directed by any such regulations framed as aforesaid at the time being in force in the said Colony and accompanied by warrant for payment of the same under the hand of the Governor countersigned by the Chief Secretary thereof the said Treasurer shall be bound to obey and all fines and fees received under the provisions of this Act except fees payable to the Commissioners for the bringing of land under the operation of this Act shall be carried by the said Treasurer to account of the Consolidated Revenue Fund.

PART VII.—*Rights Remedies and Procedure.*

Proprietor may summon Registrar General to show cause if dissatisfied.

107. If upon the application of any proprietor to have land brought under the provisions of this Act or to have any dealing or transmission registered or recorded or to have any certificate of title registration abstract foreclosure order or other instrument issued or to have any act or duty done or performed which by this Act is prescribed to be done or performed by the Registrar General the Registrar General shall refuse so to do or if such proprietor shall be dissatisfied with the direction upon his application given by the Commissioners as hereinbefore provided [or shall be dissatisfied with any correction or alteration made or directed by the Registrar General in any certificate or entry on the Register under the powers conferred by this Act in that behalf] it shall be lawful for such proprietor to require the Registrar General to set forth in writing under his hand the grounds of his refusal or the grounds upon which such direction was given and such proprietor may if he think fit at his own costs summon the Registrar General to appear before the Supreme Court to substantiate and uphold the grounds of his refusal or of such direction as aforesaid such summons to be issued under the hand of a Judge of the said Court and served upon the Registrar General six clear days at least before the day appointed for hearing the complaint of such proprietor and upon such hearing the Registrar General or his counsel shall have the right of reply and the said Court shall if any question of fact be involved direct an issue to be tried to decide such fact and the said Court shall thereupon make such order in the premises as in their judgment the circumstances of the case may require and the Registrar General shall obey such order and all expenses attendant upon any such proceedings shall be borne and paid by the applicant or other person preferring such complaint unless the Judge or Court shall certify that there were no probable grounds for such refusal or direction as aforesaid.

Registrar General may state a case for Supreme Court.

108. It shall be lawful for the Registrar General by direction of the Commissioners Whenever any question shall arise with regard to the performance of any duties or the exercise of any of the functions by this Act conferred or imposed upon him or them to state a case for the opinion of the Supreme Court and thereupon it shall be lawful for the said Court to give its judgment thereon and such judgment shall be binding upon the Registrar General and Commissioners respectively [or if in the examination of the title of any applicant or in the exercise of any of the duties of the Registrar General Examiners or Commissioners under this Act any question shall arise as to the true construction or legal validity or effect of any deed instrument or will or as to the persons entitled or the extent or nature of the estate right or interest power or authority of any person or class of persons or the mode in which any entry ought to be made on the register or certificate of title or any doubtful or uncertain right or interest stated or dealt with by the Registrar General it shall be competent for him by direction of the Commissioners to refer the same to a Judge of the Supreme Court who may if he see fit allow any of the parties interested desirous of appearing before him and summon any others of such parties to appear and show cause either personally or by counsel or attorney in relation thereto And if upon such reference the Judge having regard to the parties appearing before him shall think proper to decide the question he shall have power so to do or to direct any proceeding at law or in equity to be instituted for that purpose or at the discretion of the Judge and without deciding such question to direct such particular form of entry to be made on the Register or Certificate of Title as under the circumstances shall appear to be right.]

Registrar General to carry out order of Supreme Court, vesting trust estate.

109. Whenever any person interested in land under the provisions of this Act shall appear to the Supreme Court to be a trustee of such land within the intent and meaning of any Trustee Act then in force in the Colony and any order shall be made in the premises by the Court or a Judge thereof [The Supreme Court or any Judge thereof shall (by virtue of the Trustee Act) or otherwise in the exercise of any lawful jurisdiction make a vesting order affecting any land registered under this Act] the Registrar General on being served with an office copy of such order shall enter in the Register Book and on the grant or other instrument evidencing title to the said land the date of the said order the date and hour of its production to him and the name residence and description of the person in whom the said order shall purport to vest the said land and such person shall thereupon be deemed to be the registered proprietor of such land [and entitled if the estate therein be in possession to receive a certificate of title thereto] and unless and until such entry shall be made the said order shall have no effect or operation in transferring or otherwise vesting the said land.

Action may be brought by person claiming beneficiary interest in name of trustee.

Trustee to be indemnified.

110. Whenever a person entitled to or interested in land as a trustee would be entitled under the last preceding clause to bring or defend any action of ejectment in his own name for recovering the possession of land under the provisions of this Act such person shall be bound to allow his name to be used as a plaintiff or defendant in such action of ejectment by any beneficiary or person claiming an estate or interest in the said land Provided nevertheless that the person entitled or interested as such trustee shall in every such case be entitled to be indemnified in like manner as a trustee would before the passing of this Act have been entitled to be indemnified in a similar case of his name being used in any such action or proceeding by his cestuique trust.

Purchaser from registered proprietor not to be affected by notice.

111. Except in the case of fraud No person contracting or dealing with or taking or proposing to take a transfer from the registered proprietor of any registered estate or interest shall [except in the case of fraud wherein he shall participate or collude] be required or in any manner concerned to inquire or ascertain the circumstances in or the consideration for which such registered owner or any previous registered owner of the estate or interest in question is or was registered or to see to the application of the purchase money or of any part thereof or shall be affected by notice direct or constructive of any trust or unregistered interest any rule of Law or Equity to the contrary notwithstanding and the knowledge that any such trust or unregistered interest is in existence shall not of itself be imputed as fraud.

112. In any suit for specific performance brought by a registered proprietor of any land under the provisions of this Act against a person who may have contracted to purchase such land ~~not having notice~~ [the certificate of title of such registered proprietor shall in the absence of proof] of any fraud or other circumstances which according to the provisions of this Act would affect the right of the vendor the certificate of title of such registered proprietor shall be held in every Court of Law or Equity to be conclusive evidence that such registered proprietor has a good and valid title to the land and for the estate or interest therein mentioned or described and shall entitle such registered proprietor to a decree for the specific performance of such contract.

Registered proprietor suing for specific performance.

113. When default has been made in the payment of the interest or principal sum secured by memorandum of mortgage for six months a registered mortgagee or his solicitor attorney or agent may make application in writing to the Registrar General for an order for foreclosure and such application shall state that such default has been made as aforesaid and that the land estate or interest mortgaged has been offered for sale at public auction by a licensed auctioneer after notice given to the mortgagor as in this Act provided and that the amount of the highest bid at such sale was not sufficient to satisfy the money secured by such mortgage together with the expenses occasioned by such [attempted] sale and that notice in writing of the intention of such mortgagee to make such application has been given to the mortgagor by leaving the same at his usual or last known place of abode if such place be within three miles of the residence of such mortgagee or by forwarding the same by registered letter through the Post Office if such place be beyond that distance and such application shall be accompanied by a certificate of the auctioneer by whom such land was put up for sale and such other proof of the matters stated by the applicant as the Registrar General may require and the statements made in such application shall be verified by the oath or statutory declaration of the applicant or other person applying on his behalf.

Mortgagee may apply to Registrar General for an order for foreclosure.

114. The Registrar General shall refer such application to the Commissioners who may direct the Registrar General to cause notice to be published once in the *Gazette* and once in each of three successive weeks in at least one daily newspaper published in Sydney offering such land for sale and shall further limit and appoint a time not less than one month from the date of the publication in the *Gazette* upon or after which the Registrar General may issue to such applicant an order for foreclosure unless in the interval a sufficient amount has been realized by the sale of such land to satisfy the principal and interest moneys due and all expenses occasioned by such sale [and the previously attempted sale] and proceedings and every such order for foreclosure under the hand of the Registrar General and entered in the Register Book shall have the effect of vesting in the mortgagee all the estate and interest of the mortgagor in the land mentioned in such order free from all right and equity of redemption on the part of the mortgagor or of any person claiming through or under him.

Application how made effective.

115. No action of ejectment or other action for the recovery of any land shall lie or be sustained against the person registered as proprietor thereof under the provisions of this Act except in any of the following cases that is to say—

Registered proprietor protected against ejectment except in certain cases.

- (1.) The case of a mortgagee as against a mortgagor in default.
- (2.) The case of an encumbrancee as against an encumbrancer in default.
- (3.) The case of a lessor as against a lessee in default.
- (4.) The case of a person deprived of any land by fraud as against the person registered as proprietor of such land through fraud or as against a person deriving otherwise than as a transferee *bonâ fide* for value from or through a person so registered through fraud.
- (5.) The case of a person deprived of or claiming any land included in any grant or certificate of title of other land by misdescription of such other land or of its boundaries as against the registered proprietor of such other land nor being a transferee thereof *bonâ fide* for value.
- (6.) The case of a registered proprietor claiming under the instrument of title prior in date of registration under the provisions of this Act in any case in which two or more grants or two or more certificates of title or a grant and a certificate of title may be registered under provisions of this Act in respect to the same land [and which priority shall be computed as hereinbefore directed in section 40.]

And in any case other than as aforesaid the production of the registered grant certificate of title or lease shall be held in every Court of Law or Equity to be an absolute bar and estoppel to any such action against the person named in such instrument as seised of or as registered proprietor or lessee of the land therein described any rule of law or equity to the contrary notwithstanding.

116. Whenever an [such] action shall be brought against a registered proprietor or person holding a grant or certificate of title in either of the last two cases excepted in the next preceding section if the defendant or any person through whom he claims shall have made improvements on the land since obtaining a certificate of title thereto then whether he admit or deny the plaintiff's title he may plead the fact of such improvements being made and may set a value thereon and also on the land as distinct therefrom and give evidence thereof at the trial and if a verdict be found for the plaintiff or his title be admitted the jury shall assess the value of the alleged improvements and shall also separately assess the value which the land would have possessed if the said improvements had not been made And no writ of possession shall issue in such case unless the plaintiff shall first pay into Court for the use of the defendant the value of the improvements so assessed deducting only the costs (if any) to which he shall be entitled in the action And if the plaintiff shall fail to make such payment within three months after verdict the judgment to which he is entitled shall thereafter be limited to the sum separately assessed as the value of the land together with costs of suit And the defendant shall upon satisfaction thereof be entitled to retain the land and improvements and in either case the Registrar General shall be entitled under the power hereinafter conferred of cancelling erroneous certificates to require to be delivered up any certificate of title which shall be held by the party whose right to the land shall have determined Provided that in every case in which the defendant shall be entitled to indemnity from the assurance fund the Registrar General shall be made a co-defendant as trustee of such fund and may defend the action either severally or jointly or may leave the defence wholly to his co-defendant as he shall see fit And in no case shall the assurance fund be liable to the principal defendant for any greater damages than he shall actually sustain as the result of such action after using all reasonable diligence in the defence thereof.

In case of ejectment of defendant who has made improvements their value may be assessed.

And plaintiff shall either pay for improvements or be restricted to damages for the loss of the unimproved land.

Registrar General to be made co-defendant.

Assurance fund to be liable only for actual loss sustained by defendant.

Compensation of party deprived of land.

117. Any person deprived of land or of any estate or interest in land in consequence of fraud or through the bringing of such land under the provisions of this Act or by the registration of any other person as proprietor of such land estate or interest or in consequence of any error omission or misdescription

cription in any certificate of title or in any entry or memorial in the Register Book may in any case in which such land has been included in two or more grants from the Crown bring and prosecute an action at law for the recovery of damages against such person as the Governor with the advice aforesaid may appoint as nominal defendant and in any other case against the person upon whose application such land was brought under the provisions of this Act or such erroneous registration was made or who acquired title to the estate or interest in question through such fraud error or misdescription. Provided always that in every case in which the fraud error or misdescription shall occur upon a transfer made for value the person making the transfer and receiving the value shall be regarded as the person upon whose application the certificate of title was issued to the transferee. And provided further that except in the case of fraud or of error occasioned by any omission misrepresentation or misdescription in the application of such person to bring such land under the provisions of this Act or to be registered as proprietor of such land estate or interest or in any instrument executed by him such person shall upon a transfer of such land *bonâ fide* for value cease to be liable for the payment of any damages which but for such transfer might have been recovered from him under the provisions hereinbefore contained and in such last-mentioned case and also in case the person against whom such action for damages is directed to be brought as aforesaid shall be dead or shall have been adjudged insolvent or cannot be found within the jurisdiction then and in any such case such damages with costs of action may be recovered out of the assurance fund by action against the Registrar General as nominal defendant.

Purchasers and mortgagees protected.

118. Nothing in this Act contained shall be so interpreted as to leave subject to action for recovery of damages as aforesaid or to action of ejectment or to deprivation of the estate or interest in respect to which he is registered as proprietor any purchaser or mortgagee [or encumbrancee] *bonâ fide* for valuable consideration of land under the provisions of this Act on the plea that his vendor or mortgagor may have been registered as proprietor or procured the registration of the transfer to such purchaser or mortgagee [or encumbrancee] through fraud or error or may have derived from or through a person registered as proprietor through fraud or error and this whether such fraud or error shall consist in wrong description of the boundaries or of the parcels of any land or otherwise howsoever.

When actions may lie against the Registrar General as nominal defendant.

119. Any person sustaining loss or damages through any omission mistake or misfeasance of the Registrar General or any of his officers or clerks in the execution of their respective duties under the provisions of this Act or by the registration of any other person as proprietor of such land or by any error omission or misdescription in any certificate of title or any entry or memorial in the Register Book and who by the provisions of this Act is barred from bringing action of ejectment or other action for the recovery of such land estate or interest may in any case in which the remedy by action for recovery of damages as hereinbefore provided is inapplicable bring an action against the Registrar General as nominal defendant for recovery of damages.

Notice of action.

120. In any case in which action for recovery of damages is permitted to be brought against the Registrar General as nominal defendant as hereinbefore provided notice in writing of such action and of the cause thereof shall be served upon such nominal defendant one month at least before the commencement of such action and if in any such action judgment be given in favor of the nominal defendant or the plaintiff discontinue or become nonsuit the plaintiff shall be liable to pay the full costs of defending such action and the same when taxed shall be levied in the name of the nominal defendant by the like process of execution as in other actions ~~on the case~~.

Deficiency of assurance fund supplied temporarily out of public fund.

121. If in any such action the plaintiff recover final judgment against such nominal defendant then the Court or Judge before whom such action may be tried shall certify the fact of such judgment and the amount of damages and costs recovered and the amount of such damages and costs shall be paid to the person recovering the same and shall be charged to the account of the assurance fund and in case the balance to the credit of the assurance fund shall be inadequate to defray the amount specified such sum as may be necessary for that purpose shall be paid out of the Consolidated Revenue Fund and the amount so advanced shall be repaid from the assurance fund as the same may thereafter accrue.

Limitation of actions.

122. No action for recovery of damages sustained through deprivation of land or of any estate or interest in land as hereinbefore described shall lie or be sustained against the Registrar General or against the assurance fund or against the person upon whose application such land was brought under the provisions of this Act or against the person who applied to be registered as proprietor in respect to such land or against the person certifying any instrument as aforesaid unless such action shall be commenced within the period of six years from the date of such deprivation [nor shall any such damages be recoverable in respect of the value of any improvements made in the land since such deprivation]. Provided nevertheless that any person being under the disability of coverture infancy unsoundness of mind or absence from the Colony may bring such action within six [any period not exceeding in any event twelve years if the same be commenced within three] years from the date on which such disability shall have ceased and the plaintiff in any such action at whatever time it may be brought or the plaintiff in action for the recovery of land shall be nonsuited in any case in which the deprivation complained of may have been occasioned through the bringing of land under the provisions of this Act if it shall be made to appear to the satisfaction of the Court before which such action shall be tried that such plaintiff or the persons through or under whom he claims title had notice by personal service or otherwise or was aware that application had been made to bring such land under the provisions of this Act and had wilfully or collusively [or negligently] omitted to lodge caveat forbidding the same or had allowed such caveat to lapse.

Moneys paid out of assurance fund may be recovered.

123. Whenever any amount has been paid out of the assurance fund on account of any person who may be dead such amount may be recovered from the estate of such person by action against his personal representatives in the name of the Registrar General and whenever such amount has been paid on account of a person who shall have been adjudged insolvent the amount so paid shall be considered to be a debt due from the estate of such insolvent and a certificate signed by the Colonial Treasurer certifying the fact of such payment out of the assurance fund and delivered to the Official Assignee shall be sufficient proof of such debt and whenever any amount has been paid out of the assurance fund on account of any person who may have absconded or who cannot be found within the jurisdiction of the Supreme Court and may have left any real or personal estate within the said Colony it shall be lawful for the said Court or a Judge thereof upon the application of the Registrar General and upon the production of a certificate signed by the said Treasurer certifying that the amount has been paid in satisfaction of a judgment against the Registrar General as nominal defendant to allow the Registrar General to sign judgment against such person.

person forthwith for the amount so paid out of the assurance fund together with the costs of the application and such judgment shall be final and signed in like manner as a final judgment by confession or default in an adverse suit and execution may issue immediately and if such person shall not have left real or personal estate within the said Colony sufficient to satisfy the amount for which execution may have been issued as aforesaid it shall be lawful for the Registrar General to recover such amount or the unrecovered balance thereof by action against such person at any time thereafter when he may be found within the jurisdiction of the Supreme Court.

124. The assurance fund shall not under any circumstances be liable for compensation for any loss damage or deprivation occasioned by the breach by a registered proprietor of any trust whether express implied or constructive nor in any case in which the same land may have been included in two or more grants from the Crown nor shall the assurance fund be liable in any case in which such loss or deprivation has been occasioned by any land being included in the same certificate of title with other land through misdescription of boundaries or parcels of any land unless in the case last aforesaid it shall be proved that the person liable for compensation and damages is dead or has absconded or has been adjudged insolvent or the Sheriff shall certify that such person is unable to pay the full amount awarded in any action for recovery of such compensation and damages.

Assurance fund only liable in certain cases.

125. The Registrar General shall not individually nor shall any person acting under his authority be liable to any action suit or proceeding for or in respect of any act or matter *bona fide* done or omitted to be done under this Act.

Registrar General not to be liable for acts done *bona fide*.

126. In case it shall appear to the satisfaction of the Registrar General that any certificate of title or other instrument has been issued in error or contains any misdescription of land or of boundaries or that any entry or endorsement has been made in error or any grant certificate of title or other instrument or that any such grant certificate instrument entry or endorsement has been fraudulently or wrongfully obtained or that any such grant certificate or instrument is fraudulently or wrongfully retained he may summon the person to whom such grant certificate or instrument has been so issued or by whom it has been so obtained or is retained to deliver up the same for the purpose of being cancelled or corrected as the case may require and in case such person shall refuse or neglect to comply with such summons or cannot be found the Registrar General may apply to a Judge of the Supreme Court to issue a summons for such person to appear before such Court or Judge and show cause why such grant or certificate or other instrument should not be delivered up to be cancelled or corrected as aforesaid and if such person when served with such summons shall neglect or refuse to attend before such Judge or Court at the time therein appointed it shall be lawful for such Judge to issue a warrant authorizing and directing the person so summoned to be apprehended and brought before a Judge of the Supreme Court for examination.

Holder of certificate or other instrument of title issued in error or wrongfully retained to show cause to Court against cancellation or correction.

127. Upon the appearance before the Court or Judge of any person summoned or brought up by virtue of a warrant as aforesaid it shall be lawful for the Court or Judge to examine such person upon oath and in case the same shall seem proper to order such person to deliver up such grant certificate of title or other instrument as aforesaid and upon refusal or neglect by such person to deliver up the same pursuant to such order to commit such person to the [any] common gaol of [within] the Colony and in such case or in case such person shall have absconded so that summons cannot be served upon him as hereinbefore directed the Registrar General shall if the circumstances of the case require it issue to the proprietor of the said land such certificate of title or other instrument as is herein provided to be issued in the case of any grant or certificate of title being lost mislaid or destroyed and shall enter in the Register Book notice of the issuing of the said certificate of title or other instrument and the circumstances under which the same was issued and such other particulars as he may deem necessary.

Court may order the delivery of the instrument to the Registrar General.

In case of neglect or refusal Registrar General may issue a fresh certificate or other instrument

128. Upon the recovery of any land estate or interest by any proceeding at Law or in Equity from the person registered as proprietor thereof it shall be lawful for the Court or Judge in any case in which such proceeding is not hereinbefore expressly barred to direct the Registrar General to cancel any certificate of title or other instrument or any entry or memorial in the Register Book relating to such land and to substitute such certificate of title or entry as the circumstances of the case may require and the Registrar General shall give effect to such order.

Court may direct cancellation of certificate or entry.

[128a. No transferee mortgagee or encumbrancee of any land erroneously described shall be entitled to object to the correction of any error or to claim compensation from the assurance fund in respect thereof where the correction shall be required to render the description consistent with itself or otherwise accurate as a description of the land actually understood by him to be the subject of transfer mortgage or encumbrance notwithstanding that the contents thereof or the lengths or bearings of the boundaries thereof may be erroneously stated in excess of the true measurement and no right of encroachment upon land of any adjacent proprietor shall in such case be maintainable by reason of such error.]

Error may be corrected without compensation in certain cases.

[128b. If any misdescription of land or boundaries shall be such as cannot be corrected without prejudice to some person entitled to indemnification under this Act it shall be lawful for the Registrar General or for the Supreme Court as the case may be to inquire and determine which of the conflicting claimants will sustain the less injury through deprivation of the land and thereupon either to authorize or refuse such correction as will have the effect of such less injury and in that case the person thereby deprived shall be entitled to compensation under the provisions herein contained to the extent only of such actual and less injury.]

Correction of error may be allowed or refused so as to occasion the least injury requiring compensation.

129. Every sworn valuator shall within fourteen days of the date of his appointment and before performing any duties under this Act take the following oath before the Registrar General who is hereby authorized to administer the same—

Oath of sworn valuator.

I do solemnly swear that I will faithfully and honestly and to the best of my skill and ability make any valuation required of me under the provisions of the "Real Property Act."

130. If any person fraudulently procures assists in fraudulently procuring or is privy to the fraudulent procurement of any certificate of title or other instrument or of any entry in the Register Book or of any erasure or alteration in any entry in the Register Book or in any instrument or form issued by the Registrar General or fraudulently uses assists in fraudulently using or is privy to the fraudulent using of any form purporting to be issued or sanctioned by the Registrar General or knowingly misleads or deceives any person hereinbefore authorized to demand explanation or information in respect to any land

Certain fraudulent acts to be deemed misdemeanors.

or the title to any land which is the subject of any application to bring the same under the provisions of this Act or in respect to which any dealing or transmission is proposed to be registered or recorded such person shall be guilty of a misdemeanor and shall incur a penalty not exceeding five hundred pounds or may at the discretion of the Court before whom the case may be tried be imprisoned for any period not exceeding three years and any certificate of title entry erasure or alteration so procured or made by fraud shall be void as between all parties or privies to such fraud.

Conviction not to affect civil remedy.

131. No proceeding or conviction of any act hereby declared to be a misdemeanor or a felony shall affect any remedy which any person aggrieved or injured by such act may be entitled to at law or in equity against the person who has committed such act or against his estate.

Forgery to be a felony.

132. If any person is guilty of the following offences or any of them (that is to say)—

- (1) Forges or procures to be forged or assists in forging the seal of the Registrar General or the name signature or handwriting of any officer of the Registry Office in cases where such officer is by this Act expressly or impliedly authorized to affix his signature—
- (2) Stamps or procures to be stamped or assists in stamping any document with any forged seal purporting to be of the Registry Office—
- (3) Forges or procures to be forged or assists in forging the name signature or handwriting of any person whomsoever to any instrument which is by this Act or in pursuance of any power contained in this Act expressly or impliedly authorized to be signed by such person—
- (4) Uses with an intention to defraud any person whomsoever any document upon which any impression or part of the impression of any seal of the Registry Office has been forged knowing the same to have been forged or any document the signature to which has been forged knowing the same to have been forged—

[(5) Fraudulently uses or procures to be used for any purpose the actual seal of the Registrar General in which case such fraudulent use shall be a like offence in all respects as a forgery thereof]—

Such person shall be guilty of felony and if any person is guilty of making a false oath or declaration concerning any matter or procedure made or done in pursuance of this Act such person shall be deemed guilty of perjury.

Punishment of felony.

133. Any person convicted of felony or perjury under this Act shall be liable to imprisonment for any term not exceeding four years and to be kept to hard labor or solitary confinement for any part of the period aforesaid.

Rules of Supreme Court to apply and same right of appeal as in ordinary actions. Supreme Court may make rules &c.

134. In the conduct of actions under this Act the same rules of procedure and practice shall apply and there shall be the same rights of appeal as are in force or exist for the time-being in respect of ordinary actions in the Court in which such action may be tried. Provided that the Judges of the Supreme Court shall have power from time to time to make rules and orders for regulating proceedings in the Supreme Court under this Act and from time to time to rescind alter or add to such rules and orders in like manner as at present.

Jurisdiction

135. Unless in any case herein otherwise expressly provided all offences against the provisions of this Act may be prosecuted and all penalties or sums of money imposed or declared to be due or owing by or under the provisions of the same may be sued for and recovered in the name of the Attorney or Solicitor General before any Court in the Colony having jurisdiction for punishment of offences of the like nature or for the recovery of penalties or sums of money of the like amount.

Commencement of Act.

136. This Act shall commence and take effect from and after the first day of January one thousand eight hundred and sixty-three.

EXPLANATORY MINUTES to accompany proposed Amendments of "THE REAL PROPERTY ACT,"
submitted by the EXAMINERS OF TITLES.—August, 1863.

PRELIMINARY REMARKS.

BEFORE proceeding to point out certain amendments in the Real Property Act, suggested by the experience of its working to the present time, and by a careful consideration of all its enactments with a view to further provision against future probable difficulties, it is only fair to observe that no blame can be justly cast upon any of those concerned in its preparation or enactment on account of existing deficiencies. Under all the circumstances it is rather a matter for surprise and congratulation that these are not more numerous. So entire a reconstruction as this measure involves, of a whole department of law and administration, could not possibly be perfected at once, inasmuch as nothing short of a close observation of its actual working by those engaged in its administration could supply the data for a satisfactory completion of all its details. It was chiefly because the Bill of Mr. Torrens had passed in South Australia into the domain of actual experience, that it was preferred to the otherwise more authoritative but untried measures of an English Attorney General and a Lord Chancellor. At the same time it was not to be expected that even by this means the South Australian Bill could have become a sufficient model for New South Wales, regarded as a final measure, and so as to dispense with the necessity, in addition, of local experience. The much greater antiquity and complexity of the New South Wales titles might alone be expected to bring to light new difficulties requiring special legislation. Nor is it enough to boast, however truly, that the Act as it is amounts to a vast improvement in the law, and confers an inestimable boon on the community. The acknowledged value of the measure is only an additional reason why those engaged in conducting it should make unreservedly every suggestion that occurs to them for its improvement, and this without being deterred by any fear of trouble or expense. If anything could justify the incurring of either, it must needs be the perfecting of a system which promises to carry out in all future time, at a minimum of cost, and with a maximum of security, all the myriads of transactions affecting property in land. But here the advantage of the individual is not the only thing to be considered. The protection of the assurance fund (or the public Treasury in the event of its insufficiency) against any liability in excess of the requirements of justice and a fair apportionment of the contribution to that fund in accordance with the risk against which it affords a security, are matters of equal importance, and require clear foresight and careful regulation. Particular attention is invited to those amendments which bear on this part of the subject, and to the further observations which will be made thereon in the sequel.

REMARKS EXPLANATORY OF THE PROPOSED AMENDMENTS TAKEN SEBRIATIM.

Section 3.—In the definition of "proprietor," the words "seised or possessed" are inconsistent with the following "in futurity or expectancy." The substitution of "entitled to" renders the language of the whole sentence correct.

Same section.—The distinction made between "mortgage" and "encumbrance," as it originally stands, is very arbitrary, and as regards the latter imperfect, not including charges by way of indemnity. Although it may be convenient to adhere to the limitation of the term "mortgage" to security for a mere debt, the word "encumbrance" properly includes both mortgage and every other charge. It is in fact so used in the Schedules, and this sufficiently shews the inconvenience of the artificially exclusive definition. To provide for charges on land by way of indemnity, a new form of encumbrance will be added to the Schedule.

Section 9.—If this restriction be proper there seems no reason why it should not apply to other officers of the department. The new Bill in preparation for introduction of the Torrens' system in Ireland, contains a general restriction, both against professional practice and sitting in the House of Commons.

Section 10.—Although no alteration has been made herein it is suggested whether a remark similar to that of section 9 does not fairly apply. With or without the oath the duties of examiners, draftsmen, searchers, and surveyors, all demand an equally solemn sense of responsibility for their right performance, and for the public security.

Section 11 (addition to paragraph 1).—The Victoria Amending Bill provides for a summons through a Judge without limitation to witnesses bound to produce deeds under covenant. It may not be expedient to vest in any functionary, below the rank of a Judge, a power to compel production of deeds in any other cases. But where the obligation rests on express covenant there can be no reason why the Registrar General, for convenience sake, should not have a co-ordinate power. This it is here proposed to give, inserting also afterwards, in its proper place, the Victoria clause, so as to comprehend other cases.

Section 11 (new paragraph 2).—There is every reason why the Registrar General should possess the same power of marking exhibits as a Judge receiving documentary evidence, and although the right may be seldom disputed it is better to place it beyond controversy.

Section 11 (paragraph 4, now 5).—As this section originally stands it is self-contradictory, for after authorizing correction in the Register Book, which can only apply to *existing* entries, it excepts *previous* entries, which amounts to the same thing. The only saving required is that of the rights secured to *bonâ fide* transferees for value; these are defined by other clauses, and need only be here referred to in general terms. This is the effect of the amendment.

Section 12, line 4.—This corresponds with an amendment inserted in the Victoria Amending Bill—only differing therefrom by containing a slight additional amendment, making it clearer that the duplicate need not be originally entered in a bound volume. This provision will remove some difficulty which has arisen in the construction of the original Act, both here and in Victoria.

Section 13.—The first amendment herein made is necessary to make the Act complete, and corresponds with the English Statute introduced by the Lord Chancellor.

Section 13.—The omission of the words "contained in the mortgage deed" is desirable to admit of application by mortgagees, whose powers of sale (equally valid and stringent with express powers) are implied under the new statutory provisions for shortening deeds.

Section 13 (as to notice of writs).—It is of great importance to relieve the Registrar General of all searches or inquiries beyond his own department. This is already provided as regards lands actually upon the new register, by section 92 in its present form. There is no reason why the same rule should not extend to lands under application to be brought on the register, and it is proposed to amend section 92 with this view. In that case the qualification proposed to be here omitted will not be applicable.

Section 13 (as to separate powers).—Without this provision a married woman's separate estate is deprived of its proper character.

Section 13 (as to separate examination).—This is a condition equally essential to the validity of the application with the joining of the husband; and it is not proposed to maintain the distinction which now prevails as to the cases in which it is legally required, *e.g.*, between those in which the wife conveys an estate, and those in which she directs or appoints. The distinction does not (it is submitted) rest on any valid principle, but on mere arbitrary technicality. The risk of sinister marital influence is the same in both cases, neither more nor less. In both the protection of a separate examination is either necessary or unnecessary, and should therefore either be required in both, or in both abolished altogether. The provision in this matter is made in section 96; an amendment of which is hereafter proposed.

Section 15 (addition at the end).—This is required to save the expense of a formal deed of appointment. There is a precedent in the Statute of Wills for overruling formalities specially prescribed by settlors and substituting those imposed by the Legislature as sufficient protection against fraud or precipitancy. The Trustees Property Act of 1862, section 13, extends a similar provision to deeds, but this would not dispense with sealing or delivery. It contains, however, a precautionary proviso, which it may perhaps be deemed proper to add to the present section before it finally passes.

New section, 15A.—This is taken (with the exception of the concluding paragraph, and of the reference to the Registrar General's concurrent powers) from the Victoria Amending Bill. (See previous remark on the amendment of section 11, paragraph 1.)

New section, 15B.—This addition to the Victorian provision is submitted to be desirable, particularly as the effect of the summons, if obeyed, will not be to bring the witness into the presence of the Judge—to whom he could submit his objections for a preliminary decision—but before the Registrar General or Examiner, who will not be entitled to adjudicate upon it. As the summons will of course issue on a *primâ facie* case, some means of relief on adverse cause shown, is essential to justice.

Section 16, lines 11 and 13.—(*Reduction of minimum period for notice.*)—There are many simple cases in which even the minimum delay imposed by the Act is a needless hardship, and an obstruction to parties wishing to avail themselves of the Act

Act for a speedy transfer of property of which the title may be perfectly simple (*e.g.* a grant from the Crown to the vendor,—with only one dealing, such as a mortgage satisfied and effectually released). If in such a case it is found to require a much longer time to procure a certificate of title to the purchaser, than to have a conveyance prepared in the ordinary way, the parties naturally feel aggrieved, and refuse to avail themselves of the Act. The amendment now proposed is contained in the new Victoria Bill, and its desirableness became obvious to the New South Wales Commissioners at their very first Board Meeting. To give it practical effect, however, it will be essential, by the further amendment next proposed in section 20, to bring the Post Office arrangements into harmony with the policy of the Act.

Section 18.—When small houses, let to fluctuating weekly tenants, have been brought under the Act, compliance with this provision has been found impracticable.

Section 20.—(*As to Post Office arrangements*)—Until this amendment be made the regulations of the Post Office Department must often have the effect of delaying for nearly three months certificates which the Board would feel justified in directing the earliest issue permitted by the Act, being now one month, and proposed to be reduced to fourteen days. This section (20) prescribes a second reference to the Board by the Registrar General, if the notices fail to be served, although it by no means follows that in all cases the Board would deem such service actually essential as a condition of their ultimate favourable decision. But as the Post Office Act requires that all letters not delivered shall remain one month at the post-town or address, and when afterwards returned to the Sydney office, shall be advertised another month before being opened and returned to the writer, nearly three months elapses before their fate is made known, and during this interval it remains uncertain whether or not there will be occasion to re-submit the case under section 20. The Postmaster General and the Government were, on the first discovery of this difficulty, applied to on the subject, but it has not been found possible to devise any remedy consistent with the provisions of the Post Office Act. Hence the necessity of this amendment.

Sections 21, 22, 23, 81, 82, 83, 84 (Caveats).—The provisions regarding caveats are at present confused, in consequence of a want of mutual connection and reference between the clauses relating to caveat against bringing land under the Act—sections 21, 22, and 23—and those relating in the main to subsequent dealings—sections 81, 82, 83, and 84. Section 81 relates solely to the latter class of caveats; and yet section 82, which begins by reference to “*such*” caveats (grammatically applicable only to those mentioned in section 81), goes on to employ language inclusive of the caveats provided for in section 21. The policy of the provision which it makes is however very questionable, if considered alike, and unqualifiedly applicable to both. Section 23 gives a caveator three months to institute proceedings in the ordinary way, and gives no power to interfere with the caveat if proceedings be commenced and notified within that time. If however section 82 is to apply to this class of caveats, so as to give a Judge summary and unqualified power to remove a caveat at any time, the effect of this may be to supersede altogether the functions of Court and Jury. The reasonable course would seem to be to vest in a Judge such a control over caveats as will enable him to protect both parties—the one against being entrapped by precipitation, the other against being harassed by a claim merely vexatious and devoid of any colour of foundation, or by unnecessary delay. The ordinary time fixed for lapse through inaction in the one class of cases, is three months—in the other, fourteen days; but as either may be too little or too much under special circumstances, it may be reasonable to give a Judge power to interfere at the instance of either party, to prolong or curtail the period, as the justice of the case may require. This is all that the Act need provide for. With respect to an ultimate decision between the parties on the merits, the policy of Mr. Torrens has been always avowed to be that of leaving disputes to the ordinary tribunals. In the clauses, as now drawn, there is a confusion between judicial interference with the caveat, and judicial determination of the question at issue between the parties. The former would only be called for adversely to the caveator in two cases:—First—the total want of any *prima facie* case for litigation; or, second—gross *laches* in prosecuting a claim, even though apparently well founded. In either of these cases a Judge might feel called upon to remove the caveat, and bar the claim. Anything beyond this would rest on the ordinary course of law, and does not require any special enactment. This distinction is borne in mind in the amendments now proposed, which should be considered in connection with those proposed in section 82. (*See subsequent remarks to that section.*)

New section, 23A.—There is a provision similar to this in the English Act, and it will often allow of parties obtaining great advantage from the new law, by narrowing the grounds of possible objection to a minimum, and within ascertained limits. In many cases the reserved objections, although fatal to an application for a clean certificate, may be of a nature offering no obstacle to sale or mortgage, and such a lapse of time or other circumstances may be likely soon to remove a provision for removing them from the certificate in that case is desirable, and will be proposed in addition to the above clause, which is nearly identical with that contained in the English statute. It differs from it in one respect, by giving the applicant an option of refusing such a qualified certificate, if he prefer to have the application wholly rejected. This removes an objection which has been made to the English provision, *viz.*, that in some particular cases the applicant for an improvement of title may find himself unexpectedly put off with one which he may himself consider inferior to his former position, as affording direct notice of defects which a purchaser might chance to overlook.

Section 25.—The object of these amendments is to extend the power conferred by the section to deeds produced as well as deposited. The noting of the required memorandum would often tend to avert error and defeat fraud. But as this may be equally secured by an endorsement on the last deed in a chain of titles, another amendment declares this to be a sufficient compliance with the Act.

New section, 25A.—This amendment is adopted from the 4th section of the Victoria Amending Bill. Its object is thus explained by its proposer, after referring to a Victorian enactment, which corresponds with the 25th section of the New South Wales, 22 Vict., No. 1, which releases from liability to action on covenants to produce deeds, any covenantor who may deposit them with the Registrar General in the way thereby authorized. He says:—“A surrender of title deeds to the Registrar General under the Real Property Act, would leave the applicant without the means of performing any previous covenant to produce, and defenceless against proceedings upon such covenant, and would therefore deter persons from becoming applicants, although it may not be quite clear that the deposit under this Act would not satisfy the former, without express enactment, it is highly desirable to preclude all doubt on this point.”

New section, 25B.—There seems no valid reason why the Crown should gratuitously take over the legal liability which now attaches under the ordinary covenants for title, or why, in bringing a title before the Commissioners, the covenant, a bond of indemnity, of a previous owner should not be offered to the Crown for whatever it is worth, as one feature of the title to be decided on. In some cases bonds and covenants perfect a title by fixing with liability the same person who, but for that liability, might be induced to enforce some claim on the land. The liability and the claim then neutralize each other, and at all events the position of such persons ought not to be altered by a cancellation under the Act.

Section 27.—This amendment rectifies what is probably a clerical error. The Victoria Bill thus amends it.

New section 27A.—The principle of this amendment is identical with that governing the action of Life and Fire Assurance Companies, who require augmented premiums proportioned to various gradations of risk. There are many titles fairly marketable, and which a Court might probably even compel a purchaser to accept, which are yet very far removed in the degree of immunity from risk from that of a title held under a recent Crown grant. No title derived through a long series of years and transactions can rest as presented, *ex parte*, by a vendor, or applicant for a certificate of title, upon more than *prima facie* evidence, and the risk of dormant undiscovered objections, is of necessity augmented in proportion to the number and complexity of the various links, and also by time, so long as it falls short of the period of statutory limitation. To fix a half-penny in the pound as a common standard for all titles can therefore scarcely be reasonable. One title, for example, may consist of a grant from the Crown to A in 1860, who sold to the applicant B in 1862; a search of the register for one year against B, and for two years against A is, in this case, all that is required. Another title may originate in a grant from the Crown to X in 1795, followed by obscure half obliterated transfers to successive purchasers up to 1830; afterwards an insolvency of the owner may intervene, and a sale by his trustees—or a Sheriff may sell under an execution—or litigation may have then arisen, and the legal proceedings may be imported into the title; or a pedigree, traced through relations whose births, marriages, and deaths, in remote countries, may be evidenced by various declarations, affidavits, and certificates, all apparently authentic, but possibly fraudulent or mistaken; and the applicant may, in addition, have cut up his property into 100 allotments, and after selling fifty in detached and scattered positions, may apply for a title to the remainder, thus necessitating a search of the registry for all the alienations, and a collation of the various parcels and boundaries. The above details are not imaginary, having already come before the Examiners. Even a title involving these complexities may after much troublesome investigation be sufficiently sustained to disentitle the Examiners from rejecting it; at the same time can it, upon any possible grounds, be considered on a par with the title first referred to? This question of itself sufficiently explains and justifies the proposed amendment. The considerations here brought forward are quite peculiar to New South Wales, as the elder Colony; very few, if any, of the complicated titles referred to, can have existence in South Australia, Victoria, or Queensland; and it by no means follows,

follows, that the same or even double the assurance fee, that is appropriate to the average titles in those Colonies, is sufficient for all those titles in New South Wales, of which the Examiners would be unable to vindicate the rejection. This they can hardly do when the title is such as in the ordinary course of business, is fairly marketable; at the same time the admission that a title is fairly marketable, and that it is prudent to insure it at so low a premium as a halfpenny in the pound (1 in 480), are by no means equivalent propositions.

N.B.—Since the above remarks were written an amendment to the effect proposed has been inserted in the new Act passed in Victoria.

Section 29.—This amendment corresponds with one contained in the Victoria Amending Bill, and is no doubt required to convey the proper meaning of the provision.

Section 32.—This cannot be carried out as originally framed without introducing more complexity than it seems intended to avert. To enter upon the same folium with the certificate of the fee, all the ramifications of the title of possibly numerous leasehold interests would be often difficult, and sometimes impossible, and would secure no adequate compensatory advantage. It is enough if the instrument first creating the leasehold interest be entered on the certificate of the reversory estate, with a reference to the book and folium assigned to the former. Subsidiary dealings with the leasehold would then be entered on its own appropriate folium.

Section 33.—The words at the end of this section declaring the immateriality of errors, &c., although proper with regard to the acts of the Registrar General, are too wide with regard to errors in the application, unless limited to transferees for value. A distinction is therefore required, which the amendment introduces.

New section, 39A.—This amendment is, for the most part, taken from the Victoria Amending Bill, and will prevent the necessity of encumbering the form of certificate with the present exception, which refers to the original grant from the Crown. It may indeed be questioned whether quit-rent should be included in the implication, and whether it should not be, when unredeemed (if the certificate be not actually refused on this account), entered as a specific encumbrance. Its non-mention would then indicate its non-existence; otherwise the certificate will not preclude the necessity of a reference by a purchaser or his solicitor to the original grant, which no longer accompanies the title. This has been already done in some cases, and complained of as an imperfection in the title conferred by certificate. The objection might perhaps be remedied by leaving the implication as it stands, but providing some convenient method for indorsing a memorandum of discharge or freedom from quit-rent on the certificate. Where the original grant was by purchase, a statement of this would alone negative quit-rent. In cases of redemption the Registrar General might be authorized to endorse the fact, when ascertained, on payment of some moderate fee.

Section 40, line 5.—If this be, as is presumed, the intention of the Act, it should be unambiguously expressed.

Section 115.—The exception as to easements is omitted, being covered by an allusion to the preceding section in which this is comprised. The exception which has reference to the right of priority in the case of conflicting certificates is not omitted, but removed to the end of the section, in order to render it more convenient to add an explanatory memorandum as to the manner in which the priority is to be computed. In order to understand fully the effect of this amendment it will be desirable to review the grounds of other limitations upon the absolute indefeasibility of a title under the Act, which are already recognized in the same section. The popular idea of the new system, as first projected, was that this indefeasibility was to amount to absolute infallibility of title in all cases, and this undue pretension naturally led many, who could perceive at a glance its impracticability, to ridicule the whole system as utopian. It is by no means acting the part of a true friend to this great reform in the law, to slur over any of its inevitable difficulties. These might, indeed, be far greater without approaching in magnitude those which have been painfully endured for generations under the old law. By their candid admission and legislative anticipation provision may be at once made to render them as few and innocuous as the nature of the case will admit; whereas, if blindly left to take their own chance, they might hereafter come upon the public by surprise, and throw discredit on the whole system. Apart from and before the introduction of the exceptions and limitations declared in section 115, an indefeasible title imparted the entire extinguishment of all prior dormant claims, so far at least as to afford to a purchaser a perfect immunity therefrom, whatever right of compensation from a distinct source might be reserved to any person whose right-of-action might be thus barred. The phrase was applied to the title conferred by the Irish Incumbered Estates Act, and was thence transferred to the title of corresponding character, to be conferred by the first certificate issued after investigation, upon bringing land under the new Real Property Acts in England and Australia. Were it possible to stop the machinery of the new system at this point, every desirable end might be admitted to be attained, and no further difficulty would remain for solution. But with regard to certificates to be afterwards issued upon transfers and other dealings, it was forgotten that each certificate would, in its own turn, become successively a title prior to those subsequently issued, and therefore liable (if the principle of superseding a prior title in order to confer infallibility upon one newly granted, were to be fully carried out) to be overthrown by any fraud or blunder which might bring a subsequent certificate into conflict with itself. It would thus, in truth, be the exchange of a title defeasible, at the worst, by the discovery of anterior claims, against which (at whatever expense) protection was possible by careful investigation,—for a title defeasible under the new law by *ex post facto* fraud or error, wholly out of reach and control. A promise of compensation from an insurance fund could not be fairly regarded as an equivalent for the land itself in such a case as this. It was widely distinguishable from that of a dormant claimant out of possession, whose rights had been inadvertently overlooked in the investigation preliminary to the issue of the first certificate. That was a compensation merely of the right of a person out of possession to bring ejection. In the other case the owner and improver of property in actual possession would be liable to be suddenly ejected from his home by a stranger claiming through error, or even through fraud, if being a purchaser from its proprietor he was himself innocent of the fraud. When the new system was first discussed in New South Wales it was open to this fatal objection. The writer of these observations procured an amendment removing it, to be made in the Bill which passed through the Legislative Council in the year 1861 and first Session of 1862, on the model of Sir Hugh Cairn's English measure. When the Torrens Bill was presented for adoption in this colony it had already received a corresponding amendment, namely, that appearing in paragraph 6 of section 115 of the Act as passed. By that section the indefeasibility of a title, under certificate, is surrendered to paramount reasons of justice or policy, in the following cases (independently of those arising from the relations created by lease and mortgage, as to which there can be no controversy)—

1. Cases of fraud, unless as against a *bonâ fide* transferee.
2. Cases of misdescribed boundaries, with the like exception.
3. Cases of conflicting certificate, in which the *former* is to prevail.

It will however become evident, on consideration, that without some further provision the protection given by this last exception to a prior certificate will be found practically to fall short of what ostensibly, and on just principle, is intended. For although the holder of the first certificate will—so long as he individually retains it—secure a title unaffected by subsequent error *inter alios acta*, yet if he sell the land, and the purchaser obtain a new certificate, this new certificate will not, as the law now stands, retain the immunity of that for which it was substituted, but any intervening error committed to its prejudice would prevail against it. The same result would follow as against even the holder of the first certificate, if, on the sale of part of his land he surrenders under the ordinary routine of the law his old certificate, and obtains a new one for the retained residue. Unless in such case he be further protected by the operation of the amendment he would lose his priority despite of the policy of the law intended in the 6th paragraph of section 15 as it now stands.

New section, 41A.—This amendment is proposed in the Victoria Amending Bill to check personation. The practice which it prescribes is in fact already adopted by the Registrar General in New South Wales, but it may be as well to give it the sanction of positive law.

New section, 41B.—This amendment is also adopted from the Victoria Bill; and a corresponding enactment is understood to have been passed in South Australia.

Section 43.—Why this exception? However unusual or unlikely the annexure of a charge on one parcel of land—to be held for the benefit of the owner for the time-being of another—there is no reason why, if it do exist, it should not be noted as this clause directs with regard to other rights.

Section 45.—This qualification “if practicable” is required, inasmuch as in some cases the traces of boundaries of the original grants have been obscured and superseded by new divisions of property, affording readier means of reference and definition.

Section 48.—There cannot, it is presumed, be an intention to sanction the transfer of any charge to the prejudice of a person by whom it has been reduced or extinguished by payment, even though such partial or full satisfaction has not been entered on the register. The risk of fraud and error would be greater if this were promised than if the onus of inquiry were thrown on the purchaser. Either way the clause should be explicit, and it requires amendment to make it so.

Section 53, line 1.—This amendment is adopted from the Victoria Bill, and is evidently an improvement in the clause.

Section 54.—The Act makes no clear provision for instruments securing payment of money under contingencies, or by way of indemnity. It would be difficult to accommodate either of the forms of the original Schedule to this purpose—or indeed any form that could be conveniently registered with all its details. It is therefore desirable to provide a form which will admit of reference to an unregistered instrument, and merely provide for the purpose of registration the means of ascertaining in whom the powers of sale, &c., are vested in case of default, and whose declaration of the fact of default shall be conclusive evidence in support of their exercise for purposes of title.

Section 56.—The Victoria Amending Act of 1863 (section 11) amends the latter part of this clause with respect to application of moneys. It may be desirable to adopt this amendment here, but it is now too late conveniently to alter the present printed Bill by its insertion.

Section 57.—The requiring of proof of default, &c., “to the satisfaction of the Registrar General,” is in conflict with the absolute power of sale conferred (as regards purchaser’s title) by the preceding section, and by the existing system of conveying, on which that clause is founded. It would, moreover, often embarrass the Registrar General with the investigation of disputes quite out of his province. The amendment gives due effect to the power, while it affords as much protection against fraud or harshness as the present system admits. If more be stipulated for in special cases, it can be secured by means of an appropriate caveat, as to which see remarks on section 81 to 84.

Section 58, line 4.—There is at present no distinct power of leasing, and as every authority will now depend on statutory power, and not on tenure of estate, it is desirable to be explicit.

Section 58, line 6.—The reference to the power *hereinafter contained* only creates obscurity, as there is no such power given expressly, although it may be covered by the word “remedies” in the next section.

Section 58, line 8.—The conferring of the right to sue in ejectment after sale is erroneous, as this right should then pass to the purchaser. The amendments at the end effect this.

Section 66.—This section at present goes further than is necessary or desirable in prohibiting notice of trust on the register. The only object of such prohibition is to prevent the register being clogged with the details, or the title of transferees prejudiced by the notice. This end being fully attained, mere notice of the fact of a trust existing, or the affording of a *clue* to the particulars, by reference to the unregistered instrument containing them, may not only be allowed but encouraged. Agents, assignees, and executors, might thus often be saved much trouble and liability to error in dealing with the property of constituents, insolvents, or testators. And it is desirable also to retain by this degree of note some *moral* safeguard against fraud, even though the *legal* safeguard be entirely handed over to the caveat system. There will no doubt be many cases in which a temptation that would be sufficient to induce a trustee to use for his own purposes property totally unmarked by notice of a trust, would fail to do so, and in which he would shrink from the risk of detection and punishment, if the documents of title presented a clue to the trust. The section, as now altered, retains the advantage of such notice without any of its disadvantages.

New section 67.—Without some provision of this sort the other clauses may give an impression that the Supreme Court must be applied to in all cases. Where the appointment of the new trustee is duly made by the person entitled under will or settlement to fill a vacancy, there is no reason why the Registrar General should not complete the transfer of the property in accordance therewith as a mere matter of routine.

Section 69.—The present provisions regarding attorneys have reference only to dealings with land after it has been placed under the Act. The object of the amendment is to embrace applications under section 13. A second form of power of attorney has been placed in the Schedule to meet a difficulty felt in applying the original form to general powers of attorney. It appears to have been equally felt in Victoria, as section 16 of the new Act there passed is addressed to the same point.

New section, 69A.—This is taken, with slight modification, from a clause in the new Victoria Bill.

Section 75A.—Section 76 provides for the complex case of surrender of an insolvent’s lease through a mortgagee, but the Act makes none for the primary case of surrender by assignees direct to the lessor. This seems equally required, and is supplied by the new section.

Section 77.—A statutory declaration negating a settlement would, in many cases, be required by a purchaser of the wife’s real estate, and it may be proper that it should be supplied to the Registrar General before issuing a certificate to the husband.

Section 79.—The amendments proposed in this section are required to make the clause consistent with the new Real Estate Intestacy Act. Also to comprise leasehold estates when capable of registration,—and interests of such a nature as to be registered by entry without entitling to a distinct certificate.

Section 80.—These amendments are required to bring the clause into harmony with the preceding amended clause.

Sections 81 to 84.—(See remarks on sections 21 to 23, *ante*.)—There is a discrepancy between the term of notice given in Schedule M (twenty-one days) and that prescribed in section 82, for the lapse of a caveat if no action be taken thereon, viz., fourteen days. Mr. Torrens, in his evidence before the Select Committee, states that a settlor or beneficiary may protect his interest by forbidding trustees to deal with land without notice for a *month or more*. But if the twenty-one days be intended as a discretionary period, it is improperly inserted in a form which extends also caveats that are controlled by the fourteen days restriction of section 82. The special reference to notice in section 81 is indeed out of place, for in regard to that class of cases to which the restriction of section 82 does not apply, a required notice is only one of numerous other modifications which may be attached to the caveat by those entitled, if they please to enter an absolute caveat. It is, however, desirable to limit these modifications to some simple and easily verified condition, in order to avoid casting on the Registrar General the burthen of investigating the minutiae of trusts. If it should be found convenient hereafter to confide to the law officers of the Land Titles Department some of the judicial functions connected with the administration of the Act, additional facilities may perhaps be afforded for carrying out the details of most arrangements under the new system. In the meantime there can be no objection to a caveat prescribing the written consent of one or more persons (either including the caveator or not) as a condition of any dealing, or it may be intended that such consent shall be taken to be implied, if no objection be made after a prescribed notice. Under protection of a caveat of this nature every species of trust may be effectually created and guarded without infringing on the simplicity of legal transfer. The protection against fraud will be at least as complete as under the existing system, according to which every well drawn deed has contained (and the law itself under a recent statute implies) a provision exonerating purchasers as fully as does the Real Property Act. The only safeguard of the old system consisted in prescribing, in certain cases, the written consent of certain of the adult beneficiaries, and it is easy to retain this under the new system.

Caveats lodged by other persons, strangers to the legal title, come under quite a different rule, and it is necessary to guard carefully against their interfering vexatiously with the transfer of property. These are, therefore, made to lapse in fourteen days after notice of any intended dealing, unless in the mean-time a Judge’s order be obtained to the contrary. To render this provision consistent it will be proper to require that every caveat of this class shall fix some address in Sydney for service of notice.

In the original Act beneficiaries under will or settlement are allowed to enter at any time a caveat of the same absolute nature as the settlor himself. This would give undue power to persons having slight or indirect claims to embarrass and delay the matured arrangements of parties more deeply interested. If settlors originating a trust, or transferrors or transferees acting on the express terms of any agreement incident to a security or other qualified alienation, be allowed to guard their fulfilment by special caveat, it will be sufficient to give the remedy of the ordinary fourteen days caveat to other persons.

As the Act now stands it is by no means clear that an ordinary caveat may not be vexatiously kept alive after the lapse of the fourteen days by entry of a new one. A clause is now inserted to prevent this, but without prejudice to the power of the Registrar General or a Judge, either of whom may, if justice appear to require it, keep a caveat on foot.

Caveats will thus be of four classes,—

1. Against bringing land under the Act—

Lapses in three months, unless suit commenced and notified—or prolonged by Judge’s order.

Removable by Judge’s order at any time for want of *prima facie* case—or gross *laches* in proceeding.

2. Settlor’s caveat or caveat entered by consent of registered proprietor—

Prevents dealing unless removed—(a.) By Judge’s order. (b.) By direct consent of parties named. (c.) By implied consent through non-intervention after prescribed notice.

3. Ordinary caveat—

Lapses in fourteen days after notice, unless prolonged by Judge’s order.

Removable by Judge’s order at any time.

4. Registrar General’s caveat continues to preclude any dealing which he may deem fraudulent or improper, unless overruled by Judge’s order. Section

Section 85.—This section authorizes the creation of powers of appointment by registered instruments, without regard to the technicalities of the Statute of Uses. This may be very convenient, and get rid of much of the objection which has been made to the new system as inapplicable to the details of family settlements. But it has apparently been overlooked that powers are often made dependent on facts and circumstances which the Registrar General would find as difficult to investigate for purposes of title as those involved in details of ordinary trusts. The permission to create powers can therefore be conceded only by excluding from the legal title all such qualifications, and leaving the exercise of powers in disregard of them, to be dealt with in the same manner as ordinary breaches of trust. The amendment effects this object.

New Sections, 85A and 85B.—Complaint has been made in some quarters that certain facilities for making settlements on married women will be impaired by the new system. Under the previous law it has been easy to give a married woman absolute control over property for purposes of sale or mortgage by limiting it to such uses as she shall appoint. Section 85 provides that what might have been previously done by limitation of use may be done by direct transfer; but it does not fully meet this case of a wife's separate estate. The proposed new sections are intended to do this, inclusive of a provision against anticipation, and for suing and being sued by tenants on leases and contracts relating to the property. The same ends may be answered through a trustee, or by appropriate caveat. But these clauses may afford additional facilities to those who choose to take advantage of them.

Section 86.—It will be remembered that some controversy arose about this section when passing. The words now proposed to be omitted were inserted in the Legislative Council. Mr. Torrens communicated an objection, by telegram, before the last reading in the Assembly, but the clause was passed as it left the Council. The proviso effects the purpose intended by the Council, without being open to the objection of Mr. Torrens.

Section 88A.—Now that the real estate of intestates is divisible as personalty under the Act of last Session, it may be convenient to provide a form by which those who would prefer that their property should pass to an eldest son may effect this without the trouble of a will or settlement. A certificate under this section would effect this purpose. It is to be observed, however, that a child, or lineal heir only, would take under this clause. On failure of lineal issue the new law would still vest it in the personal representatives, unless controlled by some will or settlement. If the amendment proposed in section 96 be adopted with regard to the barring of entails by will generally, the last paragraph of this new section will not be necessary.

Section 92.—(See remarks on the proposed alteration of section 13.)—The clause is now made to apply not only to dealings under the Act, but also to applications to place land under it. There does not appear any reason why in either case the Registrar General's action should be fettered until proper notice be served upon him.

Sections 94 and 95.—The amendments here proposed are required to remove some confusion and ambiguity as to the method of proving documents.

Section 96.—The 96th section, as now drawn, is imperfect, as not including applications to bring land under the Act. The persons legally authorized require also to be more clearly designated, and there is no reason why additional facilities should not be afforded by including with them all the persons entrusted with the authentication of instruments in other respects, by section 94. The amendment proposed in the Victoria Bill contemplates the appointment of Special Commissioners by the Registrar of Titles, but if the numerous functionaries mentioned in the present and former Acts are all rendered competent, no serious difficulty can arise requiring special appointments either in the Colony or abroad. As to the cases in which separate acknowledgment should be required see previous remarks in section 13.

New section 96.—There seems no valid reason why a person who can bar an estate tail for his own purposes, by a mere acknowledgment of intention (added to the forms of an ordinary deed) before one set of public functionaries, should not be equally entitled to do so by any instrument duly authenticated as required for ordinary transfers under this Act. Successive relaxations in the law of entail have practically reduced it to a mere designation of the course of succession in default of other disposition, and there is no objection in keeping up the farce of a restriction which merely imposes trouble and risk of error.

New sections 96A and 96B.—The effect of section 96A will be materially to simplify the bringing land under the Act, or its transfer, particularly the cases where dower attaches. The provisions regarding dower in section 96B are a transcript of section 20 of the Victoria Amending Bill. Some of its provisions originated with the Examiners of Titles in Victoria, and appeared in early draft of their Bill, which was courteously sent to one of the New South Wales Examiners for perusal. Several additional amendments were thereupon suggested by him, and their substance was incorporated in the Victoria Bill, before it was brought into the Assembly of that Colony. The following explanation and analysis of its object and contents as there given, may be conveniently cited:—“The object of this clause is to avoid the difficulties which arise in dealing with land ‘owing to dower rights, and also to induce those landed proprietors who have already, at considerable expense, barred their ‘wives’ rights to dower, to bring the discharged properties under the Act without subjecting the land to a newly arising dower ‘right in consequence * * * * * Legislation should provide for the following cases:—

“(a.) An owner married before 1837, whose wife's right to dower has not been barred.

“(b.) The like where the right has been actually barred.

“(c.) The like where the right has not arisen or attached (such as a vendee who has not had a conveyance) or may be ‘defeated (such as under a conveyance to such uses as the husband may appoint, and in default of appointment to ‘him in fee.)

“(d.) An owner, whether married before or since 1st January, 1837, acquiring land under the Real Property Act, whether ‘by grant or transfer. It is proposed in the first case (a) the certificate of title, &c., should be made subject to the ‘wife's right, that is, unless she consents to relinquish it, to facilitate which is the object of the preceding new section, ‘and that in all the other cases the dower should be subject to the dealings of the husband, whether married before or ‘since 1837. Just like the present ownership of husbands married since 1st January, 1837, over their other lands. ‘Where, however, the second case (b) occurs, the widow of the applicant is not to have her barred right renewed by ‘the land being brought under the Act.”

Section 99, line 2.—This amendment will remove a difficulty which has been felt both in Sydney and Melbourne. The Victoria Bill contains the same amendment.

Section 101.—The propriety of this amendment is self-evident. It is contained in the Victoria Bill.

Section 107.—Without this addition there may be some question whether an appeal be given in the matters referred to although none can exist as to such appeal being desirable.

Section 108.—These amendments are for the most part an adaption of section 17 of the English statute 25 and 26 Victoria, c. 53.

Section 109.—The Victoria Amending Bill proposes to vest the judicial power of the Trustee Act in the newly constituted officer of “Registrar of Titles.” Should this course be followed in New South Wales the reference to the Trustee Act in this section may be omitted, but it may stand in other respects as applicable to any other vesting orders of the Supreme Court or a Judge; or, if the jurisdiction of the Court and Registrar of Titles be left concurrent or co-ordinate, the clause may remain as it is. The amendment is made to embrace all vesting orders, as the same principle would apply in any other case in which the Court might possess a power of this nature, whether already existing or to be created by any future statute.

Section 110.—This clause seems quite out of place in this Act. There can be no reason why the relative obligations of trustee and cestique trust in the matters to which this enactment refers, should be altered by the fact of the title consisting of a single certificate, instead of a box full of deeds. Any Court of Law or Equity will surely recognize in the cestique trust the same right to sue in the trustee's name, and the trustee the same right to indemnity without the special provision here made. But if necessary at all, why is it limited to the particular class of trusts created under section 109? If it be retained it should be more comprehensive; but as it is evidently useless and beyond the scope of the Act it will be better to omit it altogether.

Section 112.—If the exceptional circumstances recognized in section 115 are to prevail against a title, their proof on a trial or hearing of action, or for suit damages or specific performance, should be a sufficient defence on the part of a purchaser, notwithstanding his contract was made before he had notice. Otherwise, one or other of these two evils would result: He would defraud the rightful owner by conferring a title valid against him, pocketing the money; or he would defraud the purchaser by compelling payment for land he would be unable to retain. It is hardly necessary to inquire which result would follow. It might depend on the special circumstances. The risk of either equally demands the amendment.

Section 115, paragraph 6.—The amendment at the close is explained in remarks on section 40.

Section 122 (as to improvements).—This may perhaps be implied, but the Act cannot be too clear in protecting the assurance fund in every respect consistent with reason and equity.

Section 122 (as to privilege of disability).—The law, as section 122 now stands, gives six years from the time that disability ceases—the same period that is originally given to a person *sui juris*. The general statute of limitations, affecting titles which have not passed under this Act, limits twenty years as the ordinary term. Ten years (or half that term additional, if necessary, in case of disability) from the time of the disability ceasing, but with an ulterior provision, rendering forty years, or double the ordinary term, a final bar against all claims (continued disability notwithstanding). Now as section 122, in its present form, gives six years from the time of disability ceasing (whenever that may be), without naming any period as a conclusive estoppel, it would, if not controlled by the previous law, actually carry the privilege of disability beyond that conferred by the general statute indefinitely, that is even beyond the forty years under certain possible contingencies. This surely cannot have been intended. It could hardly indeed have been intended to abstain from contracting the period of limitation in this class of cases in some proportion to the contraction effected in others. When the principle of a statute of limitation is once recognized, and it is admitted to be consistent with justice to sacrifice occasionally remote and obscure claims to the policy of establishing the general security of property, and encouraging its improvement and free exchange, it seems hard to understand why there should be so long a period allowed for the raking up of dormant claims of absentees and others to the prejudice of persons who inhabit, improve, and sell property in ignorance of their rights or even existence. The inconsistency is greater in a remote colony, where the difficulty of tracing the relatives of a deceased owner of land born and educated in England, or elsewhere, so frequently augments the chance of concealed claims beyond the reach of a purchaser's investigation. This was strongly urged by the writer before a Select Committee of the old Legislative Council, in the year 1849,* and he has not seen any reason to change his opinion. The present amendment merely proposes to render the clause consistent with itself, as a reduction of the ordinary term of twenty years to six, and then following in other respects the analogy of the old statute. As already explained, twenty, ten, and forty are, according to that statute, the several terms of ordinary limitation of allowance for disability, and of final estoppel. The corresponding terms under the present Act will therefore be six, three, and twelve. By this means the contingent liability of the assurance fund will absolutely cease at the end of twelve years, while it will otherwise remain liable for forty years, if not longer, to claims of the very nature which are least likely to be detected, on account of their obscurity. To remedy this is the effect of the amendment here proposed. It may be further observed, that even if six years were fixed absolutely, without any allowance for disability, it would not go so far as the ancient law of England, which in the case of a fine with proclamations, rendered five years non-claim an absolute bar; and in the present case it is submitted that the investigation, advertisements, and notices which precede the certificate of title, are more than an equivalent for the obsolete formality above referred to.

Section 128A.—The object of this section is to prevent a construction being placed on the rule of indefeasible title, which might work great injustice and cast unreasonable burdens on the assurance fund. If, as a general rule, all excessive measurements of lines or areas in descriptions are to be made good by encroachment on adjacent properties, it will frequently result in a purchaser obtaining, not only what he was induced to buy, in good faith, through a vendor's erroneous assumption of title, but what he had no intention of buying, and finds unexpectedly thrust upon him by a mere blunder. If an encroachment has actually been made by a seller who embodies such encroachment in the description under which he sells, it may in certain cases be just that the purchaser shall either retain the whole land, or, if deprived of it by the true owner, obtain compensation. But if no actual encroachment has been made before the purchase, and it is only attempted to be carried out in order to give effect to a clerical or arithmetical blunder the case is wholly different, and the object of this amendment is to maintain this just distinction.

Section 128B.—The object of this section is the same with that of section 116, which was introduced in the original Act, on the motion of the writer, as a then member of the Legislature. In selecting which of two innocent parties shall suffer it cannot be wrong, *ceteris paribus*, to select the one who will suffer the least, and if the sufferer is to be indemnified by the public, the public interest requires the same thing.

CONCLUDING REMARKS.

It would render these suggestions incomplete if they closed without some reference to the proposals embodied in the Victoria Amending Bill, for placing the salaries of the Examiners on the Consolidated Revenue, independent of annual vote, and for conferring additional powers upon the Senior Examiner under the new designation of "Commissioner of Titles."

The Victoria Bill provides as to this officer and his successors, as follows:—

- (s. 24.) That he shall be called the Commissioner of Titles—and shall hold his office during good behaviour but may be removed on an address presented to the Governor by both Houses of Parliament—that upon any vacancy occurring in such office the Governor in Council may appoint a person to fill such vacancy—that there be paid to the Commissioner of Titles a salary of _____ a year and that such salary shall be charged on and payable out of the Consolidated Revenue of _____ —that all Courts Judges and persons acting judicially shall take notice of the signature of the Commissioner of Titles and of any assistant Registrar General—that the Commissioner of Titles shall have and exercise the like jurisdiction and powers and perform the like duties as is and are given to and imposed upon the Land Titles Commissioner by the said Act and may with the consent of the Governor in Council from time to time make such alterations in the several forms of instruments prescribed in the Schedule to the said Act as he may deem requisite and have and exercise all the judicial functions and powers conferred on and given to the Registrar General by the said Act as to the materiality of instruments and the construction of instruments as affecting land or the title thereto and the sufficiency of evidence and proofs and all other judicial functions and powers whether they be of the same nature or character as those particularly referred to or not.
- (s. 25.) That after the passing of this Act the jurisdiction powers and duties thereby conferred upon the Commissioner of Titles should cease to be exercised and performed by the Land Titles Commissioner.
- (s. 30.) That the twenty-fifth section of the Real Property Act should be read and construed as if the words "or of the Commissioner of Titles" had been added to such section at the end thereof and the power given to the Supreme Court or a Judge thereof by the sixty-sixth and sixty-seventh sections of the Act (67 and 68 in N. S. Wales Act) may be exercised by the Commissioner of Titles.
- (s. 31.) That as to any land under the provisions of the Act the Commissioner of Titles may exercise all such powers as are vested in the Supreme Court by the Trustee Act of one thousand eight hundred and fifty-six (in N. S. Wales 1852) and it shall be lawful for him to make the like orders under the one hundred and ninth section of the Real Property Act as are thereby authorized to be made by the Supreme Court or a Judge thereof.

The grounds on which these alterations are recommended appear from a letter addressed by Mr. Carter, the Senior Examiner, to the Attorney General of Victoria, laid before the Parliament of that Colony in December last. Of this the following is an extract:—

"I think an improvement would be made if one of the legal advisers had conferred on him the powers, &c., of the Lands Titles Commissioners, either by way of substitution or concurrently, as the Legislature may deem expedient.

"The functions of the Commissioners have reference chiefly to the number and channels of the advertisements, and the intervals between them and to other notices. The change suggested will save time and expense, and some of the powers now exercisable

* The following answer was then given by Mr. Holden to a question of Mr. Wentworth:—"I think at all events, the Imperial Statute of Limitations should be so far altered as to abolish the additional protection it affords to claimants under the disability of absence from the Colony. There can be no just reason why an antipodean heir, whose existence is likely to be unknown, and even undiscoverable here, should have a double time allotted him for raking up the ashes of his genealogy, to the prejudice of parties who have bought and improved the land. It is a totally different case from that of the absence contemplated by the law of England, where the roots of titles and families, in nearly all cases, originate on the spot, and the inquiries of a purchaser may in general establish with certainty either the negative or affirmative as to the existence of a claimant to land. As the law now stands in this Colony the purchase of land from the apparent eldest son of a settler married in the Colony, runs the risk of ejection by an unknown heir, born, it may be, of some former undisclosed English marriage, and the very distance that baffles all inquiry is made a ground of extending for forty years a claim which would otherwise die out in twenty. The facilities afforded by a recent Act of Council for proving grants by the official record, without producing the deed issued, have, I think, augmented this evil, and rendered more necessary a measure for protecting titles against claims of the nature referred to. If the heir of any grantee of land can prove the grant without producing the deed issued, and then, by proving his own relationship to the grantee, put the present occupier to strict proof of his title derived from the grantee, infinite mischief may ensue. In the course of the forty years, during which the right of action is retained by an absent heir, the evidence required to support the most honest titles may become lost or inaccessible, and property improved to a hundredfold its original value may excite the cupidity of an heir whose connection with the forgotten owner would never have been otherwise thought of, and who gains his first intelligence of the prize from an advertising attorney speculating on his share of the spoil."

exercisable by the Supreme Court, or one of its Judges, may also conveniently be given to such adviser; such as the powers mentioned in the 25th, 66th, 67th, and 109th sections. Under the 25th section the adviser could speedily judge, the deeds being at hand, of the *bonâ fide* character of the applicant, but a Judge would probably require more lengthy and costly proof in support of the application than the adviser, who would have had the title under his knowledge, and would continue to have the materials conveniently within his reach. With respect to the 66th and 67th sections it is probable that before the Judge would make the order, he would require proof of the nature of the trust and of its devolution, and of the due appointment of the incoming trustees,—matters of frequent occurrence in titles and not (save on rare occasions) giving rise to difficulty. As regards the 109th section it is observable that under a previous section (the 13th) the Registrar General may, as concerns land sought to be brought under the Act, be directed by the Commissioners to do in effect what, after the land has been brought under the Act, and the title has become presumably less complicated, the 109th section requires to be done upon the basis of an order of the Supreme Court, or one of its Judges.

“The legal adviser may also be clothed, not exclusively but co-extensively with the Registrar General, with the judicial functions cast upon the latter officer, such as the duty of dealing with the materiality of instruments, the construction of instruments as affecting land or the title to it, the sufficiency of evidence and proofs, &c. By still leaving to the Registrar General the exercise of these functions sufficient effect will, I think, be given to the desired lay element.”

The discussion of the policy of this change is a somewhat invidious task for a party personally concerned, and a sense of this has evidently restrained the pen of Mr. Carter, as it does that of the writer of these remarks, from entering more fully into the question.

That the relative position of the lay and professional administrators of the Act is, quite *an anomale* under the present arrangements, adopted from the South Australian Act, is too obvious to need argument. Mr. Torrens is himself understood to have fully admitted this. It could indeed hardly have arisen, even in Adelaide, unless as the result of two concurring facts,—the refusal of the leaders of the profession to countenance the new system on the one hand, and on the other the peculiar position of Mr. Torrens, who, although not educated as a lawyer, was quite identified with that portion of the law which the Act concerned, and could almost say regarding it,—“*L'acte c'est moi.*”

Beyond the above observation this discussion will not be here pursued any further than Mr. Carter has carried it, but it will be left to those who are not individually concerned impartially to consider, and to the Legislature to adopt or reject, with a sole view to the public advantage, all or any of the amendments which he proposes in this matter.

To the same judgment must also be referred the other proposal contained in the Victoria Bill, for rendering the salary of the responsible and quasi-judicial office of Examiner independent of annual vote.

THE EXAMINERS OF TITLES to THE COLONIAL SECRETARY.

Land Titles Office,
Sydney, 10 April, 1866.

SIR,

In submitting for approval the accompanying Bill “*for recording Titles to Land and simplifying dealings therewith,*” with a view to its superseding, as a more complete and matured measure, the Real Property Act passed in 1862, we would first recall an observation with which we prefaced the submission of a previous draft Bill, in August, 1863. We then remarked that “no blame could fairly attach to anyone on account of such defects as we proposed to remedy, inasmuch as so entire a reconstruction of a whole department of law as our new system contemplates cannot possibly be otherwise perfected than through the close observation of its working, by those personally engaged in its administration gradually collecting thereby the data required for the satisfactory completion of its details.”

In further illustration of this we might have referred to the analogy of English legislation upon such subjects as modern Joint Stock Companies, Bankruptcy, &c., which has only arrived at its existing stage of comparative perfection—even with the assiduous co-operation of eminent statesmen and jurists with leading men of commercial experience—by slow degrees, involving frequent amendments, many of them repealing and superseding all previous legislation on the same matter, and continued over a long series of years.

As our draft submitted in 1863 did not (for some reason which we are not now concerned to inquire) receive any consideration from the then Government, we have had the advantage of nearly three years' additional experience. This, as might naturally be expected, enables us now to submit what we regard as a much more complete measure. During this period three amending Bills, supplementary to the nearly identical original Act in Victoria have been passed in that Colony, and a Bill consolidating the whole and repealing the original Act, is there in progress as a Government measure. An Act introducing into Ireland the main features of the Torrens' system has been also passed by the Imperial Parliament, placing the new Record of Titles thus created under the direct supervision of the Irish Landed Estates Court. Pending the introduction of these Acts, both in Victoria and Ireland, we have been in occasional correspondence with some of the gentlemen engaged in their preparation; and we have the gratification to find that many amendments we ourselves contemplated are embodied in these foreign measures. Whether through adopting our suggestions, or in consequence of independent concurrence of opinion is immaterial, as in either case the confirmation of our views is equally satisfactory.

We will not undertake here to enter into *all* the particulars of our proposed amendments; to do this would render this letter unreasonably voluminous, and might perhaps be also deemed a needless parade of the labour we have bestowed upon innumerable details.

It may, notwithstanding, be proper that we should indicate and explain some of the most material features of the Bill; and even this will, we fear, sufficiently tax the patience of any non-professional reader.

The first question that presents itself to us is very embarrassing, in consequence of the impossibility of divesting it of personal considerations. We feel it a very invidious task to have to propose the abolition of the existing Board of Commissioners, in connection with the simultaneous conferring upon ourselves of ostensible judicial authority, with augmented powers. When, however, the reasons for these changes are considered it will, we think, be admitted that we could not honestly refrain from including them in any Bill submitted as a permanent measure. The present Board was an invention of Mr. Torrens, avowedly to meet peculiar exceptional exigencies in his own position, at the time when his Act first passed in South Australia. This will clearly appear to any person perusing his evidence before the Select Committee of the New South Wales Legislative Assembly in 1862. For the present purpose it may be sufficient to state the duties which the Board actually perform:—Once a week it assembles to receive our reports upon cases which we have investigated, and which we have decided, for reasons only known to ourselves, to recommend to pass. This recommendation usually takes exactly the same form, whether the case be one that has occupied months of laborious inquiry and correspondence, or has required only ten minutes' inspection of

short and conclusive documentary evidence. Acting implicitly upon these reports (for no revision of our labours is either provided for or possible under the present system) the Board simply instruct the Deputy Registrar General for what period and in what newspaper the case shall be advertised; while even this solitary act of discretion, whenever it deviates from mere routine, must be equally governed by some expression of our opinion, as we alone can be acquainted with those special circumstances which require such deviation. Whether it be necessary for the Registrar General and two Commissioners to assemble weekly to go through this formal ceremony, it is for others to consider.

On the other hand it may be asked whether it is desirable to allow us as Examiners to continue to exercise, without the prestige of the name of Judges—powers virtually judicial, and this under the screen of a Board which is hardly anything but a passive instrument for carrying out our decisions?—whether it would not be far better to recognize by name the powers which we possess in fact?—and to render these more efficient by authority to summon and examine witnesses, and to carry on our proceedings in that healthy atmosphere of publicity which belongs to an open Court?

The existence of these complete judicial powers in the Land Titles Court of Ireland was regarded, by all parties concerned in introducing the Colonial system into Ireland by the Act of last session, as highly conducive, if not actually necessary, to its prospective success. Mr. Hutton, the Secretary of the influential Association formed in Ireland to promote that measure, calls the Landed Estates Court “the chief element of the special preparation of Ireland for the system proposed by Mr. Torrens”; and the Committee of the Association, in their Report of January, 1865, strongly urge the necessity of so framing the Act as to place the record and all legal questions thereon arising, under direct supervision of the Landed Estates Court.—The one is indeed the proper complement of the other. The mechanical portion of the new system has hitherto been more complete in Australia, and the judicial in Ireland; and the reasons which have led to the incorporation of the former with the latter by the Imperial Parliament, are just as stringent conversely for incorporating the latter with our existing law, so far as circumstances and a reasonable regard to economy will permit. Although the English Transfer of Land Act was introduced without creating a separate Court, and was distinguished from the proposed measure of Sir Hugh Cairnes, in this particular its author (Lord Westbury) took a prominent part in preparing and urging through Parliament the last Irish measure, linking Mr. Torrens’ plan with the Landed Estates Court. The slow progress of the new system in England may perhaps be attributed in great measure to its being unconnected with a similar supervising and easily accessible tribunal. At all events the intelligent editors of the Manual of Practice under this Act (Messrs. Umlin and Key) have seen reason for conveying, in the introductory chapter of that work, their impression that even in England it will be found necessary either to entrust the management of land transfer and registration to a separate tribunal, or *in some other manner to confer certain powers which will be found useful, if not essential, to the investigation of title.*

The amended Bill now submitted for New South Wales is so framed as to confer these powers in the first instance upon the Examiners, in conjunction with the exercise of their present duties, and without necessitating any addition to the present staff beyond an efficient clerk to each Judge; leaving it open to the Government hereafter to appoint such additional officers as it may deem necessary to meet the expanding business of the Court, whenever Parliament may concur in opinion as to such necessity, and provide the requisite funds. The Court thus established would also tend to relieve the Equity Branch of the Supreme Court of many duties connected with the administration of real estate. The nomination of new trustees would naturally fall within its province, and the investigations consequent upon applications for recording new ownerships, on transmissions under wills and settlements, or for amending occasional errors, would intercept (subject only to appeal) much of the Equity business of the Supreme Court, by inquiries conducted before a tribunal possessing the utmost possible facilities for speedy and satisfactory decision.

The conferring of judicial powers to aid in the examination of titles would remedy a defect in the present system which greatly interferes with its usefulness. Our examination is at present wholly limited, so far as it is governed by any express directions in the Act, to the reception and perusal of the evidence submitted to us *ex parte*. No advertisement takes place in reference to any application until our approval of the *prima facie* title thus submitted has been notified to the Board. After this notification we are *functi officio*, and there is no provision for the amendment of our report or the revision of the order of the Board made thereon, even though the advertisement should elicit facts which, if made known to us pending our investigation, would have completely altered our opinion. The Act only makes provision for caveat by an objector, to be sustained by proceedings in the Supreme Court.

The absurdity of this is so manifest that we have occasionally exceeded, although we cannot suppose we have thereby violated, the strict duty prescribed by the Act, by inviting information by a notice in the nature of a rule to show cause, from persons in regard to whom our pending examination has disclosed any particulars which suggest the possibility of their having any claim or possessing any information adverse to the application. This has in some cases led to our receiving information leading us to withhold approval of the title, while in others it has confirmed our approval, by showing the groundlessness of some suspected defect. In either case it has tended to a more satisfactory result, and to diminish the probability of future litigation and expense.

The efficiency of the investigation is however necessarily much restricted, whether it be *ex parte* or otherwise, in the absence of judicial powers to summon and examine witnesses and compel production of documents.

Nor are these powers required only for the original investigation of applications to place titles under the Act. The entries on the record of future changes of ownership will frequently involve questions of fact as well as law, such as claims by succession at law, or under settlements, insolvencies, sheriffs’ sales, evidence of births and marriages connected with claims by succession in remainder or under entails, &c., and questions of boundary, or correctness of descriptions in other respects.

DOWER.

Other proposed amendments relate to the matter of dower. These are, in the main, identical with those passed in a first amending Bill in Victoria, in 1863. The difficulties which suggested them occurred simultaneously to the Examiners in both Colonies, on first beginning to work the Act; and suggestions made by one of us, regarding some details of the requisite amendments, were adopted in the Bill then passed in Victoria, by an alteration made pending its submission to the Legislature.

To understand this question it is necessary to revert to the law at the time of the adoption by the Colonial Legislature, in 1837, of the Dower Act, then recently passed in England. That Act rendered the rights of all purchasers from a husband married on or after 1st January, 1837, paramount over a wife's claim to dower; but it still left that claim to operate in favour of all wives married before the Act came into force, even in regard to land acquired by the husband afterwards. Considering that even as the law then stood the husband could always at his own choice acquire the same absolute right of disposal, free of dower, which the Act conferred, and this by a mere technicality which had become an established form in conveyancing, we question whether justice required such a manifest sacrifice of the policy of the new law as this reservation of right of dower of women married before 1837, in any cases of land acquired since. The effect has been to keep alive for the ensuing twenty-nine years the necessity of inquiring the date of marriage of vendors; and although every year reduces the proportion of cases to which the actual claim applies, the trouble of the inquiry still remains the same, aggravated by the additional lapse of time in obscuring evidence of facts. The bare *possibility* of marriage before 1837, even though, when estimated as a probability, it might not exceed one per cent., leaves it equally necessary, in order to establish a negative, to obtain evidence of the facts in the whole of the cases.

The Torrens Act has even introduced some additional difficulty, since it has not provided any substitute for that technical method by which conveyancers had before evaded the attaching of dower.

With a view to remedy this we proposed ourselves, in 1863, and the Victoria Amending Act of that year has already carried out in that Colony, the following amendments, viz. :—

- (1.) Dower to be wholly barred in favour of purchasers from recorded owners of land acquired from the Crown by grant dated after 1st January, 1863, and thus placed under the Act.
- (2.) To be equally barred in cases where land is brought under the Act by the application of the owner, unless the claim be noted on the certificate as attaching to the title.
- (3.) No such claim to be retained in force or noted on accepting the title of any applicant whose title is of such a nature as to have admitted of his alienating the land under the old law free from dower.

Yet even all these amendments would not finally dispense with the duty of the Examiners to inquire whether there be a claim to dower of such a nature as neither of the above rules abolishes, and which they ought therefore to note on the certificate. To put an end to this we now further propose that after the 1st January, 1870, no claim to dower shall prevail against a purchaser, in any case whatever, even though the claimant were married before 1837, unless she shall have filed a special claim with the Recorder, accompanied by proof of the marriage on which she relies.

CAVEATS AND OTHER PROVISIONS PROTECTING TRUSTS AND EQUITIES.

The object of the amendments under this head has been to perfect the machinery for protecting beneficiaries, without infringing on the simplicity and security of the legal title for purposes of transfer or security.

The compatibility of the new system with the complications of settlements and trusts has been pertinaciously denied by its opponents. We nevertheless confidently affirm that with the aid of such provisions as are incorporated in the present Bill, the attainment of all that is to be desired, not only in the title of purchasers, but also in the protection of beneficiaries, is both far easier and far more effectual under the new system than the old.

Some remarks on this subject by one of ourselves have been adopted by the Committee of the powerful Association which was formed in Ireland to watch and promote the passing of the recent Irish Record Act, and is printed in an Appendix to one of their Reports. This recognition of their applicability to a measure now actually embodied in imperial legislation, and with which our present Bill is in perfect harmony, may perhaps justify their submission for perusal in connection with the particular amendments now under notice. (*See Appendix.*)

The present Act excludes even a mere reference to a trust on the record, apparently on the assumption that the security of the legal title is thereby necessarily endangered. This is too rigid a view of the case, it being quite as easy to avert this danger by legislation in the case of the record as by inserting the usual clause exonerating purchasers in the case of deeds containing powers of sale. It is to be at the same time observed that, if the encumbering of the record by prolix detail be avoided, the disclosure of the fact and general nature of a trust is often highly desirable, not only to diminish the risk of fraud, but that of the inadvertent misapplication of trust property, through ignorance of its character, by executors, official assignees, or others.

The Bill as now drawn carefully distinguishes between that portion of the record which affects the legal title, and those equities which (whether disclosed on the record or by separate instrument) are only cognizable as matters of contract between the parties thereto. It thus renders perfectly consistent with the security of the former, an equally effective protection against fraud in regard to the latter. Every settlor continues at liberty to make precisely the dispositions which he could have made under the old system, while he is at the same time presented with a choice of methods for guarding against breaches of trust—some identical in effect with those before existing, and others new and superior. Either of the following courses are open to him :—

- (1.) He may commit the property to the trustees with unqualified powers of alienation, relying solely on their personal honor and responsibility.
- (2.) He may, by a mere note entered on the record, restrict these powers to the full number, and disqualify survivors from acting until the full number, or a given number, of new trustees be supplied to fill vacancies.
- (3.) He may impose, as a condition of alienation, the consent of one or more persons nominated on the record for this purpose, and he may further provide for the succession or change of such nominations, in the event of deaths or other emergencies.
- (4.) He may impose the condition of mere notice on persons similarly nominated, so as to afford opportunity for caveat within a given period of suspense.
- (5.) He may limit legal estates without intervention of trustees, leaving each of the parties who may become entitled thereunder to apply from time to time to the Court to be placed on the record as owner, to the extent of his respective right and interest.

The action of the Court in the case last supposed is after all not distinguishable in its principle from that

that which, upon the narrowest possible administration of the Torrens system, would necessitate the inspection and interpretation of a will in order to admit a devisee upon the record. If it were for no other reason required, judicial power would be necessary for the safe administration of the law in this sole particular. But if once conferred, and an efficient tribunal thereby established, it then becomes equally available for the extension and perfecting of the system in all other desirable respects.

STATUTORY DEFINITIONS OF SPECIAL ESTATES.

Very nearly related to the foregoing remarks on trusts and settlements are some provisions which have been introduced to facilitate the placing on the record of special estates, so as to give them, in analogy with the existing enactments regarding mortgages and leases, a definite statutory operation, dispensing with the insertion of mere formal provisions in each particular instrument creating them. There is a section of the present Act which aims at the simplification of legal instruments in a general way; but the amended Bill contains the following definite provisions:—

- (1.) Authority to the Court to place on record legal estates contracted to be created by articles of settlement, under their equitable construction, without requiring them to be previously limited in verbose technical language by a more formal instrument.
- (2.) A provision giving to a power of appointment preceding and superseding ulterior limitations, the same effect with regard to a recorded estate as it has hitherto had upon ordinary estates under the previous law. It has been a frequent objection to the present Act that it does not admit of bestowing in this way upon a married woman the same convenient power of over-riding ulterior trusts by her sole appointment, which is given by the common limitation inserted in settlements for this purpose.
- (3.) A provision is made for recording, in a simple and effectual form, the separate estate of a married woman, with or without power of anticipation.
- (4.) A provision is made by which any person who desires to retain the operation of the old rule of primogeniture with regard to his property, in case of intestacy, may elect to have it so recorded as to effect this purpose.

SECURITIES.

Under this head a defect in the present law has been supplied, by making better provision for securities given in fulfilment of agreements of a special nature, such as cash credits, indemnities, &c. The forms in the present Act and the statutory powers incident to them, are limited to mortgage debts and annuities, or other fixed money payments. For this limitation there can be no adequate reason. Even in the case of mortgages and annuities the power of sale cannot, *as a matter of title*, be properly made dependent on any preliminary proof of a default, to be exacted (in the absence of caveat or *lis pendens*) either by a purchaser or the recording officer, before accepting the signature of mortgagee or annuitant as equivalent to that of owner for purposes of sale.

The Bill as now amended provides for three kinds of security, embracing,—

- (1.) Ordinary mortgage debts.
- (2.) Other fixed payments, such as annuities, &c.
- (3.) Indemnities or contingent liabilities.

The whole are classed under a general head of “security incumbrances,” to distinguish them from leases or other qualified interests, to which the technical term of incumbrance is sometimes applied, but which are not within the scope of these provisions.

DEFINITION OF THE TITLE CONFERRED BY THE CERTIFICATE.

The provisions on this head have been carefully revised. The language of the leading section of the English Act has been adopted in preference to that of the present Colonial Act; less, however, in consideration of any material difference in its effect, than its superior clearness and brevity. The exceptions and qualifications, some of which are at present confusedly scattered in different parts of the Act, are now all placed together in immediate sequence, so as to render them more easily understood and referred to. Some amendments are made, the general policy of which is to give a more unambiguous protection to a recorded owner *in actual possession* of the land described in his certificate, against the possible effect of any adverse claim resulting from error in a conflicting certificate that may happen to be granted to another person by inadvertence or fraud. In judging of the practical operation of these provisions it is to be borne in mind that means are afforded for correction of errors by application of either party to the Court; and it is proposed that any person who neglects, within a reasonable time after becoming aware of any error, to apply for its rectification, shall not only thereby lose his right in favour of the conflicting claimant, but also his title to any compensation for consequent injury from the assurance fund. The tendency of this rule will be to purify the record from any errors arising thereon before the lapse of time has either obscured the evidence of facts required to arrive at a just decision, and also before the more simple question between the original parties has been complicated, by claims of purchasers and others having acquired a derivative title on the faith of the erroneous description.

ASSURANCE FUND—COMPENSATION.

Various other provisions besides that last referred to have been introduced, with a view to reduce within narrower and juster limits the liability of the assurance fund to compensate individuals for alleged injury sustained under the operation of the Act. Happily no claim has hitherto been made thereon, and opinions may greatly differ as to the risk in store for the future; but in no point of view can it be proper to saddle the public with this liability to any degree beyond the limits of strict justice. We believe that in order duly to establish these limits the new provisions now introduced in sections 153 to 156 inclusive are required, in addition to the qualifications embodied in several of the preceding sections. These enactments will speak for themselves, without the necessity of here setting forth the particulars.

In close connection with this subject is a provision admitting of the charge of a higher premium than $\frac{1}{2}$ d. in the £ in special cases. This provision would not only afford a legitimate means of augmenting the assurance fund, but relieve the Examiners from a serious difficulty which they often feel either in accepting or rejecting a title. The rejecting of a title is naturally regarded as casting a slur upon it, although the defect or obscurity which leads to its rejection may be exceedingly slight, and such as any purchaser might be fairly advised to disregard for some abatement in price. In a transaction, for example, affecting

affecting property valued at £10,000, an abatement ranging from £100 to £500 might often be cheerfully submitted to, although the imperfections were not such as to create any apprehension of positive danger, and where even the legal marketability of the title might be fairly open to argument.

The acceptance of such a title by the Examiners for any sum short of the supposed abatement would be a boon to the owner, and might at the same time be an excellent bargain on behalf of the fund. But as the Act now stands a title involving a possible (however remote) liability of £10,000 must either be guaranteed for a paltry premium of £20 16s. 8d., or be totally rejected.

This proposed latitude in the adjustment of the assurance fee has been, since our first suggestion of its expediency, introduced in Victoria by one of the amending Acts there passed, and it is nothing more than the adoption of the rule acted on by all Boards of Direction in Mercantile Assurance Companies.

The length to which this letter has now extended compels us to close it without entering upon any further particulars.

We will only point out, in conclusion, that the voluminous contents of the existing Act have been re-arranged and classified analytically, besides being incorporated with the new matter.

If we had now to originate a first draft of such a measure we should have given it a much more compendious form, as we should have omitted numerous directory details in which we have followed the present Act, but which would be more appropriately provided for by Rules of Court promulgated under the judicial powers which it confers.

As however these are now a part of the existing law we have hesitated to omit them merely for the sake of abbreviation, lest we should create an impression that we seek to abrogate these as rules of practice, in cases in which we do not at present see any reason to question their propriety *as such*.

We have, &c.,

G. K. HOLDEN.
ALEX. DICK.

APPENDIX.

Memorandum on the applicability of Torrens' Act to Settlements and Trusts.

By G. K. HOLDEN.

THE most complicated settlement ever made by deed or will cannot present, for the purpose of registration, any difficulties distinguishable in their own nature (or even in point of degree, when taken singly) from those of ordinary titles. Every title is indeed virtually held under settlement, inasmuch as by a law of nature no owner can retain the property personally beyond his own life. Its subsequent destination is, in default of any other, governed by the law of inheritance, which is virtually a provisional settlement in the following form, viz. :—To A and his assigns for life, remainder as he shall appoint, and in default of appointment, then as the law of inheritance prescribes. If any private settlement be in force this operates as a special law for the individual case, but it may be quite as easy—indeed in the average of cases much easier—to determine the party entitled under the special provision, than under the general law. As regards the power of overriding the settlement by transfer this may exist alike in both cases. It exists always *primâ facie* in the owner; but in making provision even for ordinary mortgages and other encumbrances this power is as effectually shifted or modified as in the most complicated settlements, and gives rise to exactly the same difficulty, neither more nor less; requiring and obtaining precisely the same solution and precautionary arrangements. Whenever a power separated from ownership is dependent on any preliminary condition for its proper exercise, whether default in payment of a mortgage debt, a wife's jointure, or a child's portion, or a mere individual discretion, it raises, in regard to title, the question—who is to be responsible for seeing to the existence or fulfilment of the condition?

This question arises alike in all cases. It arises in every case of mortgage and encumbrance, and as the general rule of conveyancing before the Act was to provide for the total exoneration of purchasers from such responsibility the effect was to render the power of sale, in point of title, really absolute; being conditional only as regarded the liability of the mortgagee, for breach of trust, in the event of his exercising it improperly.

To exonerate the Land Titles Department from the same responsibility does not alter the case in any way or degree as regards the mortgagor or owner. But if this be admitted then it follows that the business of the department is (subject only to the restraint of caveats) reduced in all cases of transfer to this single question: Is the signature of the owner, or of the donee of the power, as the case may be, duly authenticated?

Now there is, I will venture to say, no settlement, however complicated, that can give rise to any difficulty that is not capable of being met in the same way. Wherever the legal estate is vested in trustees having full powers of sale there is absolutely no distinction between the old and new law, unless it be in favour of the latter, as respects the greater facility of checking fraud in trustees, by obtaining time to apply to a Court of Equity, through a caveat, or by the entry of the "no survivorship" memorandum. The legal title will be in that case for all purposes of registration, precisely of the same simplicity as that of property unaffected by any trust, the ownership and the right of disposition being united in the same person, and both resting on the mere fact of registered ownership. But even if trustees be not interposed for all the purposes of the settlement, and if there should be successive tenancies for life, powers of appointment among children, or charges of annuities or portions, still there is no special difficulty in ascertaining the person entitled to receive a certificate of title as tenant for life, merely because it is derived under a settlement which also creates by the same instrument other contingent or expectant interests in the property. And all those other interests must resolve themselves into estates in remainder, or into powers of sale, either direct or incidental to, and in aid of, charges or encumbrances. With regard to estates in remainder these are quite as easily dealt with as an estate inherited or passing to a devisee. A tenancy in tail adds nothing to the difficulty in tracing the proper heir, and a strict settlement only prescribes a mode of inheritance or succession as easily traced as that of an ordinary fee. The settlement or will only stands in place of the law; nor does it necessarily render the inquiry any more complicated, but generally, on the contrary, simplifies it. So with regard to powers and charges embodied in settlements there is nothing which distinguishes them from the every-day transactions for which provision is made by the Act, and for which its adequacy is not in general questioned.

All powers must be delegated to or vested in some named or ascertainable person. The only questions that can arise besides the ascertaining of the person and the authenticity of his signature are the conditions (if any) under which the powers are delegated; but this is only the same difficulty, and is open to exactly the same solution as is the case of an ordinary mortgage or encumbrance. If the precaution of caveat be not resorted to the condition on which any power is conferred must, for purposes of title, be *assumed* to have arisen or been fulfilled whenever the donee of the power chooses to exercise it.

Powers are indeed in certain cases limited to special objects, such as a power of appointment among children or issue of a particular person. Here a somewhat different question presents itself, and it may not be possible to avoid the responsibility of ascertaining whether the appointee is within the limit of qualification before issuing to him a certificate of title. Even this, however, is nothing peculiar to settlements. If a testator devise his land to all his children the issue of a certificate will involve the inquiry who such children are; and when all the applicants have proved their descent it will further be requisite to ascertain that there are no other children. If a prior settlement had bestowed the land on such of the children of the same person as the same testator should appoint it would only involve the easier inquiry whether the individual appointees were such children.

From the above considerations I conclude that the Torrens system is not, as objected, in any special way inapplicable to settlements, trusts, or entails. If it only be once admitted that the system can adequately provide for the exigencies resulting from the ordinary legal succession of property, or the ordinary exercise of the powers involved in every-day mortgages or encumbrances, this must involve a virtual admission of its equal adequacy for all the purposes of settlements and trusts. These only differ from the others as words of many syllables differ from words of few syllables. They are resolvable into the same elements, and only require to be separated to present the same degree of simplicity.

Draft of a Bill for recording Titles to Land and simplifying dealings therewith.

Preamble.

WHEREAS it is expedient to place the Register of Titles established by the Real Property Act (1862) under direction of a Court empowered to adjudicate (subject to appeal in certain cases) on matters of law and fact arising in reference thereto and it is also expedient to alter the provisions of the said Act in other respects by substituting an amended Act Be it therefore enacted by 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 Parliament assembled and by the authority of the same as follows:—

Short title—commencement of Act.

1. This Act may be cited for all purposes as "Land Titles Record Act" and shall come into operation on the day of

Real Property Act (1862) repealed saving matters done or pending thereunder.

2. The Real Property Act (1862) is hereby repealed except as to matters done or pending thereunder or retained in operation by express provision in this Act All such pending matters may be continued under this Act and all titles and instruments registered under the said repealed Act shall be construed to be in virtue of such registration effectually recorded under this Act in the order of registration and as if this Act had been in force at and from the times of such registration respectively.

Register continued under this Act.

3. Land under the operation of this Act shall be exempted from the operation of all other Laws Statutes Acts and Rules whatsoever so far as inconsistent with the provisions of this Act.

Laws inconsistent not to apply to land under this Act.

4. In the construction of this Act (except where the context or other provisions of this Act require a different construction)—

Interpretation clause.

The word "Judge" shall mean one of the Judges of the Land Titles Court.

The word "Court" shall mean the Land Titles Court and where the expression "the Court" is used in connection with any proceeding for which a single Judge is competent it shall mean the Judge by whom the authority of the Court in the matter under reference is exercised.

The word "Recorder" shall include any officer acting as Assistant or Deputy Recorder under the direction of the said Court.

The word "record" shall mean the book or books to be provided and kept for the recording of titles pursuant to this Act in the Land Titles Court and the entries therein made but shall not include or be held to convey notice of any instrument recorded in regard to any portion of the contents thereof not set forth in the memorial thereof entered of record.

The word "land" shall extend to messuages tenements and hereditaments and to rents or annuities charged upon hereditaments whether subject to any fee-farm or other perpetual rent with or without condition of re-entry for securing the same or otherwise and whether corporeal or incorporeal and to any undivided share thereof.

The word "lease" shall include an agreement for a lease and the estate or interest created or agreed to be created by a lease or agreement in the whole or any part of the land therein comprised and shall include any term of years.

The word "owner" as applied to land shall include any person entitled in possession in fee simple or in tail or quasi in tail and any person who has a power of appointing or disposing of the fee and whether with or without the consent of another person and any person entitled as a trustee for sale or having a power of sale and whether with or without consent as aforesaid and as applied to a lease shall include any person entitled in possession to the interest thereunder or having power to appoint or dispose thereof and to any person entitled thereto as a trustee for sale or having a power of sale.

The words "person" and "owner" respectively shall extend to a body politic or corporate.

The word "encumbrance" shall include any lease if for an unexpired term exceeding three years also any legacy portion lien or other charge whereby money is secured to be paid inclusive of any periodical charge also every other charge upon land which is deemed an incumbrance in a Court of Equity also any power whether for the purpose of security or not to defeat alter or charge the recorded estate by appointment or limitation of any use or otherwise.

The expression "security-encumbrance" or "security" shall include mortgage charge of annuity or any other encumbrance authorized by this Act or to be recorded by direction of the Court or a Judge for securing money whether ascertained or payable on any contingency or for securing fulfilment of any agreement.

The word "certificate" or "certificate of title" shall include both the recorded original of any such certificate and the duplicate thereof issued to the person therein recorded as owner and shall also apply to the original and duplicate of any Crown grant issued on or after the first day of January one thousand eight hundred and sixty-three and registered or recorded pursuant to the Real Property Act or to this Act.

The word "settlement" shall include any instrument under which any land shall be at law or in equity so limited as to create partial or limited estates or interests.

The expression "recorded estate" shall mean any land the title to which shall be recorded under the provisions of this Act.

The expression "recorded interest" shall include any encumbrance appearing on the record whether held or exercisable for the individual benefit of the recorded owner or otherwise.

The word "instrument" shall include every writing by which (subject only to the recording of the memorial required by this Act) any estate or interest in land is created transferred or transmitted released or surrendered.

The word "grant" shall mean any grant of Crown Land whether in fee or for years and whether direct from Her Majesty or pursuant to the provisions of any statute regulating the disposal of Crown Lands.

The word "transfer" when applied to any recorded estate shall signify the change of ownership consequent on the voluntary act of the transferor.

The word "transmission" shall apply to a change of ownership consequent upon any insolvency lunacy levy under execution order of Court or other act of law or in virtue of any settlement or will (or legal succession in case of intestacy).

- The word "transferree" shall nevertheless include alienee by transmission when not otherwise distinguished.
- The expression "transferree for value" shall include persons acquiring title by way of lease mortgage or otherwise for valuable consideration.
- The words "lessor" "lessee" "mortgagor" "mortgagee" or other designations of the grantor or grantee of any partial estate shall include the persons from time to time claiming under them respectively through transfer or transmission.
- The word "addition" as applied to any person shall mean his description in regard to residence rank profession trade or occupation.
- The word "indorsed" shall include anything written upon or in the margin or at the foot of any instrument or other document.
- The word "possession" when applied to persons claiming title to land shall signify also alternatively reception of the rents and profits thereof.
- The word "lunatic" shall mean a person who shall have been found to be a lunatic upon a commission of inquiry in the nature of a writ *de lunatico inquirendo*.
- The expression "person of unsound mind" shall mean any person not an infant who not having been found a lunatic shall be incapable from infirmity of mind to manage his own affairs.
- The word "covenant" shall include every promise or agreement contained or implied in any instrument recorded under this Act or of which fulfilment is secured by any encumbrance so recorded notwithstanding the same shall not be under seal.
- The word "dealing" shall include every act by which the owner of a recorded estate or interest shall alienate the same either wholly or by creation of any lease encumbrance or other partial interest.
- The expression "Consular Officer" shall mean Consul-General Vice-Consul or any person for the time discharging the duties of Consul-General or Vice-Consul.
- The expression "official witness" shall mean any person whose attestation is by this Act declared to be of itself sufficient proof of due execution thereof and who is authorized to receive the declaration of verification required from ordinary witnesses.
- The expression "Commissioner for Affidavits" shall include any Commissioner for taking Affidavits in the Supreme Court in addition to such Commissioners as (if any) may be appointed specially to that office in the Land Titles Court.
- The word "affidavit" shall include affirmation or declaration in lieu of oath in every case in which such affirmation or declaration may be lawfully made or received.
- The word "Sheriff" shall include the Sheriff of the Colony so far as regards land within his bailiwick and any Deputy Sheriff or other person lawfully authorized to execute any writ of *feri facias*.
- The expression "sworn valuator" shall mean any person appointed by the Court with approval of the Governor in Council to value land under this Act and who has taken an oath before the said Court that he will faithfully and honestly and to the best of his skill and ability make any valuation required of him under the provisions of this Act.

I.—*Constitution of Land Titles Court.*

- 5. A Court is hereby established which shall be of record and be called the Land Titles Court with power to exercise such jurisdiction and authority as hereinafter provided including the direction and control of the Register of Titles instituted by the Real Property Act (1862) which register is adopted and continued under this Act under the designation of the Record of Land Titles. Court established.
- 6. There shall be two Judges of the said Court and the present Examiners of Titles George Kenyon Holden and Alexander Dick Esquires shall be and are hereby constituted the first Judges of the said Court but without prejudice to their continued performance of such duties of Examiners as shall until or in default of appointment of separate officers so designated be required for the purposes of this Act. Appointment of Judges.
- 7. It shall be lawful for the Governor with the advice of the Executive Council from time to time when and as often as any vacancy shall occur in the office of either of the Judges hereinbefore named or of any of their successors for the time-being by death resignation or removal from office to appoint a person being a barrister-at-law of five years standing or an attorney-at-law of seven years standing to supply such vacancy also to appoint any person of like qualification to fulfil the duty of either Judge during any interval of sickness or leave of absence. Vacancies how to be supplied.
- 8. Each of the said Judges hereinbefore named and every other Judge hereafter to be appointed under the provisions of this Act shall hold his office during good behaviour Provided always that it shall be lawful for the Governor to remove any such Judge from his office upon an Address of both Houses of Parliament. Judges to hold office during good behaviour.
- 9. Every such Judge as aforesaid shall before executing any of the duties of his office take the following oath which any Judge of the Supreme Court for the time-being is hereby respectfully authorized and required to administer:—
 "I A. B. do solemnly and sincerely promise and swear that I will duly and faithfully and to the best of my skill and power execute the office of Judge of the 'Land Titles Court' So help me God." Oath of Judges.
- 10. The said "Land Titles Court" shall cause to be made a seal for the said Court for authenticating its judicial acts and also a seal of the Record of Titles Office of the said Court for authenticating instruments proceeding therefrom and shall cause to be sealed with the one or other of such seals all orders and other instruments made by or proceeding from the said Court or Office in pursuance of this Act and all such orders and other instruments or copies thereof purporting to be sealed with the seal of the said Court or Office respectively shall be received in evidence in every Court without any further proof thereof. Court and Record Office to have seals.
- 11. There shall be one clerk to each Judge who shall be appointed in like manner as clerks to the Judges of the Supreme Court. Judges' clerks.
- 12. The present Deputy Registrar General Edward Grant Ward Esquire shall under the designation of "Recorder of Titles" have subject to the direction and control of the said Court custody of the record of titles and of all instruments recorded or deposited produced or exhibited in the said Court in reference to any proceedings therein. Appointment of Recorder.

Officers of Land Titles Branch of Registrar General's Department transferred to Land Titles Court.

13. All other officers and clerks now employed in the Land Titles Branch of the Department of the Registrar General shall from the date of this Act coming into operation be transferred from that department and become officers and clerks of the Land Titles Court and all documents maps plans books and papers in their custody as officers of the Registrar General's Department shall be subject to the direction and control of the Court.

Court to have full access to former registers &c.

14. Notwithstanding such separation from the said department the Judges and under their direction the officers of the said Court shall have free access without fee for the purpose of any investigation under this Act to all registers and documents remaining in the said department and under the charge of the Registrar General relating to titles to land and shall also have like free access without fee to wills deposited in the Supreme Court or elsewhere and to the evidence filed therein in support of applications for probate or for letters of administration in cases of intestacy also to such records in the respective offices of the Master of the Supreme Court in Equity the Curator of Intestate Estates the Chief Commissioner of Insolvency and the Sheriff as have any reference to titles to land.

Duties of officers of the Court to be provisionally performed by Judges' clerks and the transferred officers.

15. So long as no distinct officers shall be appointed to fulfil the duties of Registrar Taxing Officer and Accountant respectively of the said Court such duties together with any other ministerial duties appertaining to the judicial business of the Court shall be performed by the Judges' clerks in conjunction with the Recorder and other officers and clerks transferred as aforesaid under such arrangements as the Judges shall with approval of the Governor determine.

The Governor to appoint additional officers when necessary. Their qualification and tenure of office defined.

16. The Governor may from time to time upon the joint recommendation of the Judges appoint any additional officers (for payment of whose salaries provision shall be made by Parliament) to aid in carrying out the provisions of this Act But no person shall be permanently appointed to fill the office of Examiner Registrar or Taxing Officer unless he be a barrister of three or solicitor of five years standing at the least And all such officers and also the Recorder and (if appointed) the Accountant shall hold office during good behaviour and be removable only on the joint order of the Judges of the said Court with the sanction of the Governor for some reasonable cause therein expressed And all other officers of the Court shall be removable on the joint order of the Judges with the sanction of the Governor.

No Judge or officer to practice as barrister or solicitor.

17. No Judge or officer of the said Court shall during the term of his holding office directly or indirectly practise in any Court as a barrister or attorney or participate in the fees of any other person so practising.

Certain officers to act in person.

18. Every officer of the class holding or to hold office under this Act during good behaviour and subject only to removal on cause assigned shall execute their respective offices in person and not by deputy unless where a deputy for the execution of any of such offices shall be appointed for that purpose by the Governor in the case of temporary illness leave of absence or other unavoidable accident But nothing herein contained shall preclude the performance of any duties incident to the office of Recorder by any other officer or clerk who may be authorized by the Court to act as his assistant or deputy when and as occasion shall require.

Privilege of barristers and solicitors.

19. Barristers and solicitors shall respectively have and enjoy the like privilege of practising before and be subject to the like authority of the said Court as they have and enjoy and are subject to in the Supreme Court Provided that nothing shall preclude the Court from hearing any party interested in any case who shall appear in person.

Salaries of Judges and officers.

20. The salaries payable to the Judges of the said Court under this Act shall be issued and payable out of and charged upon the Consolidated Revenue of the Colony and the salaries payable to the other officers of the said Court under this Act shall be payable out of such funds as shall be provided by Parliament Retiring allowances in like relative proportion as regards salary and term of service and other conditions shall be payable to the Judges of the said Court as are now payable to Judges of the Supreme Court.

Judges to frame and promulgate forms of application &c.

21. The said Judges shall frame and cause to be printed and circulated or promulgated as they shall see occasion and may from time to time alter and vary forms of applications and directions indicating the particulars of the information to be furnished to the Court on applications to them under this Act with reference to title encumbrances and the circumstances of the land and such other information as in the judgment of the said Judges may assist them in forming an opinion on such application and also such other forms and directions in addition to those herein prescribed or contained as they may deem requisite or expedient for facilitating proceedings under this Act.

Judges to frame general rules to be approved by Chief Justice &c.

22. The said Judges shall when and as occasion shall require frame such general rules such as they may think best adapted for regulating the course of procedure under this Act in regard to any matter not herein fully provided for and generally for securing the due execution of the powers vested in the said Court and giving effect to the provisions and objects of this Act but no fees or sums shall under any such general rule or otherwise be payable to any officer or person appointed under this Act upon or in respect of any proceedings under this Act for his own use or in excess of (for public use) the scale of fees for the same or similar acts or proceedings set forth in the Schedule to this Act Provided always that all such general rules shall be laid before the Chief Justice of the Supreme Court who thereupon shall consider the expediency of such rules and every of them and it shall be lawful for the Chief Justice by order signed by him to confirm or disallow all or any of such rules or to remit any of such rules to the said Judges for further consideration and every such general rule or rules (when the same shall have been so confirmed by order of the Chief Justice) shall be enrolled in the Supreme Court and also in the Land Titles Court and when so enrolled shall be binding on the said Court in the exercise of its powers and shall be of the same force and effect as if the same had been enacted by authority of Parliament Provided also that any rules so confirmed and enrolled as aforesaid may from time to time be added to rescinded amended or altered as occasion may require by other rules made by the Judges for the time-being and confirmed and enrolled in like manner.

General rules to be laid before Parliament.

23. Such general rules as shall be made and confirmed as aforesaid shall be laid before both Houses of Parliament within one calendar month from the enrolment thereof if Parliament be then sitting or if Parliament be not then sitting within one calendar month from the commencement of the next session of Parliament.

Power of Court to summon and examine witnesses.

24. It shall be lawful for the Court by summons under its seal to require the attendance before the Court or one of the Judges or any officer thereof at a time and place to be mentioned in such summons of all such persons as it shall think fit to examine in relation to any matter depending before the Court and require all such persons to produce before the said Court or Judge or officer all deeds books

books papers documents and writings relating to such matter and to examine upon oath or in case of persons allowed to make affirmations or declarations in lieu of an oath upon affirmation or declaration (as the case may require) all persons who shall attend under such summons and all persons who shall voluntarily attend as witnesses and it shall be lawful for either of the said Judges or any officer appointed for that purpose generally or in the particular matter to administer such oath affirmation or declaration and every person required by such summons so to attend who without reasonable cause to be allowed by the Court shall fail to appear according to the tenor of such summons or shall refuse to be sworn or to make affirmation or declaration (as the case may be) or shall not make answer to all such questions as shall be lawfully put to him on such examination or shall refuse or fail to produce before the Court Judge or officer any such deed book paper document or writing being in or under his custody possession or power as shall be lawfully required to be produced by him before the Court Judge or officer shall for such default of appearance refusal to be sworn or to make affirmation or declaration or for not answering any such question as aforesaid or not producing such deed book paper document or writing incur and be liable to all such penalties prosecutions actions and suits as a person might incur or be liable to for failing to appear or refusing to be sworn or to give evidence in any suit or matter depending in the Supreme Court and the Court and each of the Judges thereof shall have the like powers jurisdiction and authority for enforcing the attendance of persons summoned as aforesaid for punishing persons failing to appear or refusing to be sworn or to make affirmation or declaration or to give evidence or guilty of contempt and generally for enforcing all orders made by the Court under any of the powers or authorities vested in it under this Act and otherwise in relation to the matters to be inquired into and done by them under this Act as are by law vested in the Supreme Court for such purposes in relation to any suit or matter depending in such Court.

25. The Court may in its discretion receive in evidence affidavits affirmations or declarations which may be made before any person empowered to take affidavits receivable in evidence in the Supreme Court or where they think fit the Court may by order under the seal thereof appoint and authorize any person either generally or in a particular matter to examine any witnesses who shall attend before such person to be examined in New South Wales or elsewhere in relation to any application to or matter pending before the Court and to administer oaths affirmations or declarations for the purposes of such examination but the deponent or declarant in every such case shall on the application of any other party interested in the facts deposed to be subject to be cross-examined by or on behalf of such other party orally in open Court or before any person appointed to take such examination and after such cross-examination may be re-examined orally in open Court or before such person appointed as aforesaid Provided however that nothing herein contained shall render necessary the proof by oath or affidavit of the execution of any document which but for this provision would be receivable as *prima facie* evidence upon investigation of any title or other proceeding.

Court may receive affidavits in evidence.

26. It shall be lawful for the Court to enforce the attendance of witnesses and to have such witnesses examined and evidence taken in any matter pending before it whether by commission or otherwise before such person or persons or such tribunal as under the several statutes now in force and hereafter to be enacted the Supreme Court may have evidence taken and received.

Examination by Commissioners.

27. Every person who upon examination upon oath affirmation or declaration before the Court or any of the Judges thereof or any person appointed and authorized under this Act by the Court or by any general or special order thereof to administer such oath affirmation or declaration shall wilfully give false evidence and every person who shall wilfully swear affirm or declare falsely in any affidavit authorized under this Act to be received in evidence by the Court shall be liable to the pains and penalties of perjury.

Persons swearing falsely to be punished for perjury.

28. It shall be lawful for the Court to cause any matter or question of fact arising in any proceeding before them to be tried by a special or common jury before the Court itself and the Court may make all such rules and orders upon the Sheriff or on any other person for procuring the attendance of a special or common jury for the trial of such question or matter of fact as may be made by the Supreme Court and may also make any other orders which to the Court may seem requisite and every such jury shall consist of persons possessing the qualification and shall be struck summoned balloted for and called in like manner as if such jury were a jury for the trial of any cause of the said Supreme Court and every jurymen so summoned shall be entitled in the same rights and subject to the same duties and liabilities as if he had been duly summoned for the trial of any such cause in the said Supreme Court and every party to any such proceeding shall be entitled to the same rights as to challenge and otherwise as if he were a party to any such cause and generally for all purposes of or auxiliary to the trial of question of fact by a jury before the Court itself and in respect of new trial the Court shall have the same jurisdiction powers and authority in all respects as belong to the Supreme Court or to any Judge thereof for the like purposes Provided that from any order made by the Court on an application made for a new trial there shall be the same right of appeal as from any other order of the Court Any question of fact which shall be so ordered to be tried by a jury before the Court itself shall be reduced into writing in such form as the Court shall direct and at the trial the jury shall be sworn to try the said question and a true verdict give thereon according to the evidence and upon every such trial the Court shall have the same powers jurisdiction and authority as belong to any Judge of the Supreme Court sitting at *Nisi Prius*.

Power to Court in certain cases to summon a jury.

29. It shall be lawful for the Court to review and rescind or vary any order which shall have been previously made by it or by the Commissioners under the Real Property Act (1862) but save as aforesaid and as hereinafter provided every order of the Court shall be final.

Court may rescind or vary its own orders.

30. Every order or decision of the Court shall be subject to appeal to the Supreme Court provided that notice of such appeal if against an order for entering any title on the record shall be lodged with the Recorder within seven days from the date of the order or from service of notice thereof in any case wherein such notice is hereinafter specially required and the Recorder shall enter upon the record a memorandum of any such notice of appeal and he shall not in the mean time or after such notice issue any duplicate certificate of title consequent on such order without noting thereon that the same is subject to appeal Every appeal shall in other respects and in all other cases be entered within such time and subject to such regulation for deposit of costs and be duly prosecuted in such manner as the Court of Appeal shall by general or special rule direct otherwise the decision or order of the Court below shall be final and on hearing of such appeal the only evidence to be relied on or admissible shall be such as was given before the Court below but the said Appeal Court if it shall think fit may receive such evidence or direct or make any such inquiry thereon as it shall seem fit or may direct the Court below to rehear the case on such further evidence as it may be in the power of either party to produce and the costs of such

Appeal to Supreme Court.

appeal shall be in the discretion of the said Court of Appeal. Provided always that it may be lawful for the said Court of Appeal if it see fit on special application for that purpose to rehear any appeal upon which it may already have made an order and on such rehearing to rescind vary or add to such order as to said Court of Appeal may seem just.

Appeal from Supreme Court to the Privy Council.

31. Any decision of the Supreme Court upon such appeal from the "Land Titles Court" shall be subject to an appeal to the Privy Council in like manner as and subject to the like conditions and restrictions as to the value of the subject matter and otherwise which apply to or govern or hereafter shall from time to time apply to or govern appeals from the Supreme Court in other cases.

Concurrence of both Judges required in certain cases specified.

32. Both Judges shall concur in any of the following matters namely in any order directing the first recording of a title not before under this Act in any order consequent on the transmission of an estate or interest in any order determining a disputed question arising upon notice of objection or caveat and in any order directing an amendment of the record without consent in writing of all parties whose interests can thereby be in any manner prejudiced. In other cases all powers of the Court conferred by this Act may be exercised by one Judge but if in any case requiring concurrent decision or wherein they shall voluntarily concur in deliberating thereon they shall differ as to the propriety of making an order or doing any act such order shall be deemed to have been refused.

For others one Judge to be competent. Difference in opinion to involve a negative.

If the Judges differ a Judge of the Supreme Court may be appealed to as umpire.

Subject to appeal to full Court.

33. In any case in which the Judges shall differ a special appeal shall lie to a Judge of the Supreme Court in chambers and if he shall agree with either of the Judges in difference his order concurrently with such Judge shall have the like effect as if both Judges of the Land Titles Court had originally concurred therein subject nevertheless to a like appeal therefrom to the full Court. The like power may be exercised by one Judge of the Supreme Court concurrently with one Judge of the Land Titles Court in any case in which the other of such Judges is disqualified or declines to act on the ground of personal interest.

One Judge's notes of evidence on any hearing may be acted on by others on reference or appeal.

34. In any case wherein any matter wholly or in part investigated by hearing of parties or witnesses before a single Judge shall be submitted to the other Judge for concurrence or in which any case investigated before either one or both Judges shall be submitted to a Judge of the Supreme Court or the full Court on Appeal it shall be in the discretion of the Judge or Court before whom such case is so submitted to decide thereon wholly or in part on perusal of the notes and report of any Judge before whom the hearing took place without requiring a rehearing.

II.—As to bringing Land under this Act.

All future alienation of Crown lands to be recorded under this Act.

35. Grants of all Crown lands remaining unalienated at the time of the passing of this Act shall be in duplicate and in addition to proper words of description shall refer to a map of the land on the scale at present used or on such other scale as may from time to time be directed by rule of Court and shall be delivered to the Recorder who shall record the same in manner hereinafter directed. Such recording shall be deemed an enrolment of the grant and such enrolment shall relate back to the day of the date of the grant and either part of the grant when recorded under this Act shall be sufficient evidence of a duly enrolled grant of land therein described to the person therein named on the day of the date thereof. All grants registered under the Real Property Act shall be deemed to be duly recorded under this Act.

Lands alienated in fee before the Real Property Act may be brought under this Act.

36. Land alienated in fee by Her Majesty before the first day of January one thousand eight hundred and sixty-three may be brought under the operation of this Act by an application in such form as the Court shall direct and if no other form be so directed then in a form containing the like declaration and particulars as now required in applications under the Real Property Act which application may be made by any of the following persons (that is to say)—

- (1.) The person claiming to be the owner of the fee simple either at law or in equity.
- (2.) Persons who collectively claim to be the owners of the fee simple either at law or in equity.
- (3.) Persons who have the power of appointing the fee simple.
- (4.) The person claiming to be the owner of the first estate of freehold if the owner of the first vested estate of inheritance shall consent to the application.
- (5.) The father or if the father be dead the mother or other guardian of any infant or the committee of the estate or guardian of any lunatic or person of unsound mind so however that the application be made on behalf of such infant lunatic or person of unsound mind and the certificate of title be directed to issue in his name:

Provided always that if the applicants be trustees not having absolute power of sale in their own discretion all persons whose consent is or would be requisite to sale or if there be no express power of sale then such of the parties beneficially interested as the Court shall see fit to require shall join or consent to the application. Provided also that a mortgagor or other security-encumbrancer shall not be entitled to make such application unless the encumbrancee shall consent thereto nor a mortgagee or other security-encumbrancee unless in or with a view to the exercise of his power of sale and unless the certificate of title shall be directed to issue in the purchaser's name or suspended until such purchaser be ascertained and nominated to receive the same nor a married woman unless her husband shall consent thereto and the application be acknowledged by her in the manner hereinafter mentioned as to the acknowledgment of instruments (except she shall be entitled to the land for her separate use or to be considered as a *feme sole* or to exercise a power of sole appointment in respect thereof). Provided also that the attorney of any corporation howsoever and wheresoever incorporated whether already constituted or hereafter to be constituted by a power of attorney under a seal purporting to be the common seal of the corporation giving the power may make such application for or on behalf of the corporation of which he is the attorney and may make the requisite declaration to the best of his knowledge information and belief and may subscribe the application in his own name. Provided also that by leave of a Judge in any other case in which the applicant shall reside out of the Colony or be for other sufficient reason prevented from personally making the said declaration and subscription the same may be made by his attorney duly constituted either by deed or by instrument attested as this Act requires for dealings thereunder. But no certificate pursuant thereto shall issue to any other person than the principal unless the deed or instrument so direct or confer absolute power to sell. Provided further that by leave of a Judge on the ground of absence or for other reasonable cause the joining of any joint tenant (whether as a trustee or in his own right) in an application by his co-owners may be dispensed with in any case in which the parties beneficially interested

interested shall concur or consent or in any case in which the application shall be limited to the placing of the joint property under the Act in the names of the existing joint owners and shall not require the issue of a certificate to any other person.

37. Whenever any person is entitled to receive a certificate of title in his own name he may either by the original application or at any time before the recording of the certificate appoint by writing duly signed and attested as required for instruments effectuating dealings under this Act any other person in whose name such certificate shall issue and in that case it shall be lawful for the Court to direct the certificate to be recorded and issued in the name of the person so appointed accordingly.

Any person entitled to a certificate may appoint a substitute.

38. Whenever the application shall disclose such grounds as are or may be when fully established sufficient an investigation of the title shall be proceeded with by or under direction of the Court and when necessary requisitions shall be made for further evidence which evidence may be received either by documents to be produced or affidavit or statutory declaration or by oral examination of the applicant or his witnesses either voluntarily attending or summoned in exercise of the powers hereby conferred on the said Court.

As to investigation of title.

39. If it appear to the Court that the applicant is himself the original grantee from the Crown of the land which is the subject of application and that no transaction affecting the same has been registered under any law for the registration of instruments affecting land and that there does not exist any special reason for further enquiry or delay the Court may in such case direct the Recorder to bring the land under the operation of the Act forthwith by recording and issuing a certificate of title.

Cases where the applicant is original grantee and no dealing registered dis-posable summarily.

40. In every case not within the operation of the last preceding section the Court shall cause notice of the application to be advertised inviting all persons having any grounds of objection thereto to appear and establish such grounds at or within such time and in such manner as the Court shall notify for that purpose. Such notice may be given either before entering upon the *ex parte* investigation of the title or in any stage thereof but shall in all cases be advertised once at least in one newspaper published in the City of Sydney or circulating in the neighbourhood of the land to which the application relates not less than fourteen days before the time to be thereby appointed for receiving objections and shall also be posted in some conspicuous place in the Land Titles Court or Record of Titles Office and also sent through the Post Office to the addresses of the persons stated in the application or otherwise ascertained to be occupiers of the land and (unless the land be an entire Crown allotment) to the occupiers and so far as ascertainable and practicable to the owners of the land contiguous thereto. But the directions aforesaid shall be without prejudice to any further general or special order of Court in reference to such notices.

In other cases notice to be advertised.

41. Within the time limited by such advertisement as aforesaid any person desirous of opposing the application may lodge with the Recorder a notice of objection and of the grounds of such objection in such form as the Court shall by general rule or otherwise prescribe.

As to notice of objection.

42. If within the time so appointed no such notice of objection be lodged the Court shall proceed to adjudicate upon the application *ex parte* and if satisfied with the evidence submitted in support thereof may direct the issue of a certificate of title.

If no objection Court may adjudicate *ex parte*.

43. Whenever any such notice of objection as aforesaid shall have been lodged the Recorder shall notify the same to the applicant and at any time thereafter either the objector or applicant may apply to the Court to appoint a time for hearing the parties or their witnesses respectively and the Court shall under such rules of procedure as shall be established for that purpose under the powers of this Act continue the investigation of title of the applicant in connection with any evidence of objections submitted by the objector or additional evidence for the applicant in reply and shall after terminating such investigation finally decide for or against the application.

Objection to be notified to applicant.

Either party may apply for hearing.

44. In any contested case in which the decision shall be in favour of the application and shall not be delivered in open Court in presence of all objecting parties or their counsel or solicitors notice thereof shall be given by the Recorder to any such absent parties or their solicitors or agents before making any entry on the record pursuant thereto and until such notice shall be given the time hereinbefore limited for the lodging of notice of appeal against an order for the recording of title to land shall not begin to run against such parties respectively.

Notice of decision to be given to objectors when not given in open Court.

45. The applicant shall not be bound to take the initiative in any continued investigation consequent upon the filing of any notice of objection and if in violation of any rule of procedure or otherwise in the opinion of the Court the objector shall fail in reasonable diligence the Court may disregard the objection on that ground and in that case no objection which might have been raised in the proceeding before the Court shall be available in any future proceeding or as the ground for any claim for damages or indemnity against the assurance fund or otherwise at law or in equity or in support of any appeal unless the Court of Appeal shall disaffirm the charge of *laches*.

If objector neglect to proceed with due diligence his claim may be disregarded.

46. If it appear to the Court that the evidence of title set forth by the applicant is satisfactory in all respects other than certain particulars admitting of exception or reservation and the applicant shall be willing to accept a certificate qualified in regard to such particulars it shall be lawful for the Court to direct the Recorder to grant such certificate accordingly and thereupon to specify or define any exception qualification or condition affecting the estate or interest recorded and also to reserve expressly the right of any person or class of persons and to describe any outstanding right or possibility of claim or interest subject to which such record is made and if there be any disputed question of boundary between the applicant and any owner of adjoining land which shall not have been determined by any competent authority and it appear that the delay and expense of its present investigation would be an unreasonable obstacle to the perfecting of the title in other respects the Court may direct the Recorder to specify upon the certificate of title the existence of such disputed question of title and that the certificate is issued subject thereto.

Qualified certificates issuable in certain cases.

47. It shall be lawful for the holder of any qualified certificate which shall be issued under the next preceding section to make application at any future time for the removal of the qualification and if such application be grounded on the happening of any subsequent event or the producing of sufficient evidence of any fact which if the same had happened or been established before the issuing of the certificate would have rendered the qualification inapplicable then such application may be investigated and dealt with in like manner as the original application and if satisfied as to the grounds of the further application the Court may either order the qualification to be cancelled by a memorandum on the existing certificate or the issue of a new and unqualified certificate in lieu thereof.

Qualification may be removed afterwards on cause shown.

Claim of term of five hundred years or upwards may be regarded as a fee.

48. Whenever any applicant to bring land under the provisions of this Act shall establish his title thereto for the unexpired residue of any term originally created for five hundred years or upwards and absolutely free from all right or equity incident to the reversion by means whereof such term may be redeemed or extinguished it shall be lawful to grant a certificate of title to such applicant for an estate in fee simple.

Applicant may withdraw his application.

49. An applicant may withdraw his application at any time prior to the issuing of the certificate of title and the Recorder shall in such case upon request in writing signed by the applicant return to him or to the person appearing by the application to be entitled thereto all evidences of title deposited in support of the application and it shall be in the discretion of the Court to order repayment of all or any part of the fees paid by the applicant. Provided that if the applicant shall have nominated any other person to receive the certificate such withdrawal shall not take place without his consent unless the Court shall so direct upon his failing to show sufficient cause of objection after such notice and investigation as to the Court shall appear just. The like notice and investigation shall take place in any case in which the applicant shall without consent of the nominee apply to revoke the nomination on the ground of failure in payment of consideration or otherwise and in such case the certificate may either be wholly withheld or issued to such party and on such terms and conditions as the Court shall determine.

Documents of title which include other property to be returned.

50. Upon issuing a certificate of title the Recorder shall indorse upon the last material registered document deposited in support of the application a memorandum that the land included in the certificate has been brought under this Act and shall sign such memorandum and any other documents so deposited or produced in evidence may be marked or stamped as the Court may by general or special order require and if the documents deposited shall relate to any property other than the land included in such certificate the Recorder shall return them to the applicant or to the person aforesaid otherwise the Recorder shall upon application in writing retain the same in the office and no person shall be entitled to an inspection of such documents or to have any copy thereof or extract therefrom except upon the written order of the applicant or of some person claiming through or under him or pursuant to some covenant or agreement under which he would be compellable to produce the same if retained by him or upon the order of a Judge. No action or suit at law or in equity shall be brought or maintained upon any covenant or agreement for the production of the documents which shall be so retained or upon any agreement to give or enter into a covenant for the production thereof and if any such action or suit shall be commenced it shall be a sufficient answer thereto that such documents have been deposited under this enactment.

Certificate of title to issue in name of deceased applicant or his nominee.

51. In case the applicant or the person to whom he may have directed the certificate of title to be issued shall die between the application and the issue of the certificate it shall be issued in the name of such applicant or of such person as the case may be and such land shall devolve or pass in like manner as if the certificate of title had been issued prior to the death of such applicant or person.

The like as to grants to deceased purchasers of Crown Lands.

52. The like rule of construction which by the preceding section is applied to a certificate of title shall also apply to any grant of Crown Land which has been or shall be issued in the name of any purchaser at any sale of Crown Lands who has died or shall die in the interval between the purchase and date of the grant.

Percentage in the pound to be paid for assurance of title.

53. Upon first bringing land under the operation of this Act whether by the alienation thereof in fee from Her Majesty or consequent upon an application as hereinbefore provided and also upon the recording of the title to an estate of freehold in land under the operation of this Act on a transmission under will or settlement or administration or succession upon the death of an intestate owner there shall be paid to the Recorder towards an assurance fund a sum not exceeding the sum specified in the last Schedule hereto and in the case of land brought under this Act by alienation in fee from Her Majesty the price paid for such land shall be deemed to be the value thereof for the purpose of ascertaining such sum and in the other cases such value shall be ascertained by the declaration of the applicant or by the statutory declaration of the person deriving such land by such transmission. If the Court shall not be satisfied of the correctness of the value so declared he may require such applicant or person to produce a certificate of such value under the hand of a sworn valuator which certificate shall be received as conclusive evidence thereof.

Last Schedule.

Additional indemnity fee for imperfect title.

54. Notwithstanding anything hereinbefore contained the Court may after the publication of such advertisements as it may deem fit direct the Recorder to bring any land under the operation of this Act upon the applicant contributing to the assurance fund in augmentation thereof such an additional sum of money as the Court shall adjudge to be a sufficient indemnity by reason of the non-production of any document affecting the title or of the imperfect nature of the evidence of title or against any uncertain or doubtful claim or demand arising upon the title.

Additional payment for registered memorials or copies received in evidence in lieu of original deed.

55. Whenever in the investigation of the title of any applicant the registered memorial or registered copy of any deed or instrument shall be received in evidence in lieu of production of the original deed or instrument an additional sum of ten shillings shall be paid to the assurance fund in respect of each memorial or copy.

III.—Provisions ascertaining rights conferred by Certificate.

Certificate of title to confer indefeasible title—

56. Subject to such encumbrances or other qualification as shall appear by the record and certificate of title the recorded owner for the time-being of any estate or interest under this Act shall be and be deemed to be absolutely and indefeasibly entitled to such recorded estate or interest against all persons and free from all rights and interests claims and demands whatsoever including any estate claim or interest of Her Majesty her heirs and successors except only as follows:—

Except in case of fraud and no transfer for value.

(1.) Except in the case of a certificate obtained by fraud but which exception shall not prejudice the rights of any *bonâ fide* transferee for value.

Except against adverse rightful and continuous possession—

(2.) Except as against the rights of any person adversely in actual possession of and rightfully entitled to the land at the time of its being originally brought under this Act and continuing in such possession at the time of any subsequent certificate of title being issued in respect thereof.

Or such possession under a prior certificate—

(3.) Except as against the rights of any person adversely in like possession by virtue of a conflicting certificate of title in any case in which more than one certificate may be issued in error under this Act in respect of the same land.

Or error by misdescription (the recorded owner not being transferee for value.)

(4.) Except (in any case wherein the holder of the certificate shall not be a transferee for value) any land which shall by wrong description of boundaries be erroneously therein included and in this case whether such land be in the actual possession of the true owner within the effect of the preceding exceptions or not.

- (5.) Except the following incidents which shall be construed to be reserved by implication in every certificate of title notwithstanding the same be not mentioned as encumbrances namely:—Any rights of the Crown reserved under the original grant or otherwise also any rights of tenants or occupiers for any term not exceeding an unexpired period of three years also any rights-of-way or other easements for the time-being binding on the land also any restrictions imposed by legislative or municipal regulations in respect of the alignment of streets or thoroughfares and any unpaid rates or taxes affecting the land.

And except reservations in Crown grant and other implied incidents.

57. No action of ejectment or other action for the recovery of any land shall lie or be sustained against the person recorded as owner thereof under the provisions of this Act except in any of the following cases that is to say:—

Recorded owner protected against ejectment except in certain cases.

- (1.) The case of the owner of a mortgage or other security-encumbrance as against the encumbrancer in default.
- (2.) The case of a lessor as against a lessee in default.
- (3.) The case of a person deprived of any land by fraud as against the person recorded if or so far as the action shall not prejudice any *bonâ fide* transferee for value although claiming from or through a person so recorded through fraud.
- (4.) The case of a person deprived of or claiming any land included in any certificate of title of other land by misdescription of such other land or of its boundaries as against the recorded owner of such other land not being a transferee thereof *bonâ fide* for value.

In any case other than as aforesaid the production of the certificate shall be held in every Court of Law or Equity to be an absolute bar and estoppel to any such action against the person named in such certificate as the owner or lessee of the land therein described any rule of law or equity to the contrary notwithstanding.

58. Whenever an action shall be brought against a recorded owner in either of the last two cases excepted in the next preceding section if the defendant or any person through whom he claims shall have made improvements on the land since obtaining a certificate of title thereto then unless the defendant shall be proved to have been himself guilty of fraud or to be a mere trustee in the defence of the action for some other person so guilty he shall be entitled whether he admit or deny the plaintiff's title to plead the fact of such improvements being made and to set a value thereon and also on the land as distinct therefrom and give evidence thereof at the trial and if a verdict be found for the plaintiff or his title be admitted the jury shall assess the value of the alleged improvements and shall also separately assess the value which the land would have possessed if the said improvements had not been made. And no writ of possession shall issue in such case unless the plaintiff shall first pay into Court for the use of the defendant the value of the improvements so assessed deducting only the costs (if any) to which he shall be entitled in the action. And if the plaintiff shall fail to make such payment within three months after verdict the judgment to which he is entitled shall thereafter be limited to the sum separately assessed as the value of the land together with costs of suit. And the defendant shall upon satisfaction thereof be entitled to retain the land and improvements and in either case the Court shall be entitled to require to be delivered up any certificate of title which shall be held by the party whose right shall have determined.

In case of ejectment of defendant who has made improvements their value may be assessed.

And plaintiff shall either pay for improvements or be restricted to damages for the loss of the unimproved land.

59. Except on the ground of fraud wherein he shall have participated no person contracting or dealing with or talking or proposing to take a transfer from the recorded owner of any estate or interest shall be required or in any manner concerned to enquire or ascertain the circumstances under or the consideration for which such owner or any previous owner thereof was recorded or to see to the application of any purchase money or shall be affected by notice express implied or constructive of any trust or unrecorded interest any rule of law or equity to the contrary notwithstanding and the knowledge that any such trust or unrecorded interest is in existence shall not of itself be imputed as fraud.

Purchaser from recorded owner not to be affected by notice.

60. The person named in any certificate of title as the owner of an estate of freehold in possession in the land therein described shall be held in every Court of Law and Equity to be seized of the reversion and inheritance in the land immediately expectant upon the term of any lease that may be mentioned as an encumbrance in such certificate and to have all powers right and remedies to which such a reversioner is by law entitled and shall be subject to all the covenants and conditions in such lease to be observed by or on the part of the lessor.

As to reversions expectant on leases.

61. No certificate of title issued upon an application to bring land under this Act shall be impeached or defeasible by reason or on account of any informality or irregularity in such application or in the proceedings previous to the recording of the certificate and every certificate of title issued under any of the provisions herein contained when signed by the Recorder and authenticated by the seal of the Record of Titles Office shall be received in all Courts of Law and Equity as evidence of the particulars therein set forth and of their being entered in the record and shall be conclusive evidence that the person named in such certificate as the owner of or having any estate or interest in or power to appoint or dispose of the land therein described is seized or possessed of such estate or interest or has such power and that such land has been duly brought under the operation of this Act.

Certificate to be conclusive evidence that the land has been duly brought under the Act.

62. In any suit for specific performance or action at law for damages brought by an owner of any land under the operation of this Act against a person who may have contracted to purchase such land not having notice of any fraud or other circumstances which according to the provisions of this Act would affect the right of the vendor the certificate of title of such owner shall be held to be conclusive evidence that such owner has a good and valid title to the land for the estate or interest therein mentioned or described.

Certificate to be conclusive evidence in suit for specific performance or action for damages.

63. Notwithstanding anything contained in this Act the Land Titles Court shall have (collaterally with the Supreme Court in its equitable jurisdiction and subject to appeal thereto) the same jurisdiction that Courts of Equity now have on the ground of actual fraud and the record shall be subject to alteration and amendment pursuant to any order of either Court made in exercise of such jurisdiction or in conformity to the provisions of any Insolvent Act relating to fraudulent preference.

Jurisdiction of Court not to be prejudiced in cases of actual fraud.

64. The Recorder shall when directed by the Court but not further or otherwise make any amendment or correct any error in the record or in any map thereto annexed as the Court shall consider just—such amendment or correction shall be made subject to any notices and terms as to costs or otherwise which the Court may think fit. Every such amendment or correction in the record shall be marked by the Recorder with the date of making the same and with the initials of his name and any certificate which

Power to amend the record.

may

may have been issued as hereinafter mentioned or other instrument of title shall be amended in like manner And the Court may direct and compel under the powers hereinbefore conferred for summoning parties and witnesses any such certificate or instrument of title to be brought to the office by any person for the purpose of amendment or for the purpose of having a new certificate granted in lieu thereof but such amendment of the old or substitution of a new certificate shall be without prejudice to any claim of lien or other claim thereon and shall be on such terms as to costs as the Court may deem just.

Power to order a certificate to be brought in to be amended or a new one substituted.

Record not to be inspected without leave of Court.

Index to be made.

Acts relating to registry of deeds not to apply to recorded land.

Regulations hereby enacted not to be in prejudice authority of Court over the record.

First Schedule. Certificates of title in fee simple to be in duplicate. Original certificates and grants to be bound up in record book and each constitute a separate folium—upon which entries affecting the land shall be made. There may nevertheless be a separate certificate & folium for any derived estate deed. Distinct entries made of dealings therewith. But which shall contain a reference to the folium of the principal estate

Receipts may be required for duplicate certificates.

Certificates of title recorded when entered.

Instruments recorded when memorial thereof has been entered.

Instruments to be in duplicate.

Instruments entitled to priority according to date of record.

Particulars of trusts not to be recorded—With special exceptions—But the instruments tendered for record may declare or refer to any trust and operate by way of agreement only—

And not to prejudice recorded estate—Or imply notice—

Declaration negating breach of trust may nevertheless be required before receiving any instrument for record.

To enter caveats.

IV.—General Provisions regulating entries on the Record.

65. The record shall be kept under the control of the Court in an office to be called "The Record of Titles Office" and shall not be removed therefrom for any purpose unless the Court shall direct The record may be inspected by the recorded owners of the estates and interests recorded therein respectively or by their solicitors or agents No other person shall be permitted to inspect or to take copies of or extracts from the record unless under authority of such owner or of some general or special order of the Court or a Judge An index to recorded estates shall be made and regularly entered up and such index may be inspected by any person on payment of the authorized fee.

66. The provisions of all prior Acts of the Legislature relating to the registry of deeds shall cease or be held to have ceased to be applicable to any land so soon as it shall be placed on the record under the provisions of this Act or was so placed under the Real Property Act (1862) and no such Acts shall be applicable to any lease charge or encumbrance on the record so far as the same affects any recorded estate.

67. Every direction in this Act for making entries on the record shall be construed to be permissive only and without prejudice to any order of the Court or a Judge imposing further precaution or condition either general or in reference to any particular case.

68. Certificates of title to land in fee simple shall be in duplicate in the form of the first Schedule hereto and the Recorder shall bind up in the record book one part (to be called the original) thereof and one part (to be also called the original) of the grants hereby directed to be prepared in duplicate and to be deemed certificates of title and he shall deliver the other part (to be called the duplicate) to the owner Each original certificate or grant shall constitute a separate folium of record and the Recorder shall indorse thereon in such manner as to preserve their successive priorities the particulars of all dealings with the land therein comprised and hereby required to be recorded so as to disclose from time to time the existence of every derived estate or interest whether in possession or reversion inclusive of every encumbrance or power affecting the same Separate certificates may nevertheless be issued of the title to any such derived estate or interest in such form as the Court shall by general or special order direct and each original thereof may constitute a distinct folium of the record upon which separate entries may be made of dealings with such derived estate or interest But every such last-mentioned certificate and folium shall contain a reference to the folium of the principal estate.

69. Before the delivery of any duplicate certificate of title a receipt for it in the handwriting of the owner may be required to be signed by him when practicable so as to prevent as far as may be personation.

70. Every certificate of title shall be deemed to be recorded under this Act so soon as the Recorder shall have recorded thereon the volume and folium of the record in which the same is entered And every instrument purporting to affect land under the operation of this Act shall be deemed to be recorded so soon as a memorial thereof as hereinafter described shall have been entered in the record upon the folium constituted by the existing certificate of title and the person named in any certificate of title or instrument so recorded as the grantee or as the owner of or having any estate or interest or power shall be deemed to be the duly recorded owner thereof.

71. Every instrument presented to be recorded shall be in duplicate unless in cases to be excepted by general rule or special order of Court and shall be recorded in the order of time in which the same is produced for that purpose and instruments recorded purporting to affect the same estate or interest shall notwithstanding any express implied or constructive notice be entitled to priority the one over the other according to the date of recording and not according to the date of the instrument and the Recorder upon the recording thereof shall in cases where the instruments are in duplicate file one original in the office and shall deliver the other (hereinafter called the duplicate) to the person entitled.

72. No entry shall be made on the record of the particulars of any trust unless the trust be contained or originate in a grant from the Crown for public purposes or upon order of the Court permitting such entry on special application in which case the effect of such entry shall be to preclude any dealing with the land without an order of Court But any instrument from which the recorded entry is made may declare any trusts or contain special conditions in restraint of dealing with the estate or interest thereby transferred or created and either such instrument or the record may refer to any separate document disclosing such trusts or conditions Every such trust or condition shall be binding by way of contract between the parties thereto and may be brought in evidence upon any lawful proceeding between them and their respective representatives or to restrain any dealing in favor of any other person under caveat or otherwise before the same be absolutely recorded But shall not in the absence of such proceeding or caveat interfere with the recording of any instrument exercising the ordinary powers of a recorded owner nor prejudice (by implication of notice or otherwise) any person claiming title thereunder Provided nevertheless that if the Court by general rule or a Judge in any special case shall see fit to require that before recording any such instrument as aforesaid proof by statutory declaration or otherwise be afforded negating the breach thereby of any trust or condition or agreement the Recorder shall require such evidence and file the same for production whenever required in any civil or criminal proceeding.

73. The Court may also whenever occasion shall require direct the Recorder to lodge a caveat on behalf of Her Majesty or on behalf of any person who shall be under the disability of infancy coverture lunacy unsoundness of mind or absence from the Colony to prohibit the transfer or dealing with any land belonging or supposed to belong to any such person and also to prohibit the dealing with any land in any case in which it shall appear that an error has been made by misdescription of such land or otherwise in any certificate of title or in any instrument or for the prevention of any fraud or improper dealing.

- 74. Every memorial entered in the record shall state the time of the production of such instrument to be recorded the names of the parties thereto and all such particulars of the instrument as are intended to form part of the record and to affect the title to the land and shall refer by number or symbol to such instrument and shall be signed by the Recorder. Memorial defined.
- 75. Notwithstanding that such instrument be described as recorded by reason of the entry of such memorial the instrument shall not itself be thereby rendered any portion of the record nor shall any person other than the parties thereto be thereby held to have any notice of the contents thereof beyond the particulars recorded by the memorial or necessarily to be inferred therefrom. The memorial to be the sole record.
- 76. Whenever a memorial of any instrument has been entered in the record the Recorder shall (except in cases wherein the entire land contained in any certificate is transferred and a certificate of title is forthwith required) enter the like memorial on the duplicate certificate and instrument unless the production of the same shall be dispensed with as hereinafter provided and he shall endorse on every instrument whereof a memorial is so recorded a certificate of the time at which the memorial was entered in the record and shall authenticate such certificate by signing his name thereto and such certificate shall be received in all Courts of Law and Equity as conclusive evidence that such instrument has been duly recorded. Memorial to be entered on duplicate instrument.
Certificate of record to be evidence.
- 77. No instrument until recorded in manner herein provided shall be effectual to pass any estate or interest in any land under the operation of this Act but upon the recording of any instrument in manner herein provided the estate or interest comprised in such instrument shall pass or as the case may be the land shall become liable in manner and subject to the covenants and conditions set forth and specified in such instrument or by this Act declared to be implied in instruments of a like nature and should two or more instruments signed by the same owner and purporting to affect the same estate or interest be at the same time presented to the Recorder to be recorded he shall record and indorse that instrument which shall be presented by the person producing the duplicate certificate of title And he shall not in any case without authority of some rule or special order of Court record any instrument dealing with any estate or interest without production by the person presenting the same of the duplicate certificate. Instruments not effectual until entry in record.
- 78. The owner of any estate or interest in land under the operation of this Act shall be entitled to receive a certificate of title to the same And if any certificate be issued to a minor or to a person under any other disability the Recorder shall note thereon the age of such minor or the nature of the disability so far as known to him. Proprietor of land entitled to certificate of title. If issued to person under disability such disability to be stated.
- 79. Two or more persons who may be recorded as joint owners of an estate or interest in land under the provisions of this Act shall be deemed to be entitled to the same as joint tenants and in all cases where two or more persons are entitled as tenants in common to undivided shares of or in any land such persons may receive separate and distinct certificates of title to such undivided shares And except in cases where a memorandum in restraint of alienation by survivors shall be entered any joint tenant may with the consent of his co-owner or co-owners receive a separate distinct certificate of such joint estate in which case every certificate so used shall be marked with the name or names of the owner or owners in respect of whose interest the same shall be issued and held respectively. Recorded joint owners to be joint tenants. Tenants in common to receive distinct certificates.
- 80. On the application of any recorded owner of land held in various parcels under separate certificates of title and on his delivering up the duplicates thereof the Recorder may issue to such owner a single certificate for the whole of such land in accordance with such application so far as the same may be done consistently with any regulations for the time-being in force respecting the parcels of land that may be included in one certificate and upon issuing any certificate under this section the Recorder shall cancel the previous certificate and shall indorse thereupon a memorandum setting forth the occasion of such cancellation and referring to the certificate so issued A converse proceeding may be adopted upon the application of the owner of land held under one certificate to receive separate certificates for sub-divided portions thereof. Owner of separate certificates may obtain a single certificate for all the land and vice versa.
- 81. Such references shall be noted in the record book and on instruments filed hereunder as will allow the title to be traced either downwards from or upwards to the original certificate but it shall not be necessary in any duplicate or certified copy of any certificate or instrument to insert such references and every such duplicate or copy shall be deemed complete notwithstanding the omission of such references. A history of the various dealings affecting land to be preserved.
- 82. Trustees with a power of sale may be recorded as joint owners and any tenant for life or other person beneficially interested or nominated for protection of other persons so interested may in conformity to the terms of any transfer or settlement or at any time by direction of a Judge be entered as a consenting party in which case no further dealing with the land shall be recorded without the consent of the person so indicated The name of any person may be entered in like manner as consenting party in conformity to the terms of any mortgage or encumbrance or of any subsequent agreement between the parties respectively bound and entitled thereunder for the time-being in which case the power of sale incident to the encumbrance shall not be exercised without consent of the person so indicated. A consenting party may be named to protect the interest of beneficiaries.
The like in regard to power of sale under mortgages &c.
- 83. In the event of the death of such consenting party or of any change in the interest for protection of which he was appointed or upon any other contingency requiring the appointment of another person in the stead of the person originally named it shall be lawful for the Court on proof of the change of interest or in conformity to any sufficient agreement between the parties interested providing for the contingency or upon any grounds which shall be deemed sufficient in the exercise of a like jurisdiction as that of Courts of Equity in appointing new trustees to direct the name of any person to be removed and that of any other person to be substituted as such consenting party. Name of consenting party may be changed as occasion may require.
- 84. Any person interested in any estate or interest recorded in the name of any other person may lodge a caveat with the Recorder which caveat shall be in such form and shall be verified and noted on the record in such manner as the Court shall by general rule or special order direct A caveat shall remain in force for a period of twenty-one days from the date thereof if the Court shall be then sitting or if the Court shall not be sitting then for twenty-one days from the next sitting of the Court Any transfer or other disposition recorded during such period shall unless the Court shall otherwise direct be made expressly subject to the title and claim (if any) of the cautioner. Power to any person interested to lodge a caveat prohibiting dealing.
- 85. After the expiration of such period the caveat shall cease and the officer shall cancel any note thereof on the record unless a fiat continuing it be made by a Judge and upon the caveat so ceasing the estate or interest shall be dealt with in the same manner as if no caveat had been lodged. Caveat to cease unless extended.

Court may extend time of caveat.

86. At any time during the said period application may be made to the Court for an extension thereof and if satisfied that the cautioner has sufficient grounds of *prima facie* objection to justify further delay for the investigation thereof the Court may thereupon and from time to time thereafter if occasion shall require extend the period for the caveat continuing in force and may in connection therewith require such undertaking or security or the lodging of such sum of money in Court as may be deemed sufficient to indemnify any person prejudiced by delay in the disposition of the property or may make such other order as shall appear just. If any caveat be lodged without reasonable cause the Court may order payment by the cautioner of such sum by way of compensation or costs as it may deem just.

Court to decide questions arising on caveat. Subject to appeal

87. All questions arising upon any such caveat shall be subject to investigation and adjudication by the Court under the powers hereby conferred in like manner as hereinbefore provided in the case of objections to applications for original certificate of title subject to the same right of appeal and the like conditions in regard to notice in relation thereto.

Disposition by surviving joint owners may be restricted by note on record.

88. Where two or more persons are recorded as joint owners of any estate or interest a note may with their consent or in compliance with a condition imposed by the party transferring or creating the estate or interest or by direction of the Court be made on the record to the effect if that such owners be reduced by death or otherwise below a specified number no disposition shall be made by the surviving or remaining owners unless under direction of the Court and such note shall appear on every certificate issued by the Recorder and if it be intended that no such disposition shall be made until the full original number be restored the entry of the words "no survivorship" shall suffice to express such intention.

Successors (or new trustees) may be appointed.

89. Whenever by the death or refusal to act or absence or other disqualification of either one or more of the recorded owners the surviving or remaining owner or owners shall be rendered incompetent to deal with the recorded estate the Court may on their application or that of any person beneficially interested proceed to inquire whether there be any valid provision subsisting under any settlement or agreement relating to the recorded estate for appointment of new trustees and if so the Court shall in conformity therewith and if not then in the exercise of its own discretion in the selection of fit persons to supply the vacancies make such order for that purpose as it shall deem fit and shall be entitled to exercise therein the same powers which belong to the Supreme Court in Equity and shall cause the recorded ownership to be made conformable with the appointment so made.

Continuing caveat entitling cautioner to notice of any dealing from time to time.

90. In any case in which the entry of the name of a consenting party is permissible under the provisions of section eighty-two of this Act there may be entered either in addition or instead thereof the name of any person as a continuing cautioner to whom notice shall be given of any dealing whenever presented for record and such person shall be from time to time dealt with as a cautioner regarded as having entered an ordinary caveat on the day on which he shall have received such notice. And if the dealing to which such notice refers shall be recorded before expiration of the time allowed for the remaining in force of such caveat it shall be subject to the title and claim or the objection on behalf of any other person of such cautioner so long as such caveat shall not have lapsed or have been overruled.

Right of objection to lapse in same time after notice as other caveats after entry.

91. The Court shall have the like power of removing the name of a continuing cautioner and substituting the name of another in case of death resignation or otherwise as hereinbefore provided in the case of a consenting party.

Other names may be entered in case of death resignation &c.

Every caveat &c. to be accompanied by an address in Sydney. And notice served at such address to be sufficient.

92. No caveat or caution or notice of objection to application for an original certificate of title under this Act shall be sufficient unless accompanied by some address within the City of Sydney at which the service of notices in reference thereto may be made and shall be deemed conclusive. An additional address may be given to which a duplicate notice may be sent through the Post Office but no proof of the latter notice shall be requisite nor shall any proceeding be invalidated by its omission.

The Court may direct estates and interests under settlements to be separately recorded.

93. Upon the application of any person claiming any derivative estate or interest under any settlement or lease or encumbrance of a recorded estate the Court may make an order directing the Recorder to record separately any such derivative estate or interest either in possession or in remainder which can be alienated by the owner thereof without the consent of any other person and which is not liable to be defeated or affected at law or in equity by the act of any other person or by any other contingency or as to which such condition of consent or liability if existing admits of being sufficiently stated on the record. Upon any such application the Court shall ascertain whether any power of sale or exchange or power of creating any lease or encumbrance exists with respect to such estate and if so the record shall be qualified by stating the existence of such power. The Court may also direct the officer to record separately any vested and ascertained charge or encumbrance under the settlement.

Interests &c. may be recorded by reference. No appeal to lie if the Court declines to record separately.

94. On any application to record separately any derivative estate or interest the Court may decline to have the same separately recorded or may (at its option) direct that the same be recorded by means of a note of reference to the whole or any portion of the instrument creating it or counterpart or a copy deposited in Court for reference and no appeal shall lie from any decision of the Court given under this section.

Articles may be construed as a perfected settlement.

95. In the construction of any articles or agreement for a settlement the Court may for the purpose of this Act regard any legal estate charge or power which would be created by a settlement made pursuant thereto and framed in due form of law as if the same were already subsisting in virtue of such articles and may give effect thereto on the record without requiring the previous completion of any such settlement.

Power to appoint may be recorded as an encumbrance belonging to the donee.

96. If by any instrument of transfer duly executed any recorded estate or interest shall be transferred to a transferee to such uses as some other person therein named shall appoint and until and in default of appointment to the transferee it shall be construed to have the full effect of a limitation of the use in fee simple to the transferee and to confer authority on the donee of the power to defeat such estate by its exercise and such power may be recorded as an encumbrance to which the estate of the transferee shall be subject and if the donee of the power shall be a married woman she shall be entitled to exercise such power without consent of her husband unless such consent be required by some express provision.

Provision as to separate estate of a married woman.

97. If land be transferred to a married woman under this Act as her separate estate such estate may be designated as such in the certificate of title and in that case she shall be entitled to deal with such estate as a *feme sole* in all respects also to sue and be sued in all proceedings at law or in equity relating to such estate without regard to any marital rights or liabilities of any present or future husband. Provided that the defendant in any such proceedings wherein she shall be plaintiff shall be entitled to demand security for costs in like manner as if the plaintiff were out of the jurisdiction. And in all such proceedings whether she be plaintiff or defendant her separate estate (whether that in question in the suit or any other) shall be liable for all damages and costs that shall result or be awarded against her. And it shall be

be in the discretion of any Court in which such proceedings shall be pending to direct in any stage thereof security for the same to be entered on the record of title If any land be transferred to a married woman for her own life as her separate estate such estate may likewise be declared to be without power of anticipation and so designated on the certificate of title And in that case no instrument dealing with such estate shall be recorded except leases for a term not exceeding seven years from the granting thereof (unless determinable by death of the lessor) purporting to be for the full annual value at rack rent nor shall such recording render any such lease valid if the same be in fact made in fraud or contravention of the said restriction.

The like as to restraint upon anticipation.

98. Any person entitled to receive a certificate for an absolute estate and desirous that such estate shall be descendable to his heirs under the law of descent according to primogeniture may require such estate to be entered accordingly on the record and certificate and in that case if he make no other disposition thereof by will or otherwise such entry shall be construed as a valid devise to his heirs general and the Act twenty-sixth Victoria number twenty shall not be applicable thereto as an intestate estate.

An estate may be so recorded as to pass to heirs under the former rule of inheritance.

99. The recorded owner of any estate or interest in land under the operation of this Act whether of the nature of real or personal property may transfer such estate or interest to his wife or if such owner be a married woman it shall be lawful for her to make such transfer to her husband or it shall be lawful for such proprietor to make such transfer directly to himself and another person or jointly with any other person to himself alone or to create or execute any power of appointment or disposition or to create or limit estates in remainder or otherwise as legal estates of or concerning land the subject thereof without the intervention of any precedent or particular estate and also like estates as legal estates without the employment or intervention of any form of use and upon the recording of such transfer the land estate or interest or power shall vest in or belong to the transferee solely or jointly as the case may be or in the person in whose favour any such power may have been executed or taking under any such limitation or otherwise according to the intent and meaning of such instrument.

Owner may vest estate jointly in himself and others without limiting any use &c.

100. Every covenant and power to be implied in any instrument by virtue of this Act may be negatived or modified by express declaration in the instrument or indorsed thereon and in the declaration in any action for a breach of any such covenant it shall be lawful to allege that the party against whom or against whose real or personal representatives such action is brought did so covenant precisely in the same manner as if such covenant had been expressed in words at length in such instrument any law or practice to the contrary notwithstanding and every such implied covenant and every express covenant agreement or declaration contained in any instrument duly signed and attested for the purposes of this Act shall have the same force and effect as if it had been set out at length in such instrument and had been under seal and where in any instrument there shall be more than one covenantor such covenants as are by this Act declared to be implied in instruments of the like nature shall be construed to bind the parties jointly and severally unless otherwise determined by express agreement in qualification thereof.

Implied covenants and powers may be modified or negatived.

Implied covenants by more than one person to be joint and several.

101. If in making up or continuing the record of any title any question shall arise as to the true construction or legal validity or effect of any deed will or instrument or as to the persons entitled or the extent or nature of the estate right or interest power or authority of any person or class of persons or the priority of any charge or encumbrance claim or interest or as to the mode in which any entry ought to be made in the record of title such questions shall be disposed of by the Court which may either decide the same or direct any proceeding at law or in equity for that purpose or at its discretion and without deciding such question may direct such entry to be made on the record as shall appear to be right and the Court may direct the estate or interest of any person to be recorded by reference to the deed will or instrument creating the same or to a verified copy thereof to be deposited as the Court shall direct.

Questions arising on the record to be disposed of by the Court.

102. If any certificate of title be lost or destroyed the Recorder may upon the order of a Judge (who shall be satisfied of the fact of such loss or destruction and may direct such public advertisement for the recovery of the same as he may consider expedient) give a new certificate and shall state thereon that it is given in substitution for the former certificate and the same fees shall be chargeable for the new as for the former certificate but no such new certificate shall be of any avail against any person who may have already derived title under the former certificate.

On proof of loss &c. of certificate a new one may be given.

V.—Attestation of Instruments.

103. Instruments (including powers of attorney) under this Act signed by any person and attested by one witness to whom the party signing is personally known shall be held to be duly executed and such witness may be—

Attestation of instruments and powers of attorney.

Within the limits of the Colony—

The Recorder or an Assistant or Deputy Recorder or a Justice of the Peace Notary Public or Commissioner for taking affidavits or any other person who shall be from time to time appointed as an official witness for the purposes of this Act by commission under the seal of the Land Titles Court.

And without the limits of the Colony—

Either a Notary Public or the Mayor or other chief officer of any city or municipal corporation within the United Kingdom of Great Britain and Ireland or the officer administering the Government of or the Judge of any Court of Record or Registrar General or Recorder of Titles in any British possession or the British Consular Officer at any foreign place or any other official witness appointed as aforesaid.

Such witness whether within or without the limits of the Colony may also be any other person but in such case he shall appear before one of the officers or persons aforesaid to whom he is personally known who after making due inquiries of such witness shall indorse upon the instrument or power a certificate in the form in the second Schedule hereto or to the effect thereof and such certificate shall be deemed sufficient proof of the due execution of such instrument or power No instrument or power of attorney which shall not be signed and attested as aforesaid shall be received as sufficient to authorize any entry on the record without the express order of a Judge If the Judge see fit he may order the required entry to be made either absolutely or on condition that the instrument or a duplicate thereof be perfected within a time fixed and at the expiration of which the entry shall be cancelled if such condition then remain unfulfilled.

Proof of signature.

Second Schedule.

Attested signatures of transferees and encumbrances not imperative in all cases.

104. The duly attested signatures of transferees and encumbrancees shall be affixed pursuant to the forms in the Schedule hereto whenever conveniently practicable in order to facilitate prevention or detection of forgery or personation but may be dispensed with in any case in the discretion of the Recorder (subject to the control of the Court or a Judge if any general or special order be made in reference thereto) and no instrument otherwise perfected shall when recorded be deemed insufficient for want of the signatures aforesaid.

Seal of corporation substituted for signature.

Seal of attorney of corporation to be deemed seal of corporation.

105. A corporation for the purpose of any application to bring land under this Act or of transferring or otherwise dealing with any recorded estate or interest under this Act may in lieu of signing the instrument for such purpose required affix thereto its common seal. The seal of the attorney of any corporation whose chief or head office of business shall be out of the Colony whether such attorney shall have been already constituted or shall hereafter be constituted by a power of attorney under a seal purporting to be the common seal of the corporation giving the power shall be deemed to be the common seal of such corporation within the meaning and for the purposes of this section.

VI.—Powers of Attorney.

Powers of attorney.

Third Schedule.

Existing and prospective powers to be available.

To be recorded.

Revocation to be also recorded.

Recorded power to remain in force until revocation recorded.

But without prejudice to discretionary objection after any other notice of revocation—Or to remedy for fraud.

Power of attorney deemed *prima facie* in force if filed within four months. If afterwards evidence of non-revocation required.

106. It shall be lawful for the recorded owner of any estate or interest to appoint any person to act for him in transferring or otherwise dealing therewith by signing a power of attorney in the form of the third Schedule hereto or in any other form that the Court shall deem sufficient and if it shall expressly or constructively authorize such transfer or dealing with any estate or interest in land of the principal generally or prospectively it shall be no objection to such power that the principal was not a recorded owner under this Act at the time of the execution thereof or that this Act was not then passed. No such power shall be effectual under this Act until filed in the Record of Titles Office unless such filing be on special grounds dispensed with on substitution of a verified copy or other condition by order of Court. The revocation of such power either express or constructively by the death bankruptcy insolvency or (if a female) marriage of the principal may be recorded in the said office as follows namely by a notice under the hand of the principal or of some person authorized by him or her in that behalf that he or she has revoked such power—or by the statutory declaration of any person that the principal is married or dead or has become bankrupt or insolvent as the case may be which notice or declaration respectively shall be filed in like manner as the power to which it relates and be annexed thereto. And until such filing the power shall continue effectual as an authority for recording any instrument executed by the attorney within the scope of the power notwithstanding any such express or constructive revocation. Provided that nothing herein contained shall interfere with the authority of the Court or Recorder to refuse the recording of any instrument after notice howsoever received that any such revocation has preceded the execution thereof nor shall prejudice any remedy at law or in equity against any attorney or other person who shall have received such notice for any fraud or injury committed by or in connection with the wrongful acting upon the said power.

107. Any power of attorney filed within four months after the date thereof shall be deemed to continue in force at the time of such filing without express evidence to that effect unless a revocation thereof shall have been previously recorded in manner aforesaid. But if filed afterwards it shall be accompanied by such statutory declaration or other evidence negating revocation as the Court shall by rule or special order require.

VII.—Transfers.

Transfers.

Fourth Schedule

108. The recorded owner of any estate or interest in land may transfer the same by one of the forms in the fourth Schedule hereto and a woman entitled to any right or contingent right to dower in any freehold land shall be deemed a sole owner of such right within the meaning hereof. Upon the recording of the transfer the estate and interest of the owner as set forth in such instrument or which he shall be entitled or able to transfer or dispose of under any power with all rights powers and privileges thereto appertaining shall pass to the transferee and who shall thereupon become the owner thereof and if any liabilities appertain thereto shall whilst continuing such owner be subject to and liable for the same requirements and liabilities to which he would have been subject and liable if he had been the former owner of the estate or person originally acquiring the transferred derivative interest as lessee or otherwise as the case may be.

Transfer to include right to sue thereunder.

109. By virtue of every such transfer as is herein mentioned the right to sue upon any mortgage or other instrument and to recover any debt sum of money annuity or damages thereunder (notwithstanding the same may be deemed or held to constitute a chose in action) and all interest in any such debt sum of money annuity or damages shall in the absence of any condition or agreement to the contrary be transferred so as to vest the same at law as well as in equity in the transferee thereof. Provided always that nothing herein contained shall invalidate a plea of payment or satisfaction to the transferor on the part of the defendant to any action by the transferee unless it shall appear that the defendant had notice of the transfer before such payment or satisfaction. Nor shall anything herein contained prevent a Court of Equity from giving effect to any trusts affecting such debt sum of money annuity or damages in case the transferee shall hold the same as a trustee for any other person.

Saving powers to Courts of Equity to give effect to trusts.

Instruments when signed and recorded to have the same efficacy as a deed acknowledged but married woman to acknowledge instruments signed by them.

Fifth Schedule.

110. Every transfer or other instrument when signed by the owner (unless an instrument ordinarily requiring acknowledgment and signed by a woman appearing on the record to be married) shall when recorded if attested in manner required by this Act be as valid and effectual to all intents and purposes for conveying passing or conferring the estates interests or rights expressed to be thereby transferred leased or created respectively as a deed duly executed and acknowledged by the same person would have been under any law heretofore or now in force in this colony or as any other form of document would have been either at law or in equity and every instrument acknowledged by any woman appearing on the record to be married (whether a sole owner or not) and certified under the hand of an official witness in the form of the fifth Schedule hereto shall when such instrument has been recorded be as valid and effectual to all intents and purposes as a deed duly executed and acknowledged or an instrument duly signed and acknowledged by her would have been under any law heretofore or now in force in this colony or as any other form of document would have been either at law or in equity and such certificate shall be deemed and received as sufficient evidence of the due acknowledgment by her of the instrument therein referred to.

111. Before the recording of the transfer of any estate or interest for which a duplicate certificate of title shall be held the transferrer shall deliver up such certificate and the Recorder shall after recording the transfer indorse on the certificate a memorandum cancelling the same either wholly or partially according as the transfer purports to transfer the whole or part of the land and setting forth the particulars of the transfer and the duplicate of any wholly cancelled certificate shall be retained by him and the duplicate of any partially cancelled certificate may be returned indorsed as aforesaid to the transferrer and the Recorder may make out to the transferee a certificate of title to the land mentioned in such transfer Provided that if the entries on the certificate be inconveniently numerous or if for any other reason the transferrer prefer to receive a new certificate for the untransferred residue of land such certificate may be issued on surrender of the existing certificate and payment of the regulated fee for the new certificate.

Certificate of title to be delivered up and cancelled so far as regards the portion of land transferred and fresh certificate to be issued to purchaser and a certificate for the part untransferred to be issued to owner when demanded.

112. In every transfer of land subject to mortgage or other encumbrance and every transfer of lease there shall be implied the covenants set forth in the sixth Schedule hereto in reference to such transfers respectively.

Covenants implied in transfers of encumbered land or of leases. Sixth Schedule.

113. Whenever any transfer or lease of freehold shall contain the words "Together with a right of carriage-way over" [specifying or describing the road or roads over which the easement is created and referring to a map indorsed whereon such road or roads is or are indicated] such words shall have the same effect and be construed as if there had been inserted in such transfer or lease the words contained in the seventh Schedule hereto A memorial of any transfer or lease creating any easement over or upon or affecting any land under the operation of this Act shall so far as relates thereto be entered upon the folium of the record constituted by the existing certificate of title of such land in addition to any other entry concerning such instruments required by this Act.

Creation of easements.

Seventh Schedule. Memorial of easements to be recorded.

114. Upon production of a receipt of the Treasurer of the Colony or his deputy for the full purchase money of any land sold by Her Majesty in fee together with an instrument dealing with such land signed by the purchaser the Recorder shall indorse upon such receipt such memorial as he is herein required to enter in the record upon the recording of any dealing of a like nature with land recorded and shall sign such indorsement and shall indorse such instrument with the certificate herein required on the recording of a like instrument after a grant has been recorded and so on from time to time with respect to any other dealings before the recording of the grant and every such instrument shall thereupon be held to be duly recorded under this Act The Recorder shall file such receipt and instrument in the office and upon the recording of the grant of the land he shall enter thereon a memorial of every dealing indorsed on such receipt and issue a certificate of title to the then transferee of the land (if any).

Dealings may be recorded prior to issue of Crown grant.

115. Any recorded owner subdividing any land under the provisions of this Act for the purpose of selling the same in allotments may be required to deposit with the Recorder a map which shall exhibit distinctly delineated all roads streets passages thoroughfares squares or reserves appropriated or set apart for public use and also all allotments into which the said land may be divided marked with distinct numbers or symbols and every such map shall be certified as accurate by statutory declaration of a surveyor specially licensed to practise as a surveyor under the provisions of this Act by the Court on the recommendation of the Surveyor General Such map may by the express permission of the Court be altered or varied from time to time and any roads or ways thereon shut up or diverted upon the application of parties interested or after such inquiry and notice as the Court shall see fit and upon the Court being satisfied that the alteration will not operate to the injury of any person entitled to object thereto.

Map of subdivided land.

Surveyors—how to be licensed.

116. The dower of the widow of any Crown grantee or owner of freehold land alienated from the Crown on or after the first day of January one thousand eight hundred and sixty-three and the dower of the widow of any proprietor of freehold land alienated from the Crown before that day (notwithstanding any such widow shall have been married before the year one thousand eight hundred and thirty-seven but subject as to the last-mentioned land to the provisos hereinafter contained) shall be barred by the absolute disposition of the land by her husband in his lifetime or by his will and all partial estates and interests and all mortgages and charges created under this Act or by will of her husband and all encumbrances to which any such land shall under the provisions of this Act be subject or liable shall be valid and effectual as against the right of his widow to dower in or out of the same Provided always that any right or contingent right to dower which may subsist in or out of any land alienated from the Crown before the said first day of January one thousand eight hundred and sixty-three and which shall be noted as an encumbrance in the certificate of title or in any transfer shall not be prejudiced by this section but no right or contingent right to dower in or out of such land which shall not have arisen before the land is brought under this Act or which shall be capable of being defeated by the exercise of any power of appointment conferred on the applicant owner shall be deemed or noted as such an encumbrance nor shall any such right or contingent right be deemed to exist or continue or be noted on the record of any title to land which shall be brought on the record or on any new certificate of title issued on transfer or otherwise at any time after the first day of January one thousand eight hundred and seventy unless in the meantime the wife or widow claiming such right or contingent right shall have lodged with the Recorder of Titles a claim in the form of the eighth Schedule hereto with a statutory declaration or certificate verifying the marriage in respect of which such claim is made Provided also that no land alienated from the Crown before the said first day of January one thousand eight hundred and sixty-three and the right or contingent right to dower in or out of which shall have been actually barred before the land is brought under this Act shall be subject to a new right to dower in favour of the widow of the applicant owner arising under or by virtue of the certificate of title or any entry on the record.

As to dower rights.

Subsisting dower rights if mentioned in the certificate not to be prejudiced.

No certificate issued after 1 January 1870 to reserve any dower right unless the doweress has previously lodged claim.

Eighth Schedule. Barred dower right not to be revived by the land being brought under the Act.

IX.—Leases.

117. The recorded owner of any freehold land may lease the same by signing a lease thereof in the form in the ninth Schedule hereto but no lease subject to a mortgage or other security-encumbrance shall be valid or binding against the security-encumbrancee unless he shall have consented in writing to such lease prior to the same being recorded.

Leases of land. Ninth Schedule.

118. In every lease made under the provisions of this Act there shall be implied the covenants and powers set forth in the tenth Schedule hereto.

Covenants and powers to be implied in every lease. Tenth Schedule.

119. Whenever in any lease made under this Act the lessee shall employ any of the forms of words contained in column one of the eleventh Schedule hereto and distinguished by any number therein such

Short forms of covenants by lessees. Eleventh Schedule.

lease

lease shall be taken to have the same effect and be construed as if he had inserted therein the form of words contained in column two of the same Schedule and distinguished by the corresponding number and every such form shall be deemed a covenant with the lessor by the lessee. There may be introduced into or annexed to any of the forms in the first column any express exceptions from or express qualifications thereof respectively and the like exceptions or qualifications shall be taken to be made from or in the corresponding forms in the second column.

Lease may be surrendered by indorsement by lessee with concurrence of lessor.

120. Whenever any lease made under this Act is intended to be surrendered and the surrender thereof is to be effected otherwise than through the operation of a surrender in law or than under the provisions of any law or statute now or hereafter to be in force relating to insolvent estates there may be indorsed upon such lease or on the duplicate thereof the word "surrendered" with the date and such indorsement shall be signed by the recorded owners of the lease and of the estate subject thereto respectively and shall be attested by a witness and the Recorder thereupon shall enter on the record a memorandum recording the date of such surrender and shall likewise indorse upon the lease or duplicate a memorandum recording the fact of such entry having been made on the record and upon such entry being made the estate and interest of the lessee shall vest in the lessor or in the owner for the time-being of the inheritance in the land immediately expectant on the term and production of such lease or duplicate bearing such indorsements shall be sufficient evidence that such lease has been legally surrendered. Provided that no lease subject to a mortgage or other security-encumbrance shall be so surrendered without the consent in writing of the encumbrancee.

Recovery of possession by lessor to be entered on record.

121. The Court upon proof of recovery of possession by a lessor by any legal proceeding may direct the Recorder to make an entry of the same on the record and the term for which the land was leased shall upon such entry being made determine but without prejudice to any action or cause of action which shall previously have been commenced or have accrued in respect of any breach or non-observance of any covenant expressed in the lease or by this Act declared to be implied therein.

X.—Security-encumbrances.

Security-encumbrance may be created in three forms, viz:—
1. Mortgage.
2. Charge of annuity, &c.
3. Contingent security.

122. The recorded owner of an estate or interest in land may create an encumbrance as security by way of mortgage in the first form of the twelfth Schedule hereto and by way of charge of annuity or fixed periodical payments in the second form of the same Schedule and for securing any contingent payment by way of cash credit indemnity or otherwise or the fulfilment of any covenant or agreement in the third form of the same Schedule. Any encumbrance which shall be entered on the record by order of a Judge to secure fulfilment of the provisions in any settlement shall have the effect of any or either of these forms according to the nature of the portions annuities or other subject of security.

Covenants implied.

Thirteenth Schedule.

123. The covenants powers and conditions set forth in sections one and two in the thirteenth Schedule hereto in reference to the said forms shall be therein respectively implied subject nevertheless to such variations or additions if any as shall be made by express agreement between the parties and whenever a covenant to insure shall be thereto added in the short form of column one of section three of the same Schedule it shall have the full effect of the words in column two thereof.

No security encumbrance to operate as a transfer but to confer contingent power of sale &c.

No conditions in qualification of the power to affect the recorded title of purchasers &c. But declaration negating breach of condition may be required.

124. A security-encumbrance under this Act shall not operate as a transfer of the land but when recorded the power of sale and all other powers expressed or implied therein may be exercised when occasion shall require in like manner as if the person signing any instrument giving effect thereto were the owner save only that every such instrument shall refer to the security and shall contain an allegation that the same is in exercise of the power conferred by such security and in conformity to the terms and conditions thereof. And in that case no conditions either implied or express affecting the proper exercise of the power shall have any operation otherwise than by way of agreement between the parties nor shall in the absence of sufficient caveat or Judge's order prevent the lawful and effectual recording of any instrument containing the allegation aforesaid. Provided nevertheless that a statutory declaration verifying the said allegation may be required under rule or order of Court in like manner as hereinbefore provided in regard to dealings by trustees with power of sale.

Encumbrance entering into possession to have the same rights as if the legal estate had passed.

And the rights of legal ownership in the encumbrancer to cease.

Discharge.

125. Whenever the owner of any security-encumbrance shall determine to enter into possession of any land under the conditions of the security he shall for that purpose be entitled except only as against the rights of a prior encumbrancee to all remedies for recovery of possession or of the rents and profits by action of ejectment or trespass dstraint or otherwise which he might have exercised if the legal estate in the land were actually vested in him and no tenant or other person from whom such possession or payment of any such rent or profits shall be demanded by him shall be bound or entitled to inquire respecting any default or notice or other condition precedent to his right of entry or be affected by any notice of objection on the part of the encumbrancer in relation thereto unless supported by injunction or order of a competent Court or Judge. Provided further that after such entry into or demand of possession or rents and profits by the owner of the security the rights of legal ownership and of giving discharges for accruing rents and profits shall cease to be exercisable by the encumbrancer.

126. Upon the production of any mortgage or other security having thereon an indorsement signed by the recorded owner of the security and attested by a witness discharging the land from the whole or part of the moneys or other liability secured or discharging any part of the land from the whole of such moneys or liability the Recorder shall make an entry in the record noting that such mortgage or other encumbrance is discharged wholly or partially or that part of the land is discharged as aforesaid (as the case may be) and upon such entry being made the land or the portion of land described in such indorsement shall cease to be subject to such moneys or liability or for the part thereof mentioned in such entry as discharged and the Recorder shall indorse on the duplicate certificate of title when produced to him for that purpose a memorandum of the time at which such entry was made.

Entry of satisfaction of annuity &c.

127. Upon proof to the satisfaction of the Court of the death of the annuitant or of the occurrence of any other event or circumstance upon which in accordance with the provisions of any security any terminable annuity or other payment thereby secured shall cease and upon proof to the like satisfaction that all arrears of the annuity or other secured payment and all costs occasioned by non-payment thereof have been fully satisfied the Court shall direct the Recorder to make an entry in the record that such security is satisfied and upon such entry being made the land shall cease to be subject thereto and the Recorder shall make the like indorsements as are mentioned in the last preceding section.

128. In case the recorded owner of a mortgage or other security shall be absent from the Colony and there be no person authorized to give a receipt for the money secured at or after the date appointed for payment thereof it shall be lawful for the Treasurer of the Colony to receive such money with arrears of interest if any due thereon in trust for the recorded owner or other person entitled or to become entitled thereto and thereupon the interest upon such money shall cease to run or accrue and the Recorder shall upon production of the receipt of the Treasurer for the amount paid make an entry in the record discharging the land from such money stating the time at which such entry was made and such entry shall be a valid discharge from such money and the Recorder shall make a corresponding entry on the duplicate certificate of title and security whenever those documents shall be produced to him for that purpose and if the same be a full satisfaction of the security shall state accordingly. The Treasurer shall from time to time invest all moneys which shall be received by him under this section together with all dividends and interest which shall accrue thereon in New South Wales Government securities for the benefit of the persons who shall for the time-being be entitled thereto but nothing herein contained shall render any Treasurer in any manner liable for not investing the same respectively. The Recorder shall from time to time when and as directed by order of the Court in that behalf address to the Treasurer requisitions to pay to such persons the moneys to which they may be entitled hereunder and every such requisition when signed by the Treasurer shall be sent to the Auditor General and when countersigned by him shall be the warrant for the payment by the Treasurer of the moneys therein specified.

Secured money may be paid to Treasurer if owner of security be absent from the Colony and security discharged.

Moneys received under this section to be invested.

129. The owner of any security-encumbrance of leasehold land under this Act after entering into possession of the land or the receipt of the rents and profits thereof shall during such possession or receipt and to the extent of any benefit rents and profits which may be received become and be subject and liable to the lessor of the said land or the person for the time-being entitled to the reversion expectant on the term of the lease for the payment of the rent reserved by the lease and for the observance of the covenants therein contained or by this Act declared to be implied therein on the part of the lessee or his transferees.

Encumbrance of leasehold entering into possession to become liable to lessor.

130. Whenever such default has been made and continued in payment of the moneys secured by a mortgage or other security as shall have rendered a power of sale lawfully exercisable under the express or implied conditions of the security the recorded owner thereof may apply to the Court by petition or otherwise as may be required by its rules of procedure and thereupon adduce such evidence as the Court shall require of the following facts namely—that such default has been made and then continues and that the estate of the encumbrancer in the land encumbered has been *bonâ fide* offered for sale at public auction by a licensed auctioneer and that the amount of the highest bidding at such sale was not sufficient to satisfy the moneys secured together with the expenses occasioned by such sale. And the Court upon being satisfied of the facts aforesaid may either after or concurrently with any special notice or rule to show cause to be given to or served on the parties entitled to redeem the security until sale direct the Recorder to cause notice to be published once in each of three successive weeks in at least one newspaper published in the City of Sydney offering such land for private sale and shall appoint a time not less than one month from the date of the first of such advertisements upon or after which the Court shall make in favor of such applicant an order for foreclosure unless in the interval some sufficient cause of objection shall be shown or a sufficient amount has been obtained by the sale of such land to satisfy the principal and interest moneys secured and all expenses occasioned by such sale and proceedings and every such order for foreclosure when entered in the record shall have the effect of vesting in the recorded owner of the security the estate mentioned in such order free from all right and equity of redemption on the part of the encumbrancer or of any person claiming through or under him subsequently to the encumbrance and the owner of the security shall upon such entry being made be deemed a transferee of the encumbered estate and become the recorded owner thereof and entitled to a certificate as such. The preceding provisions for foreclosure shall also apply to the case of a mortgagee or other owner of security upon whose application the encumbered property has been placed under this Act with a view to the exercise of his power of sale under the thirty-sixth section of this Act.

Mortgagee may apply for an order for foreclosure.

131. Whenever upon the insolvency of any encumbrancer of a recorded estate the assignee of the insolvent shall after the lawfully authorized valuation by the encumbrancee of his security elect to relinquish to him the benefit thereof or shall whether so electing or not neglect after reasonable notice to satisfy the amount of such valuation it shall be lawful for the Court upon application by the encumbrancee and satisfactory proof of the facts to make and cause to be entered on the record an order for foreclosure of the security. And whenever upon the insolvency of any recorded owner of a lease not subject to encumbrance the assignee of the insolvent estate shall elect to relinquish such lease or whether so electing or not neglect after reasonable notice to satisfy the rent and liabilities incident thereto or to transfer the lease to some solvent person who shall satisfy the same it shall be lawful for the Court upon application by the lessor and proof of the facts to make and cause to be entered on the record an order which shall have the effect of a surrender of the lease but without prejudice to any action or cause of action which shall previously have been commenced or have accrued in respect of any breach or non-observance of any covenant expressed in the lease or by this Act declared to be implied therein. If in the case of the insolvency of any recorded owner of a lease which shall be subject to encumbrance the encumbrancee shall obtain such order of foreclosure as aforesaid it shall operate as a transfer of the lease subject to the rent and liabilities incident thereto. But if the encumbrancee shall neglect to obtain such order or to otherwise procure a transfer of the lease within a reasonable time after the insolvency or shall neglect to satisfy the said rent and liabilities it shall be lawful for the lessor to apply to the Court for a surrender in like manner and on proof in addition to the neglect aforesaid of the same facts which are herein required in the case of a lease which is not encumbered and after such notice to the encumbrancee as the Court shall deem sufficient an order of surrender may be made accordingly. Provided further that if in any such case as aforesaid the same estate or interest shall be subject to more than one encumbrance the Court shall not make any order of foreclosure in favor of any subsequent encumbrancee to the prejudice of a prior security nor for surrender of a lease without requiring such notice as aforesaid to be given to all the encumbrancees and before making any order of foreclosure to the prejudice of a subsequent security it may require such previous notice and opportunity for redemption of the prior encumbrance to be given to any owner of a subsequent security as shall appear to be reasonable.

If assignee of insolvent encumbrancer relinquish the estate to the creditor Court may order foreclosure—

Or a surrender of lease if he relinquish the lease.

If lease be encumbered encumbrancee if he obtain foreclosure to stand in place of insolvent lessee—

If he neglect lessor may after notice obtain surrender notwithstanding the encumbrance.

If there be more than one encumbrancee their relative rights to be protected by the Court.

XI.—Transmission.

Transmission by insolvency. 132. Upon the insolvency of the recorded owner of any estate or interest whether such insolvency shall have happened before or after the recording of the ownership thereof the Recorder upon the receipt of an office copy of the appointment of such assignee shall enter in the record upon the folium constituted by the certificate of title of such land a memorandum notifying such appointment and such entry shall take effect as a caveat against any dealing with such estate or interest otherwise than by such assignee unless by express order of Court—and as to any duplicate certificate or other instrument evidencing the title to such estate or interest which shall be in possession or power of the assignee he shall produce the same in order that a like entry may be made thereon and as to any other such duplicate or instrument the Court may on his application summon the insolvent or any other person in whose possession or power the same may be to show cause why the same should not be produced for the like purpose and thereafter delivered up to the assignee. And in every case it shall be lawful for the Court to institute such inquiry as it shall see fit as to whether the estate or interest was held by the insolvent in his own right or subject to any trust or equity and if so subject to direct such entries on the record as shall appear just for protection thereof but if or so far as not so subject the assignee shall be entitled to exercise over every such recorded estate or interest a power of sale. And the like effect shall be given to any transfer surrender or other instrument signed by him as if signed by the recorded owner.

Notice of appointment of assignee to operate as caveat. Certificates of title to be delivered up. The Court to inquire as to trusts or equities. If none or if any subject thereto assignee to be entitled to exercise power of sale. Devisee of deceased recorded owner may apply to be recorded as owner. Notice to be given. 133. On the death of the recorded owner of any real estate any person claiming as devisee may apply to the Court for a fiat directing the officer to record the applicant as owner in the place of the deceased person but the Court shall unless the claim as devisee result from the special entry on the record authorized by section 99 of this Act withhold such fiat until the applicant shall have lodged in the office the probate or a true copy of the will or codicil under which he claims and if the will has not been proved in any other competent Court proof thereof and of the death of the testator shall be required by the Land Titles Court before acting thereon and no transfer or disposition by any such devisee shall be recorded except after the service of such notice on such persons (if any) who would be entitled adversely to the applicant if the devise were found to be not sustainable as the Court may deem necessary and the Court may also if it see fit suspend such fiat until a decision of some other competent Court in favour of the title claimed by such devisee shall have been obtained.

Claims upon intestacy under 26 Vict. No. 20. 134. Upon the death of any recorded owner intestate as to the recorded estate or interest the Administrator Curator of Intestate Estates or other person who under the operation of the Act twenty-six Victoria number twenty shall be entitled wholly or in part to the estate or interest of the deceased owner may make application to be recorded as such owner and after due investigation under such rules as may be established in that behalf such entries shall be made on the record as the case shall require.

Sale under writ of *fi. fa.* or decree or order of Supreme Court. Fourteenth Schedule. Purchaser under *fi. fa.* to be subject to equities affecting the execution debtor's estate unless former certificate given up or estate declared absolute after inquiry by the Court. 135. No execution issued prior to or after the passing of this Act shall bind charge or affect any land or any estate or interest therein recorded under this Act but the Recorder on being served with a copy of any writ of *fi. facias* issued out of a competent Court or of any decree or order of such Court accompanied by a statement signed by any party interested or his attorney solicitor or agent specifying the land and recorded estate or interest sought to be affected thereby shall after marking upon such copy the time of such service enter the same on the record book which shall operate as a caveat against any alienation other than in pursuance of the said writ while the same remains in force. And after the right of the execution debtor in the recorded estate or interest in any land so specified shall have been sold under any such writ decree or order the Recorder shall on receiving a transfer thereof in the form in the fourteenth Schedule hereto (which transfer shall unless qualified in manner hereinafter provided have the same effect as if made by the recorded owner) enter such transfer on the record and on such entry being made the purchaser shall become the transferee and recorded owner of such estate or interest. Provided always that until such service as aforesaid no sale or transfer under any such writ shall be valid as against a transferee for value notwithstanding such writ was actually lodged for execution at the time of the purchase and notwithstanding the purchaser had actual or constructive notice of the lodgment of such writ. Upon production to the Court of sufficient evidence of the satisfaction of any writ a copy whereof shall have been served as aforesaid it shall direct an entry to be made on the record or a memorandum to that effect and on such entry such writ shall be deemed to be satisfied. Every such writ shall cease to bind charge or affect any land or estate or interest therein specified as aforesaid unless a transfer upon a sale under such writ shall be left for entry upon the record within three months from the day on which the copy was served. Provided also that if upon the making of any such transfer pursuant to a writ of *fi. facias* the certificate of title of the execution debtor shall not be delivered up or if it shall in any manner be made to appear to the Court that there is reason to believe or suspect that the estate held by him thereunder is subject to any trust or equity the transfer shall in that case be subject to the equities (if any) to which the execution debtor held the same and shall be declared so to be by an entry to that effect upon every certificate of title issued pursuant to the same or any subsequent transfer unless and until the Court shall upon being satisfied of the non-existence or extinction of such trust or equity authorize the omission or cancellation of such entry. Provided further that upon the application of any person interested either before or after any such transfer the Court may summon the execution debtor or any other person having or claiming possession of or any interest in respect of any such certificate to shew cause why the same shall not be delivered up and to answer all inquiries relative thereto and thereupon or after such further inquiries as may be deemed necessary the Court shall either cancel such certificate or otherwise act in reference thereto in like manner as hereinbefore is provided in respect to the transfer of the recorded estate of an insolvent as the justice of the case shall require.

Marriage of female owner. 136. The Court upon production of sufficient proof of the marriage of a female proprietor of any estate or interest not appearing by the record to be held for her separate use accompanied by an application in writing signed by such female owner to record her husband as joint owner thereof in her right shall direct the Recorder to enter on the record and also upon the duplicate certificate of title or instrument evidencing the title of such female owner when produced to him for that purpose the name and addition of her husband the date and place of the marriage and the time of making such entry and the husband of such female owner shall on such entry being made be deemed to be joint owner thereof in right of his wife. Until such entry shall be made she shall be deemed to be the sole and absolute owner of such estate or interest and may transfer or otherwise deal with the same at law and in equity. A like entry may be made on application of the husband alone if it appear to the Court after such notice and inquiry as it shall deem sufficient that the wife refuses to join in the application without being entitled to hold the land for her separate use.

137. Upon the death in the lifetime of his wife of any husband recorded as joint owner with her of an estate in fee simple or of a lease mortgage or charge in her right or upon the death of any female owner whose husband shall be entitled as tenant by the curtesy to any freehold land which shall not have become vested in the personal representative under the Act twenty-six Victoria number twenty in consequence of intestacy or upon the death of any person recorded with any other person as joint owner of any land (except in cases within the meaning of the eighty-eighth section of this Act) or of any lease or charge or as joint owner of any mortgage owned on a joint account in equity the Court on the application of the widow husband or person entitled and proof to its satisfaction of such events as aforesaid may direct the Recorder to record such applicant as the owner thereof and she or he shall upon being recorded in the manner herein prescribed for the recording of a like estate or interest become the transferee of such land lease mortgage or charge and be deemed the owner thereof but as regards any tenancy by the curtesy for the lifetime only of such husband.

Recording of survivor of joint proprietors.

138. Whenever any person interested in land under the operation of this Act or any estate or interest therein shall appear to the Court to be a trustee of such land estate or interest within the meaning of any statute now or hereafter to be in force relating to trusts and trustees the Court shall have a jurisdiction in such matter concurrent with that of the Supreme Court and any entry made on the record in the premises in the exercise of such concurrent jurisdiction shall from the time of entry thereof operate as a vesting order under such statute. But if in any like case a vesting order be made by the Supreme Court the same shall not have any operation in transferring or otherwise vesting the estate or interest to which the same relates until service thereof or of an office copy thereof has been made upon the record whereupon the Court may direct an entry in the record and on the duplicate grant certificate of title or instrument of the date of the said order the time of its production to him and the name and addition of the person in whom the said order shall purport to vest the said land estate or interest and such person shall thereupon become the transferee and be deemed to be the owner thereof.

As to vesting orders under Trustee Acts.

XII.—*Special Certificate.*

139. The Recorder upon the application of any recorded owner of land under the operation of this Act shall issue to such owner a special certificate of title in the form in the fifteenth Schedule hereto enabling him to transfer or otherwise deal with his estate or interest in such land at any place without the limits of the Colony and shall at the same time enter in the record a memorandum recording the issue of such special certificate and shall indorse on the duplicate ordinary certificate of title a like memorandum and after the issuing of such special certificate no transfer or other dealing in any way affecting the estate or interest in respect of which such special certificate is issued (excepting under the sections hereinbefore contained relating to a sale under a writ of *fiery facias* or a decree or order of the Supreme Court and to the insolvency of an owner) shall be entered in the record until such special certificate shall have been surrendered to the Recorder to be cancelled or the loss destruction or obliteration of such certificate shall have been proved to the satisfaction of the Court or the time during which it is to continue in force shall have expired.

Special certificate for recording dealings without the limits of the Colony. Fifteenth Schedule.

140. Whenever any transfer or other dealing is intended to be transacted under any special certificate a transfer or such other instrument as the case may require shall be attested by some one of the persons herein authorized to act as an official witness without the limits of the Colony and upon a memorial of such instrument being entered upon the special certificate and also upon the duplicate of the ordinary certificate and authenticated by the signature of such authorized person as aforesaid the instrument to which such memorial refers shall be held to be recorded and such transfer or other dealing shall (except only as to any disposition under execution decree or insolvency as aforesaid) be as valid and binding to all intents as if the same had been entered in the record by the Recorder and signed by him and the certificate of record indorsed on the instrument of which the memorial has been so entered and signed by such authorized person shall be received in all Courts of Law or Equity as conclusive evidence that such instrument has been duly recorded.

Mode of procedure under special certificate.

141. Upon the delivery of any special certificate to the Recorder he shall enter in the record in such manner as to preserve their priorities the particulars of every transfer or other dealing recorded thereon and shall file in the office the duplicate of every transfer or other instrument signed thereunder which may for that purpose be delivered to him and shall cancel such special certificate and note the fact of such cancellation in the record and if the land be transferred the duplicate grant or certificate of title shall be delivered up to the Recorder who shall thereupon proceed as is hereinbefore directed in the case of a transfer of land.

Proceeding upon delivery of.

142. Upon proof at any time to the satisfaction of the Court that any special certificate has been lost or destroyed or is so obliterated as to be useless and that the powers thereby given have never been exercised or if they have been exercised then upon proof of the several matters and things that have been done thereunder it shall be lawful for the Court to direct the Recorder as circumstances may require either to issue a new special certificate or to make such entries in the record or do such acts as might have been made or done if no such loss destruction or obliteration had taken place.

Procedure when special certificate lost.

XIII.—*Assurance Fund.*

143. An account shall be kept under direction of the Court of all sums of money which shall be received under the provisions of this Act and shall be paid to the Colonial Treasurer at such times and shall render accounts of the same to such persons and in such manner as may be directed by any statute or regulations for the time-being in force relating to the collection and payment of the public moneys and the audit of the public accounts. All penalties and fees received under the provisions of this Act (except sums received as contributions to the assurance fund or in augmentation thereof) shall be carried to and form part of the Consolidated Revenue.

Recorder to pay moneys to receiver of revenue and to render accounts.

144. All sums of money which shall be received by the Recorder as contributions to the assurance fund or in augmentation thereof shall when paid to the Treasurer of the Colony be placed to the credit of an account to be kept in the Treasury to be called "The Assurance Fund" and shall from time to time invest the same together with all dividends and profits accruing thereon in New South Wales Government securities to constitute an assurance fund for the purposes hereinafter mentioned.

Assurance fund to be invested in Government securities.

Compensation of party deprived of land.

145. Any person deprived of land or of any estate or interest in land in consequence of fraud or through the bringing of such land under the operation of this Act or by the recording of any other person as owner of such land estate or interest or in consequence of any error or misdescription in any certificate of title or in any entry or memorial in the record may bring and prosecute an action at law for the recovery of damages against the person upon whose application such land was brought under the operation of this Act or such erroneous recording was made or who acquired title to the estate or interest through such fraud error or misdescription. Provided always that except in the case of fraud or of error occasioned by any omission misrepresentation or misdescription in the application of such person to bring such land under the operation of this Act or to be recorded as owner of such land estate or interest or in any instrument signed by him such person shall upon a transfer of such land *bonâ fide* for value cease to be liable for the payment of any damage which but for such transfer might have been recovered from him under the provisions herein contained and in such last-mentioned case and also in case the person against whom such action for damages is directed to be brought as aforesaid shall be dead or shall have been adjudged insolvent or cannot be found within the jurisdiction of the Supreme Court then and in any such case such damages with costs of action may be recovered out of the assurance fund by action against the Recorder as nominal defendant. Provided that in estimating such damages the value of all buildings and other improvements erected or made subsequently to the deprivation shall be excluded.

Purchasers and mortgagees protected.

146. Nothing in this Act contained shall be so interpreted as to leave subject to an action of ejectment or to an action for recovery of damages as aforesaid or for deprivation of the estate or interest in respect to which he is recorded as owner any *bonâ fide* transferee for value on the ground that the owner through or under whom he claims may have been recorded as owner through fraud or error or may have derived from or through a person recorded as owner through fraud or error and this whether such fraud or error shall consist in wrong description of the boundaries or of the parcels of any land or otherwise howsoever.

Actions for recovery of damages may in certain cases be brought against the Recorder as nominal defendant.

147. Any person sustaining loss through any omission mistake or misfeasance of the Recorder or any other officer or clerk in the execution of their respective duties under the provisions of this Act or by any error omission or misdescription in any certificate of title or any entry or memorial in the record or by the recording of any other person as owner and who by the provisions of this Act is barred from bringing an action of ejectment or other action for the recovery of the land estate or interest may in any case in which the remedy by action for recovery of damages as herein provided is inapplicable bring an action against the Recorder as nominal defendant for recovery of damages in estimating which damages however the value of all buildings and other improvements erected or made subsequently to the loss or deprivation shall be excluded. Provided also that no act or omission shall be held to be within the remedy for compensation hereby provided unless the same shall be proved to have arisen from fraud or from want of due precaution having regard to all the circumstances of the case and to the evidence or facts at the time apparent or accessible upon reasonable inquiry.

Notice of action to be served.

148. In any case in which an action for recovery of damages is permitted to be brought against the Recorder as nominal defendant notice in writing of such action and of the cause thereof shall be served upon such nominal defendant one month at least before the commencement of such action and if in any such action judgment be given in favour of the nominal defendant or the plaintiff discontinue or become nonsuit the plaintiff shall be liable to pay the full costs of defending such action and the same when taxed shall be recovered in the name of the nominal defendant by the like process of execution as in other actions.

Payment of amount recovered.

149. If in any such action the plaintiff recover final judgment against such nominal defendant then the Judge before whom such action may be tried or the Supreme Court shall certify the fact of such judgment and the amount of damages and costs recovered and the amount of such damages and costs shall be paid to the person recovering the same and shall be charged to the account of the assurance fund and in case the balance to the credit of the assurance fund shall be inadequate to defray the amount specified such sum as may be necessary for that purpose shall be paid out of the Consolidated Revenue and the amount so advanced shall be repaid from the assurance fund as the same may thereafter accrue.

Limitation of actions.

150. No action for recovery of damages sustained through deprivation of land or of any estate or interest in land shall lie or be sustained against the Recorder or against the assurance fund or (in any case in which no actual fraud shall be proved against the defendant in such action) against the person upon whose application such land was brought under the operation of this Act or against the person who applied to be recorded as owner in respect to such land unless such action shall be commenced within the period of six years from the date of such deprivation. Provided nevertheless that any person being under the disability of coverture infancy unsoundness of mind or absence from the Colony may bring such action within six years from the date on which such disability shall have ceased so however that such action be brought in any case not excepted on the ground of fraud in the defendant as aforesaid within twelve years next after the date of such deprivation. The plaintiff in any such action at whatever time it may be brought and the plaintiff in any action for the recovery of land shall be nonsuited in any case in which the deprivation complained of may have been occasioned through the bringing of land under the operation of this Act if it shall be made to appear to the satisfaction of the Judge before whom such action shall be tried that such plaintiff or the persons through or under whom he claims title had notice by personal service or otherwise or was aware that application had been made to bring such land under the operation of this Act and had wilfully or collusively or negligently omitted to enter a notice of objection thereto or failed to prosecute the same with effect.

Persons having notice or cognizant neglecting to caveat barred.

Moneys paid out of assurance fund may be recovered.

151. Whenever any amount has been paid out of the assurance fund on account of any person who may be dead such amount may be recovered from the estate of such person by action against his personal representatives in the name of the Recorder and whenever such amount has been paid on account of a person who shall have been adjudged insolvent the amount so paid shall be considered to be a debt due from the estate of such insolvent and a certificate signed by the Treasurer of the Colony certifying the fact of such payment out of the assurance fund and delivered to the Official Assignee shall be sufficient proof of such debt and whenever any amount has been paid out of the assurance fund on account of any person who may have absconded or who cannot be found within the jurisdiction of the Supreme Court and may have left any real or personal estate within the said Colony it shall be lawful for the said Court or a Judge thereof upon the application of the Recorder and upon the production of a certificate signed by the Treasurer of the Colony certifying that the amount has been paid in satisfaction of a judgment against the Recorder as nominal defendant to allow the Recorder to sign judgment against such person forthwith for the

the amount so paid out of the assurance fund together with the costs of the application and such judgment shall be final and signed in like manner as a final judgment by confession or default in an adverse suit and execution may issue immediately and if such person shall not have left real or personal estate within the said colony sufficient to satisfy the amount for which execution may have been issued as aforesaid it shall be lawful for the Recorder to recover such amount or the unrecovered balance thereof by action against such person at any time thereafter if he shall be found within the jurisdiction of the Supreme Court.

152. The assurance fund shall not under any circumstances be liable for compensation for any loss or deprivation occasioned by the breach by a recorded owner of any trust whether express implied or constructive nor in any case in which the same land may have been included in two or more grants from the Crown nor shall the assurance fund be liable in any case in which such loss or deprivation has been occasioned by any land being included in the same certificate of title with other land through misdescription of boundaries or parcels of any land unless in the case last aforesaid it shall be proved that the person liable for compensation and damages is dead or has absconded or has been adjudged insolvent or the sheriff shall certify that such person is unable to pay the full amount awarded in any action for recovery of such compensation and damages. Provided always that any amount paid out of the assurance fund on account of any person who may have absconded may be recovered from such person by action in the name of the Recorder at any time thereafter if such person shall be found within the jurisdiction of the Supreme Court. Provided also that the said fund shall be liable for such amount only as the sheriff shall fail to recover from the person liable as aforesaid.

Assurance fund not liable in cases of breach of trust or conflicting Crown grants or misdescription unless the legal remedies against the parties first liable to make compensation have been exhausted.

153. No claim for compensation from the assurance fund shall be sustainable by any person for the consequence of any error or omission in the record or in any certificate of title admitting of amendment under the powers conferred on the Court by this Act in any case in which it shall appear that the claimant has neglected for the space of two years after he became aware of such error or omission (or if he became aware of such error pending disability of infancy coverture or lunacy then for the like space of two years after the ceasing of such disability) to make application to the Court for such rectification. Nor shall any claim for compensation be sustainable on the ground of any amendment or refusal of amendment adverse to the claimant if the person whose title is sustained by the decision directing or refusing the amendment shall have been in adverse rightful possession of the land in question at the time when the person claiming compensation acquired title or apparent title by reason of the error or omission.

Claim forfeited by neglect to apply for amendment of bond when error discovered.

Or in case of adverse possession of the rightful owner when apparent title acquired by claimant in error.

154. No claim for compensation from the assurance fund shall be sustainable in respect of the consequences resulting from any entry made on the record by order of the Court or a Judge after investigation of any claim under any will or settlement or consequent upon any other transmission of a recorded estate in exercise of the judicial authority conferred by this Act.

No claim for damages consequent on judicial decision.

155. No transferee mortgagee or other encumbrancee of any land erroneously described shall be entitled to object to the correction of any error or to claim compensation from the assurance fund in respect thereof where the correction shall be required to render the description consistent with itself or otherwise accurate as a description of the land which under all the attendant circumstances he was reasonably bound to regard as the intended actual subject of transfer mortgage or encumbrance notwithstanding that the contents thereof or the lengths or bearings of the boundaries thereof may be erroneously stated in excess of the true measurement and no right of encroachment upon land of any adjacent proprietor shall in such case be maintainable by reason of such error.

Error may be corrected without compensation in certain cases.

156. If any misdescription of land or boundaries shall be such as cannot be corrected without prejudice to some person entitled to indemnification under this Act it shall be lawful for the Court to inquire and determine which of the conflicting claimants will sustain the less injury through deprivation of the land and thereupon either to authorize or refuse such correction as will have the effect of such less injury and in that case the person thereby deprived shall be entitled to compensation under the provisions herein contained to the extent only of such actual and less injury. Provided that under no circumstances shall such correction be made or refused to the prejudice of any person who in addition to priority of right has also had continuous possession consistent with such right or has been deprived of such possession by fraud or force.

Correction of error may be allowed or refused so as to occasion the least injury requiring compensation.

157. The Judges and Recorder shall not individually nor shall any person acting under the authority of either of them be liable to any action suit or proceeding for or in respect of any act or matter *bonâ fide* done or omitted to be done in the exercise or supposed exercise of the powers of this Act.

Officers not to be liable for acts done *bonâ fide*.

XIV.—Fees.

158. It shall be lawful for the Recorder to demand and recover such fees as are specified in the last Schedule hereto or such other fees not being in excess thereof (nor upon a higher scale in respect of any matters incident to proceedings not provided for in the said Schedule than is applied in the said Schedule to the matters most nearly corresponding therewith) as shall be hereafter prescribed by any rules of Court to be framed and promulgated under the powers conferred by this Act.

XV.—Penalties.

159. If any person wilfully makes any false statement or declaration in any application to bring land under the operation of this Act or in any application to be recorded as owner on a transmission or as an owner in remainder or reversion or in any other application to be recorded under this Act as owner of any land lease mortgage or charge or wilfully makes any false statutory declaration required under the authority or made in pursuance of this Act or if any person in the course of his examination before the Court or any Commissioner wilfully and corruptly gives false evidence or if any person fraudulently procures assists in fraudulently procuring or is privy to the fraudulent procurement of any certificate of title or instrument or of any entry on the record or of any erasure or alteration in any such entry or in any duplicate document or knowingly misleads or deceives any person hereinbefore authorized to require explanation or information in respect to any land or the title to any land under the operation of this Act or in respect to which any dealing or transmission is proposed to be recorded such person shall be guilty of a misdemeanor and shall incur a penalty not exceeding *five hundred pounds* or may at the discretion of the Court by which he is convicted be imprisoned for any period not exceeding three years and any certificate of title entry erasure or alteration so procured or made by fraud shall be void as against all parties or privies to such fraud.

Certain fraudulent acts to be deemed misdemeanors.

Forgery to be a felony.

160. If any person is guilty of the following offences or any of them (that is to say)—
- (1.) Forges or procures to be forged or assists in forging the seal of the Land Titles Court or of the Record of Titles Office respectively or the name signature or handwriting of any Judge or officer in cases where such Judge or officer is by this Act expressly or impliedly authorized to affix his signature—
 - (2.) Stamps or procures to be stamped or assists in stamping any document with any forged seal purporting to be of the said Court or Office respectively—
 - (3.) Forges or procures to be forged or assists in forging the name signature or handwriting of any person whomsoever to any instrument which is by this Act or in pursuance of any power contained in this Act expressly or impliedly authorized to be signed by such person—
 - (4.) Uses with an intention to defraud any person whomsoever any document upon which any impression or part of the impression of the seal of the said Court or Office respectively has been forged knowing the same to have been forged or any document the signature to which has been forged knowing the same to have been forged—
 - (5.) Fraudulently uses or procures to be used for any purpose the actual seal of the said Court or Office in which case such fraudulent use shall be a like offence in all respects as a forgery thereof—

such person shall be guilty of felony.

Punishment of felony.

161. Any person convicted of felony under this Act shall be liable to imprisonment for any term not exceeding four years and to be kept to hard labor or solitary confinement for any part of the period aforesaid.

Conviction not to affect civil remedy.

162. No proceeding or conviction for any act hereby declared to be a misdemeanor or a felony shall affect any remedy which any person aggrieved or injured by such act may be entitled to at law or in equity against the person who has committed such act or against his estate.

Obligation to make discovery not excluded.

163. Nothing in this Act contained shall entitle any person to refuse to make a complete discovery by answer to any bill in equity or to answer any question or interrogatory in any civil proceeding in any Court of Law or Equity or Insolvency but no answer to any such bill question or interrogatory shall be admissible in evidence against such person in any criminal proceeding.

Jurisdiction.

164. Unless in any case herein otherwise expressly provided all offences against the provisions of this Act may be prosecuted and all penalties or sums of money imposed or declared to be due or owing by or under the provisions of the same may be sued for and recovered in the name of the Attorney General before any Court in the said Colony having jurisdiction for punishment of offences of the like nature or for the recovery of penalties or sums of money of the like amount.

SCHEDULES.

FIRST SCHEDULE.

[Royal Arms.]

COLONY OF NEW SOUTH WALES.

Section 68.

Certificate of title under the "Land Titles Record Act."

[Insert name and addition] is now the recorded owner of an estate in fee simple subject to the encumbrances notified hereunder in all that piece of land delineated and colored on the plan hereon containing [insert area] or thereabouts being [insert if applicable] Crown allotment section [or otherwise according to the Crown grant] parish of county of [state particulars of boundaries &c. in any case in which reference to plan may not be deemed sufficient—also rights of way or other easements appurtenant or excepted. If the grant was for any public purpose shortly mention it.]

Dated the day of one thousand eight hundred and

Recorder of Titles. (Seal of Office.)

Encumbrances referred to.

SECOND SCHEDULE.

Section 104.

Certificate of Recorder or other official witness taking declaration of ordinary witness.

Appeared before me at the day of one thousand eight hundred and C.D. the attesting witness to this instrument and declared that he personally knew A.B. the person signing the same and whose signature the said C.D. attested and that the name purporting to be the signature of the said A.B. is his own handwriting and that he appeared of sound mind and freely and voluntarily signed such instrument.

THIRD SCHEDULE.

Section 106.

Form of Power of Attorney.

I A.B. [insert addition] do hereby appoint C.D. [insert addition] my attorney to sell to any person all or any lands leases mortgages or other encumbrances or recorded estates or interests in land whether now belonging to me or which shall hereafter belong to me under or by virtue of the "Land Titles Record Act" or of which I am now or shall hereafter be the recorded owner under the said Act Also to mortgage or otherwise encumber the same respectively for securing any sum at any rate of interest or for any other purpose Also to lease all or any such lands as shall be of freehold tenure or sublet such as shall be of leasehold tenure for any term for which I could myself lease or sublet the same not exceeding *twenty-one* years in possession at any rent [or otherwise according to the nature and extent of the powers intended to be conferred] And for me in my name to sign all such transfers and other instruments and do all such acts matters and things as may be necessary or expedient for carrying out the powers hereby given and for recovering all sums of money that are now or may become due or owing to me in respect of the premises and for enforcing or varying any contracts covenants or conditions binding upon any purchaser lessee tenant or occupier of the said lands or upon any other person in respect of the same and for recovering and maintaining possession of the said lands and for protecting the same from waste damage or trespass.

Dated this day of one thousand eight hundred and

Signed by the said A.B. in }
the presence of }

FOURTH

NINTH SCHEDULE.

Lease.

Section 117.

I A.B. of [insert addition] being the recorded owner of an estate [in fee simple or as the case may be] in the land hereinafter described subject however to the encumbrances notified hereunder do hereby lease unto C.D. of [insert addition] all that piece of land containing [area in acres roods and perches] being [the whole or part as the case may be] of the land comprised in [Crown Grant or Certificate of Title] dated A.D. 186 recorded volume folio [These references will suffice alone if the whole land in the grant or certificate be leased but if the lease be of a part a surveyor's description and plan will be required. Add also if intended any rights-of-way or other easements and any exceptions if intended of mines or minerals timber &c.] To be held by [him] the said C.D. as tenant for the term of years computed from the day of at the yearly rent of pounds (£) payable as follows [specify times for payment] subject to the following covenants conditions and restrictions viz. :—

1. To the covenants and powers implied in every memorandum of lease by virtue of the Land Titles Record Act sec. 118 or such of them or so far as not hereby expressly negatived or modified.

2. To the full effect of the covenants next hereinafter shortly noted as the same are set forth in words at length in sec. 119 of the said Act [here insert any of the short forms authorized by the said section.]

3. To the following special additional provisions viz. :—[Here add any other terms of the intended lease.]

I C.D. of [insert addition] do hereby accept this lease as tenant subject to the conditions restrictions and covenants above set forth.

Dated this	day of	one thousand eight hundred and
Signed by the said A.B. who is personally known	}	A.B. Lessor.
to me in my presence		
Signed by the said C.D. who is personally known	}	C.D. Lessee.
to me in my presence		

Encumbrances referred to.

TENTH SCHEDULE.

Section 118.

1.—Covenants on the part of the lessee binding on himself and representatives and transferees with the lessor and his representatives and transferees to be implied in every statutory lease if or so far as not thereby expressly excluded or qualified as follows :—

(1.) That he or they will pay the rent reserved by the lease at the times therein mentioned and all rates and taxes which may be payable in respect of the leased property during the continuance of the lease.

(2.) That he or they will keep and yield up the leased property in good and tenable repair accidents and damages from storm and tempest and reasonable wear and tear excepted.

2.—Powers of lessor and his representatives and transferees to be implied in every such lease (subject to like exclusion or qualification) as follows :—

(1.) That he or they may with or without surveyors workmen or others once in every year during the term at a reasonable time of the day enter upon the leased property and view the state of repair thereof.

(2.) That in case the rent or any part thereof shall be in arrear for the space of one month although no legal or formal demand shall have been made for payment thereof or in case of any breach or non-observance of any of the covenants expressed in the lease or by this Act declared to be implied therein on the part of the lessee or his transferees and such breach or non-observance continuing for the space of one month it shall be lawful for the lessor or his transferees to re-enter upon and take possession of the leased property.

ELEVENTH SCHEDULE.

Section 119.

Interpretation (column two) of short forms (column one) of covenants in Leases.

<i>Column one.</i>	<i>Column two.</i>
1. The lessee will not transfer or sublet.	1. The lessee his executors administrators or transferees will not during the said term transfer assign or sublet the premises hereby leased or any part thereof or otherwise by any act or deed procure the said premises or any part thereof to be transferred or sublet without the consent in writing of the lessor or his transferees first had and obtained.
2. The lessee will fence.	2. The lessee his executors administrators or transferees will during the continuance of the said term erect and put up on the boundaries of the said land or on those boundaries upon which no substantial fence now exists a good and substantial fence.
3. The lessee will cultivate.	3. The lessee his executors administrators or transferees will at all times during the said term cultivate use and manage in a proper and husbandlike manner all such parts of the land as are or shall with the consent in writing of the said lessor or his transferees be broken up or converted into tillage and will not impoverish or waste the same.
4. The lessee will not cut timber.	4. The lessee his executors and administrators or transferees will not cut down fell injure or destroy any growing or living timber or timber-like tree standing and being upon the said land without the consent in writing of the said lessor or his transferees.
5. The lessee will insure against fire in the name of the lessor [Add to the amount of £ if a specific sum to be fixed.]	5. The lessee his executors administrators or transferees will insure and during the said lease keep insured against loss or damage by fire in the name of the lessor or his transferees in some public insurance office approved of by him or them to the fixed amount if any and if not to the amount of their full value all buildings which shall for the time-being be erected on the said land and which shall be of a nature or kind capable of being insured against damage by fire and will when required deposit with the lessor or his transferees the policy of such insurance and within seven days after each premium shall become payable the receipt for such premium And on any breach or non-observance of this covenant the lessor or his transferees may without prejudice to and concurrently with the powers granted to him and them by this lease and by the "Land Titles Record Act" insure such buildings and the costs of effecting such insurance shall be a charge upon the said land recoverable as rent in arrear. All moneys which shall be received under or by virtue of any such insurance shall be laid out and expended in making good the loss or damage.
6. The lessee will paint outside every third year.	6. The lessee his executors administrators or transferees will in every third year during the continuance of the said term paint all the outside woodwork and ironwork belonging to the leased property with two coats of proper oil-colors in a workmanlike manner.
7. The lessee will paint and paper inside every fourth year.	7. The lessee his executors administrators or transferees will in every fourth year during the continuance of the said term paint the inside wood iron and other work now or usually painted with two coats of proper oil-colors in a workmanlike manner and also re-paper with paper of the same quality as at present such parts of the said premises as are now papered and also whiten or color such parts of the said premises as are now whitened or colored respectively.
8. The lessee will not use the premises as a shop.	8. The lessee his executors administrators or transferees will not convert use or occupy the said premises or any part thereof into or as a shop warehouse or other place for carrying on any trade or business whatsoever or permit or suffer the said premises or any part thereof to be used for any such purpose or otherwise than as a private dwelling-house without the consent in writing of the said lessor or his transferees.

9. The lessee will not carry on any offensive trade.

10. The lessee will carry on the business of publican and conduct the same in an orderly manner.

11. The lessee will apply for renewal of license.

12. The lessee will facilitate the transfer of license.

9. The lessee his executors administrators or transferees will not at any time during the said term use exercise or carry on permit or suffer to be used exercised or carried on in or upon the said premises or any part thereof any noxious noisome or offensive art trade business occupation or calling and no act matter or thing whatsoever shall at any time during the said term be done in or upon the said premises or any part thereof which shall or may be or grow to the annoyance nuisance grievance damage or disturbance of the occupiers or owners of the adjoining lands and properties.

10. The lessee his executors administrators or transferees will at all times during the continuance of the said term use exercise and carry on in and upon the premises the trade or business of a licensed victualler or publican and seller of fermented and spirituous liquors and keep open and use the house inn and buildings standing and being upon the land as and for an inn or public-house for the reception accommodation and entertainment of travellers guests and other persons resorting thereto or frequenting the same and manage or conduct such trade or business in a quiet or orderly manner and will not do or commit or suffer to be done or committed any act matter or thing whatsoever whereby or by means whereof any license shall be allowed to expire or to become void or shall or may be liable to be forfeited suspended taken away or refused.

11. The lessee his executors administrators or transferees will from time to time during the continuance of the said term at the proper times for that purpose apply for and endeavour to obtain such license or licenses as is or are or may be necessary for carrying on the said trade or business of a licensed victualler or publican in and upon the said premises and keeping the said house or inn open as and for an inn or public-house as aforesaid.

12. The lessee his executors administrators or transferees will at the expiration or other sooner determination of the said term sign and give such notice or notices and allow such notice or notices of a transfer or renewal of any license as may be required by law to be affixed to the said house or inn to be thereto affixed and remain so affixed during such time or times as shall be necessary or expedient in that behalf and generally will do and perform all such acts matters and things as shall be necessary to enable the said lessor or his transferees or any person authorized by him or them to obtain the transfer of any license then existing and in force or the renewal of any license or any new license.

TWELFTH SCHEDULE.

SECURITY-ENCUMBRANCES.

1.—Security-encumbrance (A) Mortgage.

I A.B. [insert addition] being the recorded owner of an estate [in fee simple or as the case may be] in the land hereinafter described subject however to the now existing encumbrances notified hereon in consideration of pounds (£) lent to [me] by C.D. of [insert addition] the receipt whereof [I] hereby acknowledge do for the purpose of securing to [him] the payment in manner hereinafter mentioned of the said principal sum and interest thereon hereby mortgage to the said C.D. all my estate and interest as such recorded owner as aforesaid in all that piece of land containing [area in acres roods and perches] situated in [parish or town and county] being [the whole or part as the case may be] of the land comprised in [a Crown grant or certificate of title as the case may be] dated and recorded volume folio [If the mortgage be of the whole land comprised in the grant or certificate the above references will suffice—if of a part a surveyor's description and plan must be added] and for the consideration aforesaid [I] do hereby covenant with the said C.D.

Firstly—That [I] will pay to [him] the above sum of pounds (£) on the day of Secondly—That [I] will pay interest on the said sum at the rate of pounds (£) by the £100 in the year as follows:—[Specify when and how payable] [Add covenant to insure if intended with any other special covenants or modifications of the covenants or powers implied by virtue of the Act.]

Dated the day of one thousand eight hundred and
 Signed in my presence by the said A.B. who is personally } A.B.
 known to me
 Signed in my presence by the said C.D. who is personally } C.D.
 known to me

Prior Encumbrances referred to.
 (Note if any.)

2.—Security-encumbrance (B) for securing annuity or other ascertained payment of money other than an ordinary mortgage debt

I A.B. of [insert addition] being &c. [as in mortgage form] in all that &c. [description and plan as in mortgage form] and desiring to render the said land available for securing to and for the benefit of C.D. of [insert addition] the [annuity or other designation of intended encumbrance] hereinafter mentioned do hereby encumber the said land therewith and declare the same to be payable to the said C.D. at the times and in manner following that is to say [set forth amount of annuity rent charge or other moneys secured with the times and mode of payment] and that in default of such payment in any particular the said C.D. shall be entitled to all the powers and remedies implied or given in favour of a security-encumbrance by the "Land Titles Record Act" [nevertheless with the qualification and addition following viz.—here insert any such if intended.]

Dated &c. }
 Signed &c. } [As in last preceding form.]

Prior Encumbrances referred to.
 (Note if any.)

3.—Security-encumbrance (C) to secure fulfilment of covenants by way of indemnity or for any other purpose to which the preceding form may not be applicable and the details of which may be declared by a separate instrument.

[Commencement and description as in last preceding form] and desiring to render the said land available for securing C.D. of [insert addition] against any default in observance of the terms and conditions of a [deed of indemnity cash credit bond or as the case may be] dated the day of 18 and made between [set forth parties] hereby declare that upon any such default being made as aforesaid the said C.D. shall have and exercise in virtue hereof all the powers and remedies of a security-encumbrance under the Land Titles Record Act And I further declare that for the purpose of ascertaining the respective rights of the parties thereto as between themselves and of determining the application of any moneys to be raised under the powers hereby conferred the said [deed bond or as the case may be] heretofore referred to is to be considered as a part of this instrument whether hereto annexed or not But as regards the rights of all persons claiming title under any Act or instrument purporting to be in exercise of the said powers and to be consequent on any alleged default in observance of the said terms and conditions every such act or instrument shall without the necessity of any statement of particular circumstances

of

of itself be conclusive evidence of the fact of such default and of the fulfilment of all other preliminary conditions by notice or otherwise (if any) required (either by implication of law or express agreement) for giving full effect to every such act or instrument and for excluding all objection to the recording thereof in every case in which such recording shall not be otherwise suspended by reason of a sufficient caveat or judicial order.

Dated &c. }
Signed &c. } [As in last two preceding forms.]

Prior Encumbrances referred to.

(Note if any.)

THIRTEENTH SCHEDULE.

Covenants on the part of the grantor of every security-encumbrance (binding on his representatives and transferees) with the encumbrancee his representatives and transferees to be implied in every such encumbrance as follows :—

Section 123.

1. That the grantor of such encumbrance or his representatives or transferees will pay to the encumbrancee or his representatives or transferees the principal and interest or other moneys expressed to be secured by the mortgage or other encumbrance at the times and in the manner thereby appointed for payment thereof or upon the occurrence of the event or circumstance whereupon the same shall respectively become payable under the terms and conditions therein expressed. Also that he or they will repair and keep in repair all buildings or other improvements erected and made upon the encumbered land and that the encumbrancee and his transferees may at all reasonable times until such encumbrance be redeemed enter into and upon such land with or without surveyors or others to view and inspect the state of repair of such buildings or improvements.

2. *Powers and conditions to be implied in every such security-encumbrance (unless varied by express agreement) as follows :—*

That if default shall be made in payment of the principal sum interest or annuity or other moneys secured or any part thereof respectively or in the observance of any covenant expressed in any such encumbrance or that is hereby declared to be implied therein and such default be continued for one month or for such other period of time as may therein for that purpose be expressly fixed the encumbrancee or his transferees may serve on the encumbrancer or his transferees notice in writing to pay the money owing on such encumbrance or to observe the aforesaid covenants (as the case may be) by giving such notice to him or them or by leaving the same on the encumbered land or by sending the same through the Post Office by a registered letter directed to the then owner of the land at his address appearing in the record.

That if such default in payment or in observance of covenants shall continue for one month after the service of such notice or for such other period as may in such encumbrance be for that purpose fixed the encumbrancee or his transferees may enter into possession of the land and receive the rents and profits thereof and exercise all the rights of owner thereof and whether in such possession or not may sell the land encumbered or any part thereof either altogether or in lots by public auction or by private contract and subject to such terms and conditions as may be deemed fit and may buy in or rescind any contract for sale and resell in manner aforesaid without being liable for any loss occasioned thereby and may make and sign such transfers and do such acts and things as shall be necessary for effectuating any such sale and the admission by the encumbrancee or his transferees in the transfer of the payment of the purchase or consideration money shall effectually discharge the purchaser therefrom and from being concerned to see to the application or being answerable for any loss or misapplication thereof and no purchaser shall be bound to see or inquire whether such default or non-observance as aforesaid shall have been made or have happened or have continued or whether such notice as aforesaid shall have been served or otherwise into the propriety or regularity of any such sale.

That the purchase money arising from the sale of the encumbered land shall be applied as follows—

If the sale be by a mortgagee or his transferees—

First in payment of the expenses occasioned by such default and sale—secondly in payment of the moneys which may be due or owing on the mortgage—thirdly in payment of subsequent mortgages and of any money which may be due or owing in respect of any subsequent charge in the order of their respective priorities and the surplus if any shall be paid to the mortgagor. Provided always that if the sale be made by a mortgagee or his transferees and there is a subsequent charge the purchase moneys after there shall have been made thereout all proper prior payments shall be deposited by him or them in the manner and names and for purposes corresponding with those after mentioned.

If the sale be by an annuitant or his transferees—

First in payment of the expenses occasioned by such default and sale then in payment of the moneys which may be due or owing to the annuitant or his transferees and the residue shall be deposited by him or them at interest in the Savings' Bank or in some other bank in Sydney in the joint names of the annuitant or his transferees and of the Recorder to satisfy the accruing payments of the charge and subject thereto for the benefit of the parties who may be or become entitled to the residue of the deposited money.

If the sale be under a power contained in any encumbrance other than a security for a mortgage debt or annuity—

First in payment of the expenses occasioned by the breach of covenant or condition giving occasion to the exercise of the power of sale next in satisfaction of the security according to the terms of the instrument and subject thereto for the benefit of the encumbrancer or his representatives or transferees and in case of any doubt or dispute in relation thereto subject to the order of Court to be made on the application of any party interested.

3.—*Interpretation (column two) of short form (column one) of covenant to insure in a security-encumbrance.*

Column one.

The encumbrancer will insure against fire in the name of the encumbrancee [Add to the amount of £ if a specific sum to be fixed.]

Column two.

The encumbrancer his executors and administrators or transferees will insure and during the said term keep insured against loss or damage by fire in the name of the encumbrancee or his transferees in some public insurance office approved of by him or them to the fixed amount if any and if not to the amount of their full value all buildings which shall for the time-being be erected on the said land and which shall be of a nature or kind capable of being insured against damage by fire and will when required deposit with the encumbrancee or his transferees the policy of such insurance and within seven days after each premium shall become payable the receipt for such premium. And on any breach or non-observance of this covenant the encumbrancee or his transferees may without prejudice to and concurrently with the powers granted to him and them by this instrument and by the "Land Titles Record Act" insure such buildings and the costs of effecting such insurance shall be a charge upon the said land and recoverable as interest or other money hereby secured and in arrear. All moneys which shall be received under or by virtue of any such insurance shall be laid out and expended in making good the loss or damage or in or towards satisfaction of the moneys hereby secured at the option of the encumbrancee.

FOURTEENTH

FOURTEENTH SCHEDULE.

COLONY OF NEW SOUTH WALES.

Form of transfer of land under writ of fieri facias.

I [insert name] as the Sheriff of the Colony of New South Wales [or as the Registrar of the District Court or Section 135. person appointed to execute the writ hereinafter mentioned or otherwise as the case may be] in pursuance of a writ of fieri facias tested the day of one thousand eight hundred and and issued out of the Supreme Court in an action wherein is the plaintiff and the defendant which said is recorded as the owner of [here state nature of the estate or interest] in the land hereinafter described subject to the encumbrances notified hereunder and to effectuate the sale made under such writ do hereby in consideration of the sum of paid to me by E.F. [insert addition] transfer to the said E.F. all the estate and interest of the said in all that &c. [describe land referring to plan as in case of ordinary transfer.]

Dated the day of one thousand eight hundred and Signed by the said in the presence of Signed by the said E. F. in the presence of

Encumbrances referred to.

FIFTEENTH SCHEDULE.

COLONY OF NEW SOUTH WALES.

Special certificate.

[Copy grant or certificate of title.]

This special certificate is issued under the provisions of the "Land Titles Record Act" for the purpose of enabling the owner abovenamed to transfer or otherwise deal with the above-described land at any place without the limits of the said Colony and will continue in force for restraining any alienation otherwise than in virtue hereof (unless through compulsion of law under writ of execution order of Court or insolvency) from the date hereof until the day of one thousand eight hundred and or until the same be surrendered to me for cancellation or the loss destruction or obliteration hereof proved to the satisfaction of the Land Titles Court. Section 139.

Dated this day of one thousand eight hundred and

Recorder of Titles. (Seal of Office.)

SIXTEENTH SCHEDULE.

For every application to bring land under the Act—to cover all fees of office except advertising and certificates unless application be litigated such fees as shall be from time to time fixed by a graduated scale to be promulgated under rule of Court but not in any case to exceed— £ s. d.

When the applicant is the original grantee and no transaction affecting the land has been registered { 1/4 p cent. on the value. When the title is of any other description { 1/2 p cent. on the value.

For every transmission or other entry or change of ownership on the record requiring judicial investigation— Such fees as shall be determined by Rule of Court in like manner but not exceeding if the investigation be ex parte and the case not litigated { 1/2 p cent. on the value.

Contribution to assurance fund upon first bringing land under this Act and upon the registration of an estate of freehold on a transmission— In the pound sterling 0 0 0 1/2

Table with 2 columns: Description of fee and Amount in £ s. d. Includes items like 'For every certificate or special certificate of title', 'For registering a transfer or a lease mortgage or charge', 'For every official search if special', etc.

	£	s.	d.
For every map thereon (but with power to the Court or a Judge to require additional payment not exceeding the ordinary charges of professional draftsman in any special case)	0	2	0
For taking affidavit or statutory declaration in the office	0	1	0
Every exhibit thereto	0	0	6
For filing the same	0	1	0
For commission to a perpetual Commissioner to take acknowledgments	1	0	0
For a special commission	0	15	0
For every summons	0	2	0
For every examination thereunder	0	10	0
For every ordinary order of Court or Judge	0	2	6
For every appointment	0	1	0
For every entry on the record not herein specified.....	0	2	6
For taxation of costs and any other Court or office business not before mentioned such other fees (not in any case to exceed the fees legally chargeable for similar business in the Supreme Court) as shall be fixed by Rule of the Land Titles Court.			

1869.

LEGISLATIVE ASSEMBLY.
NEW SOUTH WALES.

SUPERANNUATION FUND.

(STATISTICS OF.)

Ordered by the Legislative Assembly to be Printed, 10 November, 1869.

RETURN to an *Order* made by the Honorable the Legislative Assembly of New South Wales, dated 4th November, 1869, That there be laid upon the Table of this House, a Return showing,—

- “ (1.) The names of all recipients of pensions under the Superannuation Act, with the annual rate of each of their pensions, and the total amount now payable.
- “ (2.) The total annual amount of the deductions from the Salaries of Public Officers, at the rate of 4 per cent. per annum.
- “ (3.) The amount of the balance of the Public Endowment of £10,000, granted under section 16, 27th Vict. No. 11.
- “ (4.) The particulars of any outstanding claims under Superannuation Act.”

(Mr. Piddington.)

SUPERANNUATION FUND.

No. 1.

RETURN showing the names of all recipients of pensions under the Superannuation Act, with the annual rate of each of their pensions, and the total amount now payable.

Name.	Service for which Pension granted.	Total Pension.			Amount of Deduction.			Amount paid.		
		£	s.	d.	£	s.	d.	£	s.	d.
Meredith D. Ferguson	Accountant, Government Printing Office...	280	0	0	14	0	0	266	0	0
John Crook	Harbour Master, Sydney	433	6	8	.....	.....	.....	433	6	8
Stephen Greenhill	Chief Clerk, Pay Branch, Treasury	600	0	0	.....	.....	.....	600	0	0
Robert A. Hunt	Superintendent, Money Order Office.....	600	0	0	24	0	0	576	0	0
John G. Lennon	Principal Clerk, Revenue Branch, Treasury	360	0	0	16	0	0	344	0	0
Nicholas Nelson	Clerk, General Post Office	312	10	0	15	0	0	297	10	0
Edward C. Brewer	Sheriff's Bailiff, Sydney	128	6	8	7	0	0	121	6	8
Robert Brindley	Draftsman, Survey Office	325	0	0	15	0	0	310	0	0
Joseph R. Humbley	Clerk, Audit Office	247	10	0	11	0	0	236	10	0
Samuel Morgan	Clerk, Survey Office.....	146	13	4	8	0	0	138	13	4
William H. Christie	Postmaster General.....	823	6	8	38	0	0	785	6	8
George Brett	Tide-waiter, Customs	110	16	8	7	0	0	103	16	8
William Vallack	Chief Clerk, Colonial Secretary's Office ...	650	0	0	26	0	0	624	0	0
Thomas Jones	Sheriff's Bailiff, Bathurst	150	0	0	6	0	0	144	0	0
John Wells	Under Secretary for Finance and Trade ...	746	13	4	32	0	0	714	13	4
William C. Still	Landing Surveyor, Customs	560	0	0	24	0	0	536	0	0
Lewis Gordon	District Surveyor.....	333	6	8	20	0	0	313	6	8
Thomas K. Abbott	Secretary, General Post Office	441	13	4	21	4	0	420	9	4
William Thompson	Official Postmaster, Bathurst.....	150	0	0	12	0	0	138	0	0
John Chippendall	Gaoler, Bathurst	175	0	0	7	0	0	168	0	0
Edwin H. Statham	Storekeeper, &c., Lunatic Asylum, Parra- matta	124	13	4	8	16	0	115	17	4
John Brown	Sheriff's Bailiff, Parramatta	186	13	4	8	0	0	178	13	4
John Wallace.....	Gaoler, Maitland	140	0	0	7	0	0	133	0	0
Edward Rogers	Clerk of the Peace	600	0	0	24	0	0	576	0	0
Francis Campbell	Superintendent, Lunatic Asylum, Tarban...	433	6	8	26	0	0	407	6	8
John E. Turner	Landing-waiter, Customs	137	10	0	11	0	0	126	10	0
W. R. Davidson	Surveyor General.....	1,000	0	0	40	0	0	960	0	0
Stephen Cole	Commissioner of Crown Lands	435	0	0	18	0	0	417	0	0
Samuel Elyard	Clerk, Colonial Secretary's Office	400	0	0	16	0	0	384	0	0
Terence M'Mahon.....	Clerk, General Post Office	134	3	4	7	0	0	127	3	4
James Prout	Sheriff's Bailiff, Sydney	60	0	0	4	16	0	55	4	0
Alexander T. Ross	Coast-waiter, Broken Bay	133	6	8	10	0	0	123	6	8
Charles Tompson	Clerk of Legislative Assembly	720	0	0	32	0	0	688	0	0
William H. Palmer	Police Magistrate, Bathurst	300	0	0	.....	.....	.....	300	0	0
Edward Denny Day	Do. Maitland	500	0	0	20	0	0	480	0	0
Charles E. Newcombe	Do. Queanbeyan	450	0	0	18	0	0	432	0	0
William Warburton	Tide-waiter, Customs	87	10	0	7	0	0	80	10	0
Charles T. Weaver	Police Magistrate, Armidale	333	6	8	20	0	0	313	6	8
William King	Landing-waiter, Customs	162	10	0	13	0	0	149	10	0
<i>Pensions authorized, but in abeyance</i>										
William C. Mayne	Auditor General	540	0	0	36	0	0	504	0	0
Michael Fitzpatrick	Under Secretary for Lands	533	6	8	32	0	0	501	6	8
David B. Hutchinson	Prothonotary	466	13	4	28	0	0	438	13	4
TOTALS.....£		15,452	3	4	689	16	0	14,762	7	4

The Treasury,
10th November, 1869.

WM. MUIR,
Examiner of Accounts.

No. 2.

THE total annual amount of the deductions from the Salaries of Public Officers, at the rate of 4 per cent. per annum.

Nine thousand nine hundred and sixty pounds £9,960 0 0

The Treasury,
10th November, 1869.

WM. MUIR,
Examiner of Accounts.

No. 3.

3

No. 3.

THE amount of the balance of the Public Endowment of £10,000, granted under section 16, 27th Vict.
No. 11.

One thousand nine hundred and fifty-nine pounds nine shillings and six-pence..... £1,959 9 6

The Treasury, New South Wales,
10th November, 1869.

GEORGE LAYTON,
Accountant.

No. 4.

RETURN showing the particulars of any outstanding claims under the Superannuation Act.

Particulars.	Amount.	Total.
	£ s. d.	£ s. d.
GRATUITIES UNDER CLAUSE 7 :—		
H. Cary, late District Court Judge	1,175 0 0	
F. L. Oliver, late Clerk, Lands Department.....	100 0 0	1,275 0 0
GRATUITIES UNDER CLAUSE 10 :—		
Mrs. Allen, widow of T. D. Allen, late Gaoler at Parramatta	16 13 4	
Mrs. Styles, widow of James Styles, late Clerk of Petty Sessions, Yass	379 3 4	
Mrs. Kingsmill, widow of J. Kingsmill, late Sheriff's Bailiff.....	533 6 8	929 3 4
PENSIONS FOR WHICH LETTEES OF CREDIT HAVE BEEN FORWARDED TO LONDON :—		
J. G. Lennon, July to December, 1869.....	172 0 0	
Do. January to June, 1870	172 0 0*	
N. Nelson, August to December, 1869	123 19 2	
Do. January to June, 1870.....	148 15 0*	
E. Rogers, August to December, 1869	240 0 0	
Do. January to June, 1870.....	288 0 0*	1,144 14 2
PENSIONS PAYABLE IN SYDNEY :—		
J. Kingsmill, July, 1869	16 0 0	
L. Gordon, August and September, 1869.....	52 4 4	
J. E. Turner, August and September, 1869	21 1 8	
T. Jones, September, 1869	12 0 0	
W. C. Still, September, 1869	44 13 4	
Pensions due for the month of October, 1869	1,008 8 1	1,154 7 5
	£	4,503 4 11

* The Bank has been instructed to cancel the Letter of Credit for these amounts.

The Treasury, New South Wales,
10th November, 1869.

GEORGE LAYTON,
Accountant.

1869.

NEW SOUTH WALES.

MUNICIPALITIES.

(BOROUGH OF ALBURY—BY-LAWS.)

Presented to Parliament, pursuant to Act 31 Vict., No. 12, sec. 15:

Colonial Secretary's Office,
Sydney, 26th April, 1869.

BOROUGH OF ALBURY.

BY-LAWS.

THE following By-laws, made by the Council of the Borough of Albury—for regulating their own proceedings—for the collection of rates—for preventing and extinguishing fires, &c., &c.—having been confirmed by His Excellency the Governor, with the advice of the Executive Council, are published in accordance with the requirements of the Municipalities Act of 1867.

JOHN ROBERTSON.

BY-LAWS of the Municipal Council of the Borough of Albury, made at their Meeting, held on the eighteenth day of March, one thousand eight hundred and sixty-nine.

1. If at any meeting of the Council duly held, the Mayor shall be absent at the expiration of fifteen minutes after the time appointed for holding the meeting, or if, after being present, he shall retire, such Alderman as the members present shall choose from among themselves, shall preside for that meeting.

2. The Mayor or presiding Alderman may take part in all the proceedings of the Council.

3. All questions duly proposed shall be put by the Mayor, and the sense of the Council thereon shall be declared by him.

4. The Mayor shall, on every motion made and seconded, put the question first in the affirmative and then in the negative, and he may do so as often as may be necessary to enable him to declare his opinion, from the show of hands, as to which party has the majority.

5. If two or more members rise to speak at the same time, the Mayor shall decide which member is entitled to pre-audience.

6. The Mayor shall preserve order, and his decision on disputed points of order shall be final.

Order of Business.

7. The business of each ordinary meeting of the Council shall be transacted in the following order:—

- (1.) The reading and confirmation of the minutes of previous meeting.
- (2.) The reading of official correspondence.
- (3.) The presentation of petitions.
- (4.) Reports brought from Committees.
- (5.) Miscellaneous business.
- (6.) Motions of which notice has been given.
- (7.) Notices of motion.
- (8.) Orders of the day.

8. The first business of each meeting of the Council shall be to confirm the minutes of the preceding meeting; and no discussion shall take place thereupon, except as to the accuracy thereof.

9. Orders of the day shall comprise all business set down for the day by order of any previous meeting, or necessarily arising out of the proceedings of a former meeting.

Rules of Debate.

10. Every member shall stand when speaking, and shall address the chair.

11. Except in Committee, no member shall speak twice on the same question, unless in explanation where he has been misrepresented or misunderstood: Provided, however, that the mover shall be allowed to reply, and that every member shall have the liberty of speaking once on every amendment, as well as on the original motion.

12. No member shall speak upon any motion or amendment for a longer period than fifteen minutes, without the consent of the Council.

13. No member shall digress from the matter under discussion, or impute motives; and all personal reflections upon any member shall be deemed highly disorderly.

14. When any member shall use any expression capable of being applied offensively to any other member, the member so offending shall be deemed guilty of wilfully hindering the proceedings of the Council, and shall be required by the Mayor to withdraw the expression, and to make a satisfactory apology to the Council; and should such member so offending refuse or neglect to do so before the rising of the Council, his name shall be entered on the minutes, with a record of the occurrence, and he shall be liable to a penalty not exceeding twenty shillings.

15. Whenever any matter of order arises it shall be taken into consideration immediately; and upon a member rising to order he shall be heard, and the member who

was speaking shall sit down until the question of order has been decided.

16. Any member may require the question or matter under discussion to be read for his information at any time during the debate, but not so as to interrupt any other member while speaking.

17. A debate may be adjourned to a later hour of the same day, or to another day which may be specified; and the member upon whose motion the debate is adjourned shall be entitled to pre-audience on resumption of the debate.

Divisions.

18. It shall be competent for any member to divide the Council upon any question put from the chair, either in full Council or Committee of the Whole Council; and upon such division, those who are on the affirmative side shall place themselves on the right hand of the Mayor, and those who are on the negative side shall place themselves on his left hand; and no member shall leave his place until the names of all the members present have been taken down by the Council Clerk, or the person officiating for him.

19. All divisions of the Council shall be entered on the minutes of the proceedings.

20. In divisions, every member, excepting the Mayor or presiding Alderman, shall be compelled to vote.

21. All meetings of the Council shall be held with open doors, unless it shall become necessary to exclude strangers on account of their disorderly conduct. The Council, however, shall have the power of excluding strangers in the certain cases mentioned in the 101st section of the Municipalities Act of 1867.

Motions.

22. No member shall make any motion initiating a subject for discussion, but in pursuance of notice openly given at a previous sitting of the Council, and duly entered on the notice paper, with his signature thereto, but it shall always be in order on the presentation of any document, except a petition, for the member presenting it to move without previous notice, that a day be appointed for its consideration.

23. Motions shall take precedence of orders of the day, and be moved or postponed in the order in which they stand on the notice paper, or lapse.

24. No motion shall be put unless it be seconded.

25. When a motion has been proposed and seconded it shall be the property of the Council, and shall not be withdrawn without the consent of the Council.

26. Any number of amendments may be proposed on a motion before the Council; and when more than one amendment is moved and seconded, the question shall first be put on the last amendment, and then on the next to the last, and so on in the inverse order in which they are moved, except when such motion or amendment shall relate to the fixing of salaries, rates, or other matters of finance, in which case the lowest sum shall be put first, then the next lowest, and so on to the highest.

27. Any motion for adjournment, if seconded, shall be immediately put without discussion; and if such motion be negatived, it shall not be competent for any member to make a similar motion until half an hour at least shall have elapsed from the period of moving the one that has been negatived; but if the motion be carried, the business then undisposed of shall have precedence at the next meeting of the Council.

28. No motion, the effect of which, if carried, would be to rescind or be repugnant to any resolution which has been passed by the Council, shall be entertained during the same municipal year, unless a call of the whole Council has been duly made for that purpose; and no such motion, if negatived by the Council, shall be again entertained during the same municipal year.

29. The mover of any motion which may be referred to any Committee, shall *pro hac vice* be a member of such Committee.

Petitions.

30. It shall be incumbent on any member presenting a petition to acquaint himself with the contents thereof, and to report to the Council that it does not contain disrespectful language.

31. On the presentation of a petition or memorial, no debate shall take place thereon until notice has been given in the usual way; and the only question that shall be entertained on the occasion of its presentation shall be that the petition or memorial be received, and, if necessary, that it be referred to a Committee.

32. Every petition received by the Council shall be received only as the petition of the party or parties whose signature or signatures it bears; and no petition shall be received unless at least one signature be upon the sheet containing the petition.

33. The rules of the Council shall be observed in a Committee of the Whole Council, except the rule limiting the number of times of speaking.

34. There shall be two permanent Committees of the Council, to be called the Public Works and Finance Committees, which shall be chosen annually at the meeting of Council next after the annual election of Mayor. The Public Works Committee shall consist of five members; the Finance Committee shall consist of three members; three to be a quorum at the Public Works Committee, and two to form a quorum at the Finance Committee: Provided, nevertheless, that the Council shall be at liberty to fill up occasional vacancies.

35. The Council Clerk shall convene every Committee within seven days of its first appointment, and at any time by order of the Chairman, or any two members of such Committee.

36. The appointment of Special Committees shall continue until the specific duty for which they are appointed shall have been discharged, provided that such Committee may at any time be dissolved by a vote of the Council.

37. The Finance Committee shall be at liberty, without the express authority of the Council, to authorize disbursements for current expenses to an amount not exceeding five pounds, in one week, and report the same to the Council at their next meeting.

38. The Chairman of Committees shall have all reports fairly written out on paper of uniform size, provided by the Council, so as to admit of their being bound up at convenient intervals.

39. At all meetings of Committees, the Mayor, if a member, shall preside, or if he be not a member, then such Alderman shall preside as a majority of the members of the Committee shall have appointed permanent chairman thereof; and in the absence of the Mayor or permanent Chairman respectively, such chairman as the members present shall appoint.

Miscellaneous Regulations.

40. The engagement of any officer of the Council may be terminated, by vote of a majority of the whole Council, three months' notice being given to such officer: Provided that any officer may resign upon giving one month's notice of his intention to do so. And provided also that nothing herein contained shall in any way affect the provisions of the 152nd section, with reference to the suspension of officers for misconduct and their dismissal with the approval of the Council.

41. For the consideration of any by-law, or for the raising or appropriating of money, it shall be competent for any member, without previous notice, to move for a call of the whole Council for the consideration of any such subject, at the next or subsequent meeting; and upon such motion being carried, due notice thereof shall be given in the notice paper for the day, when the subject for which such call is made is set down for consideration; and any member not in attendance when such subject comes under consideration, or not in attendance at the voting upon such question or any amendment thereof, whether of adjournment or otherwise, shall be liable to a penalty of not more than one pound, unless reasonable cause for such absence be shewn to the satisfaction of the Council.

42. The Council Clerk shall have the charge of the common seal of the Corporation, and shall be responsible for the safe custody and proper use of the same, each impression thereof being verified with the signature of the Mayor, duly attested by the Council Clerk.

43. The Council Clerk shall not affix the common seal to any corporate document without the express order of the Council, but shall, upon the authority of the Council, or the Mayor, affix the seal to any power of attorney or other document requiring verification, upon the payment of half a guinea for each impression.

44. Any one or more of the Standing Orders may be suspended, *pro tempore*, in a case of emergency, if a majority of the Council then present shall deem such suspension necessary.

Collection of Rates.

45. The rates shall be levied and collected half-yearly or annually, as the Council may appoint.

46. The taxes thus levied shall be held due and payable on such days as the Council shall by resolution from time

to time appoint. Notice of the amount of taxes imposed shall be served upon the person or premises taxed, in the usual mode. Every person not paying his or her taxes at the office of the Council, or to the Council Clerk, or other proper officer, within thirty days after such notice as aforesaid, shall be decreed a defaulter.

Defaulters.

47. It shall be the duty of the Council Clerk to furnish the Council from time to time with lists of all persons who are in default within the meaning of this by-law—or of section 176 of the Municipalities Act of 1867.

48. It shall be the duty of the Mayor to issue distress warrants against all defaulters within one month after such default shall, in manner aforesaid, have been reported to him, and to cause such warrants to be enforced. With the consent of the Council, or a majority thereof, a further time—not exceeding three months—may in special cases be allowed for payment. No further extension of time shall however in any case or upon any pretence be guaranteed without the sanction of a majority of the Council.

The Bailiff and his duties.

49. The Bailiff of the Municipality shall be appointed by resolution of the Council, and may at any time be removed from office by a similar resolution, moved upon notice in the ordinary way.

50. It shall be the duty of the Bailiff to make all levies by distress, for the recovery of rates, in the manner hereinafter provided. He shall give security (to the satisfaction of the Mayor) to the extent of £100, for the faithful performance of his duty.

51. All levies and distresses shall be made under warrant, in the form or to the effect of the schedule hereto annexed, and marked with the letter A, under the hand of the Mayor, or of any person who may for the time being be duly authorized to perform the duties of that officer.

52. At the time of making a distress, the Bailiff shall hand a copy of the warrant to the occupant of the land or premises, or the owner of the goods distrained, or to some person resident at the place where such distress is made; and in case there shall be no person at such a place he shall give a copy to the ratepayer on demand at any time within one month after the making of such distress.

53. On making a distress the Bailiff shall forthwith make out a written inventory, in the form or to the effect of the schedule annexed hereto and marked with the letter B, which inventory shall be delivered to the occupant of the land or premises, or the owner of the goods so distrained upon, or to some person on his or her behalf, resident at the place where the distress shall be made; and in case there shall be no person at such place with whom such inventory can be left as aforesaid, then such inventory shall be posted on some conspicuous part of the land or premises on which the distress is made, or the Bailiff shall give a copy of the inventory to the ratepayer on demand at any time within one month after the making of such distress.

54. Where a distress has been made, and the rates levied for shall not be paid within five days thereafter, the Bailiff may sell the goods distrained upon at public auction, or may cause the same to be thus sold by any duly licensed auctioneer, either on or off the premises, for the best price that can be got for the same, towards the satisfaction of the said rates; and the overplus, if any, shall be handed over to the owner of the goods or the occupant of the land or premises where the distraint has been made, and a full and true account in writing shall in every case be given by the Bailiff to the said owner or occupant on demand: Provided always that nothing herein contained as to the time of sale shall apply to any corn, grass, hops, roots, fruits, pulse, or other product whatever which shall be growing at the time of the same being seized in distress.

55. The Bailiff, in making a distress for rates as aforesaid, may impound or otherwise secure the distress so made, of what nature or kind soever it may be, in such places or such part of the land or premises chargeable with the rate as shall be most fit and convenient for this purpose; and it shall be lawful for any person whomsoever, after the expiration of the five days as before-mentioned, to come and go to and from such place or part of the said land or premises where any distress shall be impounded and secured as aforesaid, in order to view and buy, and in order to carry off and remove the same on account of the purchaser thereof.

56. The owner of any goods so distrained upon may, at his or her option, direct and specify the order in which they shall be successively sold; and the said goods and chattels shall in such case be put up for sale according to such directions.

57. No distress shall be made upon the goods of any casual visitor in any house, or on the goods or the furniture of any lodger in any house or apartment ordinarily let or used as a lodging-house or apartment.

58. The Bailiff shall hand over to the Council Clerk all proceeds of such distresses within forty-eight hours after having received the same.

59. The Bailiff may, with the sanction of the Council, authorize any person to act temporarily as his deputy; and the person thus authorized shall have and exercise for the time being all the powers of the Bailiff himself, but the Bailiff and his sureties shall in every case be held responsible for the acts of such deputy.

A.

WARRANT OF DISTRESS.

I, A. B., Mayor of the Borough of Albury, do hereby authorize you, C. D., the Bailiff of the said Borough, or your deputy, to distrain the goods and chattels in the [dwelling-house or in and upon the land and premises] of E. F., situate at _____, being the amount of rates due to this Borough to the _____ day of _____ for the said [dwelling-house, land, or premises, as the case may be] and to proceed thereon for the recovery of the same rates according to law.

Dated this _____ day of _____ A.D. 18 ____
To _____ Mayor.

B.

INVENTORY.

I HAVE this day, in virtue of the warrant, of which a copy is attached hereto, distrained the following goods and chattels in the [dwelling-house, or in and upon the land or premises] of E. F., situate at _____ within the Borough of Albury, for _____, being the amount of rates due to the said Borough to the _____ day of _____

Dated this _____ day of _____ A.D. 18 ____
Bailiff.

PART II.

MISCELLANEOUS.

Preventing and extinguishing fires.

1. For the better prevention of fires no person shall erect stacks of hay, wheat, or other inflammable materials, within three hundred feet of any building, in any populous portion of the town.

2. That from the time of passing this by-law no building, constructed of or roofed with bark or calico, shall be erected within the populous portion of the Municipality, except by permission of the Council.

3. In cases where a fire shall take place, it shall be lawful for the Mayor to allow one pound for the first load of water, and fifteen shillings for the second load, to be used for extinguishing the said fire.

Suppressing nuisances.

4. No householder or resident shall be permitted to allow his or her premises, yards, closets, or drains, to be offensive, or a nuisance to the adjoining householders or residents.

5. No noisome or offensive trade shall be permitted to be carried on in any premises, to the inconvenience of the residents of adjoining houses.

6. Upon representation by any two respectable householders that the house, yard, closets, hog-sties, or drains of the adjoining premises are a nuisance or offensive, the Mayor and any two Aldermen shall cause an inspection to be made of the premises complained of, and if any such premises shall be found to be a nuisance, or otherwise offensive, notice shall be given in writing, to the proprietor or resident of such premises, that if within three days after such notice the nuisance shall not be removed, the proprietor or tenant of the aforesaid premises shall be liable to a penalty not exceeding ten pounds, nor less than forty shillings.

Extirpation of noisome weeds.

7. The Council shall have power, in respect to districts where the lands are under cultivation, or have been cleared and fenced, to order and compel the extirpation of Bathurst burs or Scotch thistles, or other noisome weeds detri-

mental to good husbandry; and one publication of notice in the *Government Gazette*, and two insertions of such notice in the local newspapers, shall be deemed sufficient notice to owners of property. And if, after the expiration of fourteen days from the first publication of such notice, the owner of the land shall neglect or refuse to extirpate such weeds, the Council shall have the power to recover by legal process, a fine not exceeding five pounds. In the case of noisome weeds found growing on lands unoccupied, the owners of which are unknown, the Council shall be empowered to clear the weeds from such lands, the cost of which operation shall remain a charge upon the property, and may be recovered at any future time from the owner or occupier of such property: Provided that such cost does not exceed five pounds.

Management of the roads and streets, pathways, &c.

8. Any person trespassing by erecting a fence on any public street, thoroughfare, or lane in any part of the Municipality, shall for every such offence forfeit and pay a sum not less than forty shillings nor exceeding ten pounds; and also, any person having any fence or other obstruction erected or placed on any street, or road, or by-way in any part of the said Municipality, shall be compelled to remove the same within three months after notice to that effect has been duly served on the parties, subject to a fine or penalty of five pounds, and every week the same may remain after the expiration of the time stated in such notice to be treated as a subsequent offence against this by-law; and for every such offence shall be liable to a fine of five pounds.

9. No person shall form, dig, or open any drain or sewer in any public road, street, or thoroughfare, or shall cut up the surface of any such road, street, or thoroughfare upon any pretence whatever, without leave in writing first had and obtained from the Council.

10. No person shall be allowed to throw rubbish, sweepings, or deposits of any kind whatever on the streets, pathways, or gutters; and any person committing a breach of this by-law shall be liable to a fine not exceeding one pound.

11. No driver, carter, or other person shall wilfully or negligently do or suffer or cause to be done any damage or injury to the kerbstones, gutters, or pathways of any street or roadway; and no persons shall be at liberty to drive a wheeled vehicle of any kind, or ride or drive or lead any horse or horses or other cattle on the pathways. In cases where persons desire access to any private right-of-way, yard, lane, or other premises, such person shall, at his own proper cost and expense, form and maintain a crossing over the footpath, to be constructed of stone pitchers or pavement or planking (as the Council, their Surveyor, or other duly authorized officer, may in each case deem best), for the full width of the footpath, with kerbing at each side of such crossing, constructed of such material and of such a height as the Town Surveyor may direct.

12. No person shall be allowed to alter, cut, or destroy the pathways or roads, or to remove loam, sand, or gravel from any of the roads, streets, or reserves of the Municipality, without the authority of the Council, in writing.

13. No person shall be allowed to obstruct any road, street, or public thoroughfare within the Municipality, by building materials, drays, carts, or anything calculated to obstruct and hinder free passage, without the sanction of the Council, in writing; and no person shall be allowed to leave waterholes, or excavations for cellars or other purposes, unfenced, or in such a manner as to be dangerous to passers-by; and at all places where buildings are being carried on, or where any obstruction to the danger of passers-by exists, the person causing such obstruction shall be required to provide lights on either side, and keep the same lighted from sunset to sunrise.

14. Any person who shall cast any filth, rubbish, or dead animal, or any animal with intent of drowning, into any public watercourse, sewer, waterhole, or river, or creek, or canal, or shall obstruct or divert from its channel any such sewer, canal, or watercourse, shall forfeit a sum not exceeding five pounds, and shall pay the cost of removing such filth or obstruction, or of restoring such watercourse or canal to its proper channel, such penalty and costs not exceeding fifty pounds on the whole.

15. No person shall be permitted to place any house, shop, building, or other erection to the front of any street in the Municipality, or to erect any verandah extending over the footway, without first serving notice, in writing, on the Mayor, on any lawful day, between the hours of 10 o'clock and 4 o'clock, stating such intention, and de-

scribing the proposed situation of the building or erection, and without having received an authority signed by the Mayor.

16. No person shall be at liberty to encroach beyond the building-line in any street or lane, by the erection of houses, door-steps, fences, or any other obstruction whatever.

17. No person shall place or expose on the pathways or streets, carts, parcels, packages, or produce of any kind whatever, to the obstruction of the public.

18. That if any person riding or driving any horse, or driving any horse, mule, or other animal harnessed to any dray, cart, waggon, gig, truck, or other carriage or vehicle, shall, within the said Municipality, ride or drive the same furiously, or so as to create alarm or danger to the public, or to endanger the safety of any person on any public thoroughfare in the said Municipality, every person so offending shall for such offence forfeit and pay a fine not less than forty shillings nor exceeding ten pounds.

19. No horses, cattle, goats, or pigs shall be permitted on the streets, unless when driven through or being brought from one locality to another.

20. Nothing in these by-laws contained shall be deemed to prevent any person from placing an awning or verandah in front of his or her shop or house: Provided, however, that such awning be not less than seven feet above the height of the footway in front of such house or shop, and that the posts be placed into the kerb at the outer edge of such footway.

21. If any person shall haul or draw, or cause to be hauled or drawn, upon any part of the streets, roads, or public place, any timber, stone, or other thing, otherwise than upon wheeled carriages, or shall suffer any timber, stone, or other thing which shall be carried principally or in part upon wheeled carriages, to drag or trail upon any part of such streets or public places, to the injury thereof, every such person so offending shall, upon conviction, forfeit and pay for every such offence a sum not exceeding forty shillings, over and damages occasioned thereby, provided such penalty and damage do not exceed fifty pounds on the whole.

22. Every person who shall have a well situated between his dwelling-house, or the appurtenances thereof, and any road, street, or footway within the limits of the said Borough, or at the side thereof, or in any yard or place open or exposed to such road, street, or footway, shall cause such well to be securely and permanently covered over; and if any person having such well as aforesaid shall fail to cover and secure the same within twenty-four hours notice, in writing, shall have been given to him or her by any officer of the said Council, or shall have been left for such person at his or her usual or last known place of abode, or on the said premises, shall, on conviction before any Justice of the Peace, forfeit and pay the sum of ten shillings; and every day such well may remain open and uncovered after such notice as aforesaid, shall be treated as a subsequent offence against the provisions hereof, and for every such offence shall be liable to a fine of five shillings.

23. If the driver of any waggon, wain, cart, or dray of any kind, shall ride upon any such carriage in any street as aforesaid, not having some person on foot to guide the same (such carts as are drawn by one horse and driver, or guided with reins only, excepted), or if the driver of any carriage whatsoever shall wilfully be at such a distance from such carriage, or in such a situation whilst it shall be passing upon such street, that he cannot have the direction and government of the horse or horses or cattle drawing the same, or if the driver of any waggon, cart, dray, or coach, or other carriage whatsoever, meeting any other carriage, shall not keep his waggon, cart, dray, or coach, or other carriage, on the left or near side of the road, street, or thoroughfare; or if any person shall in any manner wilfully prevent any other person or persons from passing him or her, or any carriage under his or her care, upon such street, or by negligence or misbehaviour prevent, or hinder, or interrupt the free passage of any carriage or person in or upon the same, every such driver or person so offending shall, upon conviction before any Justice of the Peace, forfeit and pay any sum not less than ten shillings, nor exceeding forty shillings.

24. Every person who shall carry or convey, or cause to be carried or conveyed, in any street or public place, the carcass, or any part of the carcass, of any newly-slaughtered animal, without a sufficient and proper cloth covering the same for the concealment from public view, shall be liable, on conviction, to a penalty not exceeding two pounds for every such offence.

Regulating Free Library.

25. The Free Public Library shall be established in a suitable room to be obtained by the Council for the purpose. It shall be open to the public every day, except Sunday, Christmas Day, and Good Friday, between the hours of 2 and 5 p.m. and 7 till 10 p.m. The Council to have the power of appointing a librarian to take charge of the property, to maintain good order, and generally to ensure the comfort of visitors.

Preserving trees, shrubs, and other property.

26. No person shall cut or fall, or remove or destroy, any standing timber, trees, shrubs, or brush in or upon any street, thoroughfare, court, market, highway, or reserve within the said Borough, without the permission of the Mayor.

27. Any person wantonly or maliciously breaking or injuring any lamp-post or street name plate, or extinguishing any light set up for public convenience, or damaging any Corporation property, shall be liable to a penalty upon conviction for every such offence, not less than one pound nor exceeding five pounds.

28. No person shall bathe in the Murray River, or the adjacent creeks or waterholes, within sight of any public road or reserve, except before 6 a.m. or after 8 p.m.

PART III.

By-laws for the regulation of Slaughter-houses.

1. Every Inspector of Slaughter-houses, and of any animals intended to be slaughtered within the Borough of Albury, shall, upon receiving due notice thereof, inspect all animals intended to be slaughtered, and shall particularly describe the color, mark or marks, brand or brands, and sexes, together with the name of the owner or owners thereof, which particulars he shall carefully enter, or cause to be entered, in a book to be kept for that purpose, and which book such inspector shall produce when required for examination by the Council or any Justice of the Peace, inspector, sub-inspector, sergeant of police, or any other police officer.

2. The owners or occupiers of slaughter-houses shall give the Inspector *twelve hours notice* in writing, of the number of cattle intended to be slaughtered at any particular time; and any person neglecting or refusing to give such notice as aforesaid, shall be liable to a penalty of five pounds for every head of cattle slaughtered prior to inspection.

3. The Inspector shall only inspect cattle for slaughter in the yards adjoining licensed slaughter-houses.

4. Any person found slaughtering animals without being duly licensed shall be liable to a prosecution for a breach of the first section of the Act 5 William IV, No. 1; and no person shall be permitted to slaughter cattle, sheep, or pigs, intended for sale within the Borough, except at a duly licensed slaughter-house.

5. Nothing herein contained shall extend to or affect any person or persons slaughtering at his or her or their own residences within the Municipality, animals for his or her or their family, servants, or laborers.

6. The owner or occupier of any slaughter-house within the Borough of Albury, used for the slaughter of animals intended for human food, shall keep the milts or spleens and lungs of all animals slaughtered in the said slaughter-house for a period of six hours after the animals have been slaughtered, unless the Inspector of Slaughter-houses shall have previously examined the milts or spleens and lungs of such slaughtered animals. And any such owner or occupier as aforesaid, who shall neglect or refuse so to do, shall forfeit and pay a penalty of not less than forty shillings nor more than twenty pounds.

7. Every person who may from time to time be in that behalf appointed by the Albury Borough Council, shall be the Inspector of Slaughter-houses within the Borough of Albury; and such Inspector shall from time to time enter

into and examine all such slaughter-houses, and the milts or spleens and lungs and carcasses of all animals slaughtered, unless the same shall have been previously examined by him.

8. It shall be lawful for any such Inspector, appointed or to be appointed as aforesaid, to ask, demand, and receive the sum of threepence for each and every head of cattle or skin, and one penny for each and every head of sheep, pig, calf, or lamb inspected by him under the authority of these by-laws, to be paid by the keeper of such licensed house or place, and to be recovered before any one or more Justice or Justices of the Peace.

9. Any person who shall assault, resist, or obstruct any such Inspector of Slaughter-houses when in the execution of his duty, or shall aid, abet, or incite any person so to do, shall for every such offence forfeit and pay a penalty of not less than twenty shillings nor more than ten pounds.

10. The blood, offal, and filth of all such animals as may be slaughtered in any such slaughter-house and premises used therewith, shall be removed at least once in every twenty-four hours; and any owner or occupier of any such slaughter-house who shall fail, neglect, or refuse to comply with this by-law, shall, upon conviction for every such offence, forfeit and pay a penalty not exceeding ten pounds.

11. If the owner or occupier of any such slaughter-house shall knowingly cause, permit, or suffer any animal infected with any disease affecting the milt or spleen or lungs to be slaughtered in any such slaughter-house, or if, after the slaughter of any animal, it shall be found to be diseased, and such owner or occupier, as soon as the animal is inspected and condemned, shall not immediately thereupon cause the entire carcass to be destroyed by fire, in the presence of the Inspector, such owner or occupier shall for every such offence forfeit and pay any sum not exceeding fifty pounds nor less than ten pounds: Provided, however, that should the owner of any animal, which may be condemned by the Inspector, object to the decision of that officer, the owner thereof shall be at liberty to appoint some veterinary surgeon or other competent person as arbitrator in his behalf; and in the event of the Inspector and such veterinary surgeon or other competent person not agreeing, it shall be lawful and incumbent upon them, under a penalty of ten pounds, to appoint an umpire, whose decision shall be final.

12. The word "animal" shall, for the purpose of these by-laws, be held to include cattle, sheep, pigs, calves, and lambs; and the words "die of any disease" shall be held to apply to all cases of death other than death caused by killing or slaughtering.

Penalties.

13. All penalties imposed under these by-laws may be sued for and recovered in a summary way, by distress and sale of the offender's goods, before any two Justices of the Peace, according to the provisions of the Act 14 Victoria, No. 43, and the Acts therein adopted; and all such penalties when recovered as aforesaid, shall be paid into the corporate fund of the Municipality; and no person shall be liable to any penalty, fine, or forfeiture under these by-laws, unless proceedings, in respect thereof, be commenced within six months after the same shall have been incurred.

14. Every person committing a breach of any provision of any by-law hereinbefore mentioned shall, when no specific penalty shall have been provided for such offence, be liable to a penalty not exceeding twenty pounds.

Made and passed by the Borough Council of Albury, this eighteenth day of March, in the year of our Lord one thousand eight hundred and sixty-nine.

SAMUEL MUDGE,
Council Clerk.

GEORGE DAY,
Mayor.

1869.

NEW SOUTH WALES.

MUNICIPALITIES.

(BOROUGH OF MORPETH—BY-LAWS.)

Presented to Parliament, pursuant to Act 31 Vict., No. 12, sec. 158.

Colonial Secretary's Office,
Sydney, 16th July, 1869.

BOROUGH OF MORPETH.

BY-LAWS.

THE following By-laws, made by the Council of the Borough of Morpeth, for regulating their own proceedings—the prevention and extinguishing of fires—the care and management of the public roads and streets—the suppression of nuisances and houses of ill-fame, &c.—and for the general good rule and government of the Borough,—having been confirmed by His Excellency the Governor, with the advice of the Executive Council, are published in accordance with the requirements of the Municipalities Act of 1867.

JOHN ROBERTSON.

BOROUGH OF MORPETH.

BY-LAWS to regulate the proceedings of the Borough Council of Morpeth—the prevention and extinguishing of fires—the care and management of the public roads and streets—the suppression of nuisances and houses of ill-fame, &c.—and for the general good rule and government of the Borough.

Standing Orders.

The meetings of the Council shall be held on every alternate Tuesday, at the hour of 7 o'clock p.m., except as provided under clause 103 of the Municipalities Act of 1867.

2. If the Mayor be not present within fifteen minutes after the time appointed for the meetings of the Council (a quorum being then present), any Alderman may be elected Chairman for that particular meeting.

3. The Mayor or Chairman shall preserve order; and when required or called upon to decide a point of order or practice, he is to state the rule, custom, or precedent, applicable to the case, without argument or comment.

4. The Mayor or Chairman may take part in all the proceedings of the Council.

5. All questions duly proposed shall be put by the Mayor or Chairman, and the sense of the Council thereon shall be declared by him.

6. Every question shall be put in the affirmative, and then in the negative; and this may be done as often as the Mayor or Chairman shall deem necessary for enabling him to determine which side has the majority.

7. No member, having taken his seat, shall be allowed to withdraw, without asking the permission of the Chairman.

8. If two or more members rise to speak at the same time, the Mayor or Chairman shall decide which of them is entitled to pre-audience.

9. The Mayor or Chairman may, without waiting for the interposition of any member of the Council, call to order any member proceeding to speak a second time on the same question, except in explanation.

Order of business.

10. The business of each ordinary meeting of the Council shall be transacted in the following order, viz. :—

- a. The reading and confirmation of the minutes of the previous meeting.
- b. The reading of official correspondence.
- c. The presentation of petitions.
- d. Reports brought up from Committees.
- e. Miscellaneous business.
- f. Motions of which notice has been given.
- g. Notice of motions.
- h. Orders of the day.

11. The question for confirming the minutes of the previous meeting shall be proposed by the Mayor or Chairman immediately upon their being read, and shall be to the effect that the minutes now read are a correct record of the proceedings; and no discussion shall be allowed thereon, except on the point of accuracy.

Rules of Debate.

12. Every member shall stand when speaking, and shall address the Chair.

13. Except in Committee, no member shall speak more than once on the same question, unless in explanation when misrepresented or misunderstood: Provided, however, that the mover of any question shall be allowed the liberty of reply; and provided further, that every member shall be at liberty to speak once on any amendment, as well as on the original motion; but the right of reply shall not extend to the mover of an amendment.

14. No member shall speak upon any motion or amendment for a longer time than fifteen minutes, unless by permission of the Council.

15. No member shall digress from the matter under discussion, nor make personal reflections on members, nor impute motives.

16. When any member shall use any expression which the Mayor, or Chairman, or any Alderman, shall think capable of being offensively applied to any other member, the member so offending shall be required by the Mayor, or Chairman, to withdraw the expression, and to make a satisfactory apology to the Council.

17. No Alderman, when discussing any matter, shall be interrupted, unless by a call to order, when he shall sit down. The Alderman calling to order shall then be heard, and the question of order decided before the debate or any other business is resumed.

18. Any member may require the question under discussion to be read for his information at any time during a debate, but not so as to interrupt any other member when speaking.

19. A debate may be adjourned to a later hour of the day, or to another day specified; and the member on whose motion a debate is adjourned, shall be entitled to pre-audience on resumption of the debate.

Divisions.

20. It shall be competent for any member to divide the Council upon any question put from the Chair, either in full Council or Committee of the Council; and upon such division, those who are on the affirmative shall place themselves on the Mayor's or Chairman's right hand, and those who are on the negative shall place themselves on his left hand; and no member shall leave his place until the names of all the members present have been taken down by the Council Clerk, or person officiating for him.

21. All divisions of the Council shall be entered on the Minutes of the Proceedings.

Motions.

22. No member shall make any motion initiating a subject for discussion, but in pursuance of notice, openly given at a previous sitting of the Council, and duly entered on the Notice Paper, with his signature thereto, and dated; but it shall always be in order, on the presentation of any document, except a petition, for the member presenting it to move, without previous notice, that a day be appointed for its consideration.

23. Motions shall take precedence of orders of the day, and be moved or postponed in the order in which they stand on the Notice Paper, or lapse.

24. No motion shall be put unless it be seconded.

25. When a motion has been proposed and seconded, it shall be the property of the Council, and shall not be withdrawn without the consent of the Council.

26. Any number of amendments may be proposed on a motion before the Council; and when more than one amendment is moved and seconded, the question shall first be put on the last amendment, and then on the one next to the last, and so on, in the inverse order to that in which they have been moved: Provided, however, that when such motion or amendment shall relate to the fixing of salaries, rates, or other matters of finance, the lowest sum shall be put first, then the next lowest, and so on to the highest.

27. Any motion for adjournment, if seconded, shall be put immediately, without discussion; but if such motion be negatived, it shall not be competent for any member to make a similar motion until at least half an hour shall have elapsed from the period of moving the one that has been negatived.

28. No motion, the effect of which, if carried, would be to rescind, or be repugnant to, any resolution which has been passed by the Council, shall be entertained during the same municipal year, unless a "Call of the whole Council" has been duly made for that purpose; and no such motion, if negatived by the Council, shall be again entertained during the same municipal year.

29. Matters of extreme urgency may, with the consent of the Council, be brought under consideration, without notice being previously given.

30. A book, to be called a "Motion Book," shall be provided by the Council (for the purpose of immediate reference), in which the Council Clerk shall enter all motions duly made, and amendments thereon (if any), specifying the manner in which such motions or amendments have been dealt with.

Petitions.

31. It shall be incumbent on any member presenting a petition to acquaint himself with the contents thereof, and to report to the Council that it does not contain any disrespectful language.

32. On the presentation of a petition no debate shall take place, and the only question that can then be entertained by the Council shall be, that the petition be received, or that it be referred to a Committee: Provided, however, that any petition that has been received by the Council may be taken into consideration, upon notice of motion being given in the usual way.

33. Every petition received by the Council shall be received only as the petition of the party or parties whose signature or signatures it bears; and no petition shall be received, unless at least one signature be upon the sheet containing the petition.

Committees.

34. In a Committee of the whole Council the general rules of the Council shall be observed, except the rule limiting the number of times of speaking.

35. Every Report of a Committee shall be signed by the Chairman thereof.

36. When the Report of a Committee is brought up and presented to the Council, the question as to its reception may be moved and put at once; but it shall not be adopted, or taken into consideration, without notice in the usual way.

37. There shall be three Standing Committees, to be called respectively, the Committee of Finance (of which the Mayor shall be Chairman), the Improvement Committee, and the General and Punt Committee; and the members of all such described Committees shall be chosen by ballot.

38. The Standing Committees shall be appointed for the municipal year, at the first meeting of the Council after the election of the Mayor of the Municipality; and any vacancies occurring therein during the year shall be filled up by the Council.

39. All Reports of Committees shall be fairly written on foolscap paper, for the convenience of filing or binding.

Finance Committee.

40. No matters of account shall be disposed of by the Council until they have been examined and reported upon by the Committee of Finance.

41. The Chairman may, however, with the assent of two members of Committee, under signature, authorize the expenditure of any sum not exceeding ten pounds, during any recess; and such expenditure shall be reported to the Council, at its next meeting, and the usual draft obtained for payment thereof.

42. All drafts upon the funds shall be signed by the Mayor of the Municipality and one member of the Finance Committee, and be countersigned by the Council Clerk.

43. The Mayor of the Municipality shall in all cases give the necessary information to the bankers, whose signatures are necessary to constitute a genuine draft.

44. No accounts of any kind whatsoever, except those otherwise specially provided for, shall be paid, except at the usual meetings of the Council, or until such accounts shall have been first passed by the Finance Committee, and be then allowed by the Council.

45. No contract shall be paid for until such contract shall have been fully completed to the satisfaction of the Committee under whose authority the contract was entered into, nor by it unless in the form prescribed for other payments.

Improvement Committee.

46. No public work of any character shall be undertaken (except as in rule No. 44 of Finance Committee By-laws), until the nature thereof, and estimate of probable cost, be first brought before the Council, for consideration and approval.

47. All accounts against the Corporation, relating to works, shall be examined by the Improvement Committee, and, if found correct, shall be passed to the Finance Committee for payment in the usual manner.

General Committee.

48. All matters which the Council shall think fit to refer to a Committee, and which do not fall within the province of any other Standing Committee, shall be referred to the General Committee: Provided, however, that the Council may, at any time, refer such matters to a Committee to be appointed for that special business.

Making By-laws.

49. Before any proposed By-law is discussed in Council, a copy thereof shall be open for public inspection, in the office of the Corporation, not less than seven days.

50. No By-law shall be passed until it has been reported upon by a Committee of the whole Council, nor until it has been twice read in Council on different days.

51. All By-laws, when confirmed and published as the Municipalities Act of 1867 directs, shall be fairly transcribed into a book to be kept for that purpose, signed by the Mayor, and countersigned by the Council Clerk; and the said book shall, at all reasonable times, be open to public inspection.

Miscellaneous.

52. Any member may record his protest against any decision of the Council, provided that the protest be handed to the Council Clerk not later than the next Council meeting: And provided, also, that notice of his intention to protest be given immediately on the passing of the resolution to which the protest refers.

53. The common seal shall not be affixed to any document without the express authority of the Council; and every impression thereof, so authorized, shall be verified by the signatures of the Mayor and the Council Clerk.

54. No officer of the Corporation shall be at liberty to show, lay open, or expose, any of the books, papers, or records of the Corporation, to any person, other than an Alderman, without leave from the Council, except as otherwise provided for by section 108 of the Municipalities Act of 1867.

55. In cases where security is required by clause 151 of the Municipalities Act of 1867, no sureties shall be accepted, otherwise than by a vote of the Council; and it shall not be competent for the Council to accept as sureties any of its own members, nor any person holding office in the Corporation.

56. Any one or more of the standing orders may be suspended *pro tempore* in a case of emergency, if a majority of the Council then present shall deem such suspension necessary.

57. The bankers and trustees shall be appointed annually at the first meeting held after the election of the Mayor; and the Council Clerk shall, immediately upon such appointments having been made, notify the same to every officer and servant of the Corporation who may be entrusted with the custody or control of moneys.

The Bailiff and his duties.

58. The bailiff shall be appointed by a resolution of the Council, and may be at any time removed in a similar way.

59. The bailiff shall make all levies and distresses for the recovery of rates under warrant, in the form of the Schedule hereto annexed and marked with the letter A, under the hand of the Mayor, or any person who may for the time being be duly authorized to perform the duties of that office.

60. At the time of making a distress, the bailiff shall forthwith make out a written inventory, in the form or to the effect of the Schedule annexed hereto and marked with the letter B, which inventory shall be delivered to the occupant of the land or premises, or the owner of the goods so distrained, or to some person on his or her behalf, resident at the place where the distress has been made; and in case there shall be no person at such place with whom such inventory can be left as aforesaid, then such inventory shall be posted on some conspicuous part of the land or premises on which the distress has been made; and the bailiff shall give a copy of the inventory to the ratepayer, on demand, at any time within one month after the making of such distress.

61. The bailiff, in making a distress as aforesaid, may impound or otherwise secure the distress so made, of what nature or kind soever it may be, in such places, or in such part of the land or premises chargeable with the rate, as shall be most fit and convenient for this purpose; and it shall be lawful for any person whatsoever, after the expiration of the five days hereinbefore mentioned, to come and go to and from such place or part of the said land or premises where any distress shall be impounded and secured as aforesaid, in order to view and buy, and in order to carry off and remove the same on account of the purchaser thereof.

62. The owner of any goods so distrained upon may, at his or her option, direct and specify the order in which they shall be successively sold; and the goods and chattels shall, in such case, be put up for sale according to such direction.

63. The bailiff shall hand over to the Council Clerk all proceeds of such distresses, within forty-eight hours after having received the same.

64. The bailiff, with the sanction of the Mayor of the Borough, may authorize any person to act temporarily as his deputy; and the person thus authorized shall have and exercise, for the time being, all the powers of the bailiff himself; but the bailiff and his sureties shall, in every case, be held responsible for the acts of such deputy.

65. The bailiff shall be paid for every levy made under these By-laws, according to the Schedule hereunto annexed marked C.

SCHEDULE A.

Warrant of Distress.

I, the Mayor of the Municipality of Morpeth, do hereby authorize you, bailiff of the said Borough, to distrain the goods and chattels in the dwelling-house, or in and upon the land and premises of situate at for the sum of being the amount of municipal rates due to the Borough, to the day of for the said dwelling-house, land, or premises (as the case may be), and to proceed thereon for the recovery of the said rates according to law.—Dated this day of 18

Mayor.

SCHEDULE B.

Inventory.

I HAVE this day, in virtue of a warrant, under the name of the Mayor of the Municipality of Morpeth, dated distrained the following goods and chattels in the dwelling-house, or in and upon the land and premises of situate at within the Borough of Morpeth, for the

sum of being the amount of rates due to the said Municipality to the day of 18 —
Dated this day of 18
Bailiff.

SCHEDULE C.

Fees to Bailiff.

FOR making entry and inventory, five shillings; if in possession more than five hours, five shillings additional; and for every subsequent day whilst in possession, five shillings; and five per cent. on the net amount of sale.

Prevention and extinguishing of fires.

66. It shall not be lawful for any persons to burn any shavings, or other matters or things, in any street, road, or public place, within the Municipality.

67. No householder shall place, or knowingly permit to be placed, in any house, yard, workshop, out-houses, or other premises, fire, powder, or combustible materials of any kind, in such a manner as to endanger contiguous buildings.

68. The Mayor, upon the representation of any two householders, that fire is being used to the danger of contiguous buildings, shall cause three days' notice, in writing (unless the urgency of the case requires that it should be removed at once), to be given to such householder, to show cause why the same should not be removed or remedied, and an opportunity thereupon given to show such cause.

69. For every offence against the provisions of these By-laws the offender shall be liable to a penalty not exceeding ten pounds, to be recovered in a summary manner before any Justice, as provided by the Municipalities Act of 1867, sec. 193.

70. In every case in which it shall be made to appear, to the satisfaction of any Justice of the Peace, that the chimney of any house or building, within the limits of the Municipality, has taken fire, from the occupier of any such house or building having omitted to cause such chimney to be regularly and sufficiently swept and cleaned, or from any other neglect of such occupier, or of his or her servant or servants, such occupier shall, on conviction before any such Justice of the Peace, forfeit and pay for every such offence any sum not exceeding forty shillings; and in every such case the proof that any such chimney did not take fire through the neglect of such occupier, in not having the same regularly and sufficiently swept or cleaned, shall be upon such occupier.

Care and management of the public roads and streets and public thoroughfares of the Borough.

71. The Surveyor of the Municipality, duly appointed by the Council thereof, or any person acting for him, shall be the proper person for marking out, when necessary, any roads, streets, or thoroughfares, in actual public use as such, within the Borough. In marking out such roads, streets, or thoroughfares, recourse shall be had, when practicable, to the plans under which lands, with frontage to the road, street, or thoroughfare in question, shall have been sold; and it shall be the duty of the Surveyor, or any person acting for him, to place posts at the corners or intersections of any roads, streets, lanes, or thoroughfares, wherever the same may be considered necessary or desirable by the Municipal Council, so as to give a width of forty-two feet at least for the carriage-way, and twelve feet at least for the footway on each side, when the street shall be sixty-six feet wide; and in proportion, and in the discretion of the said Surveyor, or person acting for him, in any public roads, streets, lanes, or thoroughfares, of other width than sixty-six feet.

72. Whenever any road, street, or lane, has been marked out in the manner herein provided, no house, shop, fence, or other structure shall be erected or allowed to project or encroach on any part thereof.

73. Whenever any footways shall have been marked out, the Surveyor, or person acting for him, may, with the sanction of the Council, cause the same to be levelled and made, as nearly as practicable, of equal height and breadth, and with an equal slope and inclination; and for this purpose, may remove any flagging, steps, or other matter or thing that may injure or obstruct the said footway, or render unequal or inconvenient, and which now is, or may hereafter be, erected or placed on the space marked out for any of the said footways.

Obstructions and encroachments.

74. The Surveyor may at any time, or the person acting as such, on the order of the Council, and upon due notice of ten days, direct the removal of any fence, building, or other obstruction or encroachment which shall be made in and upon any road, street, lane, or thoroughfare, under the charge of the Council. Notice shall in this case be served, either personally, or at the usual or last known place of abode of the person to whom such obstructive or encroaching structure belongs, or who has erected the same, or caused it to be erected, or who may be in charge of the same.

75. In any case where, after the service of notice for the removal of any obstruction or encroachment as aforesaid, the person causing the same shall not remove it within a reasonable time, it shall be lawful for the Council to direct the removal of the same, under the superintendence of its own proper officer, and at the cost of the owner or of the person thus offending, or of the person who may be in charge thereof: Provided that the expenses thereby incurred shall in no case exceed the sum of ten pounds, to be recovered summarily in manner provided for the recovery of penalties under these By-laws.

76. In case where the obstruction or encroachment cannot be removed, unless at a greater cost than ten pounds, it shall be open to the Council to direct such removal, and to pay all costs thereof, above ten pounds, from the municipal funds, or to proceed by action of trespass against the person causing such obstruction or encroachment, or who may be in charge thereof.

77. The foregoing provisions shall be equally applicable to all obstructions by digging or excavation.

78. The Surveyor, or person acting for him, may at any time, by order of the Council, cause the traffic of any street, lane, or thoroughfare, or any portion thereof, to be stopped, for the purpose of repairing the same, or for any necessary purpose; and any person or persons offending against this By-law, either by travelling on, or by removing or destroying any obstruction that may be placed thereon, for the purpose of suspending the traffic, shall forfeit and pay a penalty of any sum not exceeding five pounds for every such offence.

79. No person shall be allowed to obstruct any pathway, road, street, or public thoroughfare within the Municipality, by building materials, drays, carts, goods, merchandise, or anything whatsoever calculated to obstruct or hinder free passage, without the sanction of the Mayor in writing; and no person shall be allowed to leave waterholes, or excavations for cellars or other purposes, unfenced, or in such a manner as to be dangerous to passers-by; and at all places where buildings are being carried on, or where any obstruction to the danger of passers-by exists, the person causing such obstruction shall be required to provide lights on either side, and keep the same lighted from sunset to sunrise.

Trespasses, and removal of nuisances.

80. Any person who shall cast any filth, rubbish, or any dead animal, or any animal with intent of drowning, into any public watercourse, sewer, waterhole, river, creek, or canal, or who shall suffer slops, suds, or filth of any kind, to flow from his or her premises into any such watercourse, sewer, waterhole, river, creek, or canal, or who shall permit or suffer any such slops, suds, or filth to flow from his or her premises over any of the footways or streets of the Municipality, or shall permit or cause, by means of pipes, shoots, channels, or other contrivances, filth of any kind whatsoever to flow into any public watercourse, sewer, waterhole, river, creek, or canal, or shall obstruct or divert from its channel any such sewer or watercourse, shall forfeit any sum not exceeding fifty pounds, nor less than forty shillings, such penalty to be recovered summarily in the manner provided for the recovery of penalties under these By-laws.

81. No person shall form, dig, or open any drain or sewer, in any public road or street, lane or thoroughfare, or shall cut up the surface of any such road, street, lane, or thoroughfare, upon any pretence whatever, without leave in writing from the Mayor.

82. No person shall be allowed to throw rubbish, sweepings, or deposits of any kind whatsoever, on the streets, pathways, or gutters of the Borough.

83. Any driver, carter, or other person who shall wilfully or negligently do, or suffer or cause to be done, any damage or injury to the curbstones, gutters, or pathways of any street or roadway, or who shall drive a wheeled vehicle of any kind, or ride or drive, lead or stand, or permit to stand, any animal (other than dogs) on the pathways within the Borough, shall, upon conviction before any Justice of the Peace, forfeit and pay a sum not exceeding forty shillings nor less than five shillings.

84. Any person who shall damage any public building, wall, parapet, bridge, road, street, sewer, watercourse, sluice-pump, fountain cock, waterpipe, shoot, embankment, or other public property in possession of the Council, shall be dealt with as provided by section 12, 2 Victoria, No. 2.

Throwing filth on carriage or foot ways, driving barrows and carriages on foot-ways.

85. If any person shall, in any street or road, throw, cast, or lay, or shall cause, permit, or suffer to be thrown, cast, or laid, or to remain, any ashes, rubbish, offal, dung, soil, dead animal, blood, or other filth or annoyance, or any matter or thing, in or upon the carriage-way or foot-way of any such street or road, or shall kill, slaughter, dress, scald, or cut up, any beast, swine, calf, sheep, lamb, or other cattle, in or so near to any of the said streets or roads, as that any blood or filth shall run or flow upon or over, or to be on any such carriage-way or foot-way, or shall run, roll, drive, draw, place, or cause, permit, or suffer to be run, rolled, driven, drawn, or placed, upon any of the foot-ways of any street or road, any waggon, cart, dray, sledge, or other carriage, or any wheelbarrow, or any truck or cask, or shall wilfully lead, or stand, or drive, or ride any horse or other

beast, upon any of the footways aforesaid, every person so offending, upon conviction before any Justice of the Peace, or upon the view of any such Justice, shall forfeit and pay a sum not exceeding forty shillings nor less than five shillings, for every such offence.

86. Nothing in these By-laws contained shall be deemed to prevent any person from placing an awning in front of his or her house or shop: Provided, however, that such awning be not less than seven feet above the height of the footway in front of such house or shop, and that the posts be placed close up to the curbstone or outer edge of such footway.

Suppression of nuisances and houses of ill-fame.

87. No householder or resident shall be permitted, under a penalty of any sum not exceeding ten pounds, to allow his or her premises, yards, closets, or drains, to be offensive or a nuisance to the neighbouring householders or residents.

88. No noisome or offensive trade shall be permitted, under a penalty of any sum not exceeding ten pounds, to be carried on in any premises, to the inconvenience or annoyance of the residents of neighbouring or adjoining houses or premises.

89. Upon representation by any respectable householder, that the house, premises, yards, closets, or drains of the neighbouring or adjoining premises are a nuisance, or offensive, the Inspector of Nuisances, or any other person appointed by the Council, shall make an inspection of the premises complained of; and the officer of the Council shall have full power, without any other authority than this By-law, to go upon such premises for the aforesaid purpose; and if any such premises be found to be a nuisance, or otherwise offensive, notice in writing shall be given to the proprietor or resident of such premises, that if, within seven days after the service of such notice, the nuisance shall not be removed, the proprietor, tenant, or occupant of the aforesaid premises, shall, upon conviction before any two Justices of the Peace, be liable to any penalty not exceeding twenty pounds.

90. Upon representation, by any respectable ratepayer, that the house or neighbouring or adjoining premises is of ill-fame, it shall be lawful for the Mayor and any Alderman to cause the residents of such house or premises to furnish to the Council a list of the names, ages, sex, birth-place, and occupation of all the inmates of the said house or premises; and upon non-compliance with such request, or if, upon consideration, the Mayor and any Alderman consider the house to be one of ill-fame, they shall, with the sanction of the Council, declare the same to be a nuisance; and the Mayor shall cause a notice in writing to be served upon such householders or residents to discontinue or abate the said nuisance, within forty-eight hours after the receipt of such notice, otherwise they shall, upon first conviction before any two Justices of the Peace, be liable to a penalty of not less than forty shillings, nor more than fifty pounds, and on second conviction shall be liable to a penalty of not less than five pounds nor more than fifty pounds.

91. For preserving the cleanliness of the said Borough, and the health of the inhabitants thereof, it shall be lawful for the Inspector of Nuisances, from time to time, and when and as often as he or the Council shall see occasion, to visit and inspect the butchers' shambles and slaughter-houses, and to give such directions concerning the cleansing of such shambles and slaughter-houses, both within and without, as to him or the said Council shall seem needful; and any butcher, and the owner or occupier of any such shambles or slaughter-houses, who shall obstruct or molest any such officer in the inspection thereof, or who shall refuse or neglect to comply with such directions within a reasonable time, shall, upon the view of any Justice of the Peace, or on conviction on the complaint of any such officer, forfeit and pay any sum not exceeding ten shillings.

Swine, horses, goats, &c., not suffered to wander about the streets.

92. It shall not be lawful for any person whatsoever to suffer any kind of swine, or any horse, ass, mule, sheep, or goat, or other cattle belonging to him or her, or under his or her charge, to stray or go about, or to be tethered or depastured in any road, street, or public place; and any person who shall so offend shall forfeit and pay, in respect of every such animal, a sum not exceeding forty shillings.

Hog-sties and nuisances not removed on complaint.

93. In case any privy, hog-sty, boiling-down, or any other matter or thing (which shall, at any time or times hereafter be in any place within the said Municipality), shall be or become a nuisance, it shall be lawful for the said Council, upon any complaint thereof to them made by any of the inhabitants, and after due investigation of such complaint, by notice in writing, to order that such privy, hog-sty, boiling-down, or other matter or thing, being a nuisance, shall be remedied and removed within seven days after such notice shall have been given to the owner or occupant of the said premises wherein such nuisance shall exist, or shall have been left for such owner or occupier at his or her last or usual place of abode, or on the said premises; and every such owner or occupier neglecting to remedy or remove such nuisance, pursuant to such notice and to the satisfaction of the Council, shall, on conviction, forfeit and pay the sum of ten

pounds for every such neglect or disobedience. And also, it may be lawful for the said Council to cause to be indicted for such nuisance, such person so neglecting or disobeying any such notice, at the then next Court of General or Quarter Sessions to be held in or nearest to the said Municipality; and such person or persons being found guilty thereof, such nuisance or nuisances shall be removed, taken down, and abated, according to the law with regard to public or common nuisances.

Swine not to be kept.

94. It shall not be lawful for any person whomsoever, to breed, feed, or keep any kind of swine in any house, building, yard, garden, or other hereditaments, situate and being in or within forty yards of any street or public place in the Borough; and any person who shall so offend, shall, on conviction, forfeit and pay for every such offence any sum not exceeding forty shillings nor less than five shillings.

Drawing or trailing timber.

95. If any person shall haul or draw, or cause to be hauled or drawn, upon any part of the streets, roads, or public places, any timber, stone, or other thing, otherwise than upon wheeled carriages, or shall suffer any timber, stone, or other thing which shall be carried principally or in part upon wheeled carriages, to drag or trail upon any part of such streets or public places, to the injury thereof, every such person so offending shall, upon conviction, forfeit and pay for every such offence a sum not exceeding five pounds; and it shall be lawful for any constable to apprehend any person whom he shall find in the act of committing such offence, and to convey such person before any Justice of the Peace, to be dealt with according to law.

No rock to be blasted without notice to Mayor, &c.

96. Any person who shall be desirous of blasting any rock within the Municipality, shall give notice in writing, twenty-four hours previously, to the Mayor or Council, who shall appoint, in writing, a time when the same may take place, and give such other directions as he or they may deem necessary for the public safety; and if any person shall blast, or cause to be blasted, any rock within the limits aforesaid, without giving such notice, or shall not conform to the directions given to him by the Mayor or Council, he or she shall forfeit and pay for every such offence any sum not more than twenty pounds, and the proof of such authority as aforesaid shall be on the party proceeded against for a breach of this enactment.

Wells to be covered over, &c.

97. Every person who shall have a well situated between his dwelling-house or the appurtenances thereof, and any road, street, or footway within the limits of the said Borough, or at the side thereof, or in any yard or place open or exposed to such road, street, or footway, shall cause such well to be securely and permanently covered over; and if any person, having such well as aforesaid, shall fail to cover and secure the same within twenty-four hours after notice in writing shall have been given to him or her by any officer of the said Council, or shall have been left for such person at his or her usual or last known place of abode, or on the said premises, shall, on conviction before any Justice of the Peace, forfeit and pay the sum of two shillings and sixpence for every such offence.

Enclosures around scaffolding.

98. If any person shall dig or make, or cause to be dug or made, any hole, or leave or cause to be left, any hole in or adjoining to any street, road, or public place, for the purpose of making any vault or vaults, or the foundation or foundations to any house or other building, or for any other purpose whatsoever, and shall not forthwith enclose the same in a good and sufficient manner, or shall keep up or cause to be kept up and continued, any such enclosure for any time which shall be longer than shall be reasonably required, or shall not, when thereunto required by the said Council or its officer, well and sufficiently fence or enclose any such hole within twenty-four hours after he shall be required to do so by the said Council or officer, and in the manner, and with such materials as they or he shall direct, and to their and his satisfaction, and shall not place a light upon the said inclosure, and keep the same constantly burning from sunset to sunrise during the continuance of such enclosure, or shall fail to place or erect a fence, rail, or boarding around any scaffolding or ladder that may be required during the repairs or erection of any building (such fence, rail, or boarding, not to extend beyond the footway of any street), or fail to keep, during the existence of such fence, rail, or boarding, a light burning from sunset to sunrise at each corner of the same, then and in every such case the person so offending shall, on conviction before any Justice of the Peace, forfeit and pay for every such offence, and for every such refusal or neglect, any sum not exceeding five pounds nor less than forty shillings.

Erections, &c., in front of public streets, roads, &c.

99. No person shall build, erect, put up, or remove, or cause to be built, erected, put up, or removed, any building, house, shop, warehouse, wall, or fence, fronting any public street, road,

or thoroughfare, unless he shall have previously given seven days' notice of his intention to commence such works, to the Mayor or the Council Clerk of the Municipality; and any person so offending shall, upon conviction before a Justice of the Peace, pay for every such offence any sum not less than ten shillings nor more than forty shillings.

Slops, night-soil, &c., to be conveyed away only at certain hours, &c.

100. If any person or persons shall drive, or cause to be driven, any cart or other carriage, with any night-soil or ammoniacal liquor therein, through or in any of the streets or roads, or public places within the said Borough, between the hours of five o'clock in the morning and ten o'clock at night, or shall fill any cart or other carriage so as to turn over or cast any night-soil, ammoniacal liquor, slop, mire, or channel dirt, or filth, in or upon or near to any of the said streets or other public places, it shall and may be lawful for any constable whomsoever to seize and apprehend the offender, and to convey him before any Justice of the Peace; and in order to prevent nuisances, it shall not be lawful for any person to deposit night-soil, ammoniacal liquor, or other offensive matter, nearer to any street, road, or dwelling-house, than shall be directed by the said Council or their officer; and all night-soil or other offensive matter shall be removed within the hours prescribed, in properly covered and water-tight carts or other vehicles; and no vehicle used for this purpose shall be allowed to stand on any premises nearer to any road, street, or dwelling-house, than shall be directed by the said Council or their officer; and every person so offending shall, for every such offence, forfeit and pay the sum of five pounds; and in case the person so offending cannot be apprehended, then the owner of such cart or carriage in which such night-soil, ammoniacal liquor, slop, filth, mire, or channel dirt, shall be put or placed, and also the employer of the person so offending, shall be liable to and forfeit and pay such penalty as aforesaid.

Interrupting free passage, &c., driving on wrong side of road, &c.

101. If the driver of any waggon, wain, cart, or dray of any kind, shall ride upon any such carriage in any street as aforesaid, not having some person on foot to guide the same (such carts as are drawn by one horse and driver, or guiding with reins only, excepted),—or if the driver of any carriage whatsoever shall wilfully be at such distance from such carriage, or in such a situation whilst it shall be passing upon such street, that he cannot have the direction and government of the horse or horses, or cattle drawing the same,—or if the driver of any waggon, cart, dray, or coach, or other carriage whatsoever, meeting any other carriage, shall not keep his waggon, cart, dray, or coach, or other carriage, on the left or near side of the road, street, or thoroughfare,—or if any person shall, in any manner, wilfully prevent any other person or persons from passing him or her, or any carriage under his or her care upon such street, or by negligence or misbehaviour prevent, hinder, or interrupt the free passage of any carriage or person in or upon the same,—every such driver or person so offending shall, upon conviction before any Justice of the Peace, forfeit and pay any sum not exceeding forty shillings nor less than ten shillings; and it shall be lawful for any constable to seize and convey any person so offending before any Justice of the Peace, to be dealt with according to law.

Furious or careless driving, &c.

102. Any person who shall ride or drive through or upon any road, street, or public place, negligently, carelessly, or furiously, so as to endanger the life or limb of any person, or to the common danger of the passengers, shall, on conviction before any Justice of the Peace, forfeit and pay any sum not exceeding ten pounds nor less than two pounds.

Affixing placards on walls, and chalking thereon.

103. It shall not be lawful for any person to paste, or otherwise affix, any placard or other paper upon any wall, house, or building, by chalk or paint, or in any other manner, unless with the consent of the owner thereof; and any person who shall be guilty of any such offence shall, on conviction before any Justice of the Peace, forfeit and pay the sum of ten shillings.

Carrying carcasses of newly-slaughtered meat.

104. Every person who shall carry or convey, or cause to be carried or conveyed, in any street or public place, the carcass, or any part of the carcass, of any newly-slaughtered animal, without a sufficient and proper cloth covering the same, for the concealment from public view, shall be liable, on conviction, to a penalty of any sum not exceeding forty shillings for every such offence.

Rain not to be carried to footways.

105. It shall not be lawful for any person whomsoever to carry, by means of pipes, gutters, or other contrivances, any rain-water from the roof of his or her premises or house, nor permit nor suffer any rain-water to drop from the roof of his or her premises or house, upon any part of the footways of any

street or public place within the Borough; and any owner or occupier of any such house or premises, who shall neglect or refuse to remedy or remove any such pipes, gutters, or contrivances, when required to do so by any municipal officer, shall, on conviction, forfeit and pay any sum not exceeding ten shillings, and a like sum for every day or part of a day that the same shall not be remedied or removed: Provided that the owner or occupier of any such house or premises, may convey any such rain-water, by means of pipes laid under the surface of any such footways, into the gutters adjoining the same: And provided also, that all such pipes shall be laid down to the satisfaction of and under the superintendence of the Town Surveyor, or any other person appointed by the Council.

Breaking horses, &c.

106. It shall not be lawful for any person or persons in any street or public place within the Municipality, to drive any carriage or carriages for the purpose of breaking, exercising, or trying horses, or to ride, drive, or lead any horse, mare, or gelding, for the purpose of airing, exercising, trying, breaking, showing, or exposing for sale, any such horse, mare, or gelding, otherwise than by passing quietly through such streets or public places: Provided further, that no person or persons shall be

allowed within the said Borough to furiously or carelessly drive any horse, mare, or gelding to or from any public watering-place, creek, or river; and the person or persons in charge thereof, and who shall be *prima facie* presumed to be the owner of the said animal or animals, and shall be liable accordingly, and every person so offending, upon conviction before any Justice of the Peace, shall forfeit and pay, for every such offence, any sum not exceeding forty shillings nor less than five shillings.

Jurisdiction of offences.

107. Unless where hereinbefore otherwise directed, all complaints of offences against these By-laws shall be heard and determined within three months from the committal of the offence complained of; and no such complaint shall be made unless within one month from the time when such offence shall have been committed.

Made and passed by the Borough Council of Morpeth, this thirteenth day of October, one thousand eight hundred and sixty-eight.

CHAS. E. JAKUES,
Mayor.

JOHN J. HAYNES, Council Clerk.

1869.

NEW SOUTH WALES.

MUNICIPALITIES.

(MUNICIPAL DISTRICT OF NUMBA—BY-LAWS.)

Presented to Parliament, pursuant to Act 31 Vict., No. 12, sec. 158.

Colonial Secretary's Office,
Sydney, 31st July, 1869.

MUNICIPAL DISTRICT OF NUMBA.

BY-LAWS.

THE following By-laws, made by the Council of the Municipal District of Numba, for regulating their own proceedings, and the duties of the officers and servants of such Council,—for preserving order at meetings of the Council,—for determining the times and modes of collecting and enforcing payments of rates,—for preventing and extinguishing fires,—for suppressing nuisances, &c., &c.—having been confirmed by His Excellency the Governor, with the advice of the Executive Council, are published in accordance with the requirements of the Municipalities Act of 1867.

WILLIAM FORSTER.

BY-LAWS for regulating the proceedings of the Council of the Municipal District of Numba, and the duties of the officers and servants of such Council,—for preserving order at meetings of the said Council,—for determining the times and modes of collecting and enforcing payments of rates,—for preventing and extinguishing fires,—for suppressing nuisances,—for compelling residents to keep their premises free from unwholesome matters,—regulating and licensing vehicles plying for hire, and sale of butchers' meat; opening new public roads, ways, and parks,—aligning and cleansing roads and streets,—regulating the supply and distribution of water,—sewerage and drainage,—preserving trees and shrubs,—preventing or regulating the bathing or washing the person in any public water near a public thoroughfare,—preserving public decency,—providing for the health of the Municipality, and against the spreading of contagious or infectious diseases,—and generally maintaining the good rule and government of the said Municipality.

PART I.

Council days and hours.

1. The Council shall meet for the dispatch of business at the hour of 5 o'clock p.m. on every alternate Thursday, unless such day be a public holiday. In the latter case, the meeting shall be held on such other day as the Mayor may appoint.

No meeting of Council unless a quorum or a moiety th reof.

2. The business of the Council shall commence with a quorum or a moiety of the Council. If at the expiration of thirty minutes from time of meeting there is no quorum or moiety thereof, no business shall be transacted, but the names of the Aldermen present shall be recorded in the minute-book.

Absence of Mayor, an Alderman to be chosen as Chairman.

3. If the Mayor be not present thirty minutes after the time appointed for the meeting of the Council, an Alderman shall be elected to preside as Chairman for the time being.

Mayor or Chairman may give a casting vote.

4. The Mayor or Chairman of the Council for the time being may take part in all the proceedings of the Council; and, in case of any equality of votes upon any division, may give a casting vote in addition to his vote as Alderman.

ORDER OF BUSINESS.

5. The following shall be the order of business at all meetings of the Council, other than special meetings.

Minutes to be read and verified.

1. The minutes of the last preceding meeting to be read, corrected if erroneous, and verified by the signature of Mayor or other Chairman. No discussion to be permitted upon such minutes, except as to whether they are correct or not.
2. Reading of copies of letters sent by authority of the Council.
3. Reading of letters received, and considering and ordering thereon.
4. Reception and reading of petitions and memorials.
5. Reading and ordering on report of Permanent Committee.
6. Reading and ordering on report of Select Committee.
7. Reading and ordering on reports of deputation.
8. Financial statement and accounts.
9. Special business not classified; order of the day, including subject arising from proceedings of former meetings.
10. Motions of which previous notice has been given.
11. Notices of motion.

All communications addressed to the Council Clerk.

6. All communications by letter, intended for the Council, shall be made and addressed to the Clerk, and all applications and memorials shall be addressed to the Mayor, under cover to the Council Clerk.

Notice of motion limits.

7. No notice shall be decided on at any meeting of the Council, unless such notice (in writing), signed by the Alderman proposing, shall have been given seven clear days before the next meeting of the Council.

Order of the day.

8. The order of the day shall include all business of which due notice has been given; and also all matters arising out of former meeting of the Council.

Notice of motion struck out.

9. Any motion entered on the notice paper, and the Alderman having given notice of the same being absent, and no other Alderman deputed to bring forward such motion, when the business is called in order such motion shall be struck out.

All notices of motion to be numbered by the Council Clerk. Liberty to withdraw notice of motion.

10. All notices of motion, and all requisitions from Aldermen and directions from the Mayor, as to the entry of any particular matter of business for the consideration of the Council at its then, next, or any future meeting, shall be numbered by the Council Clerk as they are received; and each such notice, requisition, and direction, shall be preserved by such clerk until after the matter to which it relates shall have been disposed of, and the record in the minute-book of the manner in which such matter has been so disposed of, shall have been duly verified as required by section 5 of this part of these By-laws: Provided, however, that the person giving or forwarding any such notice of motion, requisition, or direction, to the Council Clerk, shall be at liberty to withdraw the same at any time before the making up of the business paper.

By-laws open for inspection seven days at Council Chamber.

11. No By-law shall be decided on without due notice (as in cases of motion); and a copy of the proposed By-law shall be open in the Council Chamber seven days, for the inspection of all ratepayers, free of charge, or of any person duly qualified to vote at elections under the Municipalities Act.

Order of debate.

12. Every Alderman who shall move or second any motion, or shall propose or second any amendment, or shall take any part in any debate or discussion, or shall put or reply to any question, or shall make any statement, or shall in any other way or for any other purpose address observations to the Council, shall, while so doing, stand up in the customary place, unless he shall be prevented from so doing by reason of some bodily infirmity, and shall address himself to the Mayor or other Chairman then presiding: Provided that in case of a question, such question may, by permission of the Mayor or Chairman, be put directly to the Alderman or officer to be questioned, and may be replied to in like manner; but in every such case, the question so put and the answer thereto shall be subject to every legal objection on the ground of disorder or irrelevancy; and all members of the Council shall, on all occasions, when in such Council, address and speak of each other by their official designations, as Mayor, Chairman, or Alderman, as the case may be.

GENERAL GOOD RULE AND GOVERNMENT OF THIS MUNICIPALITY.

Fire or combustible materials, &c.

13. Every person who shall place, or knowingly permit to be placed, in any house, yard, workshop, out-offices, or other premises, fire, gunpowder, or combustible or inflammable materials of any kind, in such a manner as to endanger contiguous buildings, shall, on conviction, for every such offence, forfeit and pay a penalty of not more than five pounds, and shall forthwith remove such fire, gunpowder, or combustible or inflammable materials. And every such person who shall suffer any such fire, gunpowder, or combustible or inflammable materials to remain as aforesaid, for seven days after any such conviction, shall be deemed guilty of a further offence against this By-law.

Setting fire to matter without notice.

14. Every person who shall wilfully set fire to any inflammable matter whatsoever in the open air without having given notice in writing to the occupiers of the land adjoining to the land upon which such matter shall be, and also to the Council Clerk, of his intention so to do, or within twenty-four hours after giving the last given of such notices, or between the hours of four in the afternoon of any day and eight in the morning of the following day, shall forfeit a sum not exceeding five pounds.

Fireworks, &c.

15. Every person who shall light any bonfire, tar-barrel, or firework upon or within sixty yards of any public or private

street, or any public place, or shall sell gunpowder, squibs, rockets, or other combustible matter, by gas, candle, or other artificial light, shall forfeit a sum not exceeding five pounds.

Officers and Servants—Notice to candidates.

16. No appointment to any permanent office at the disposal of the Council shall take place until public notice shall have been given as hereinafter provided, inviting applications from qualified candidates for the same. The salary or allowance attached to such office shall in every case be fixed before such advertisement is published; and all applications, as advertised, shall be called for by tender.

Mode of appointment.

17. Every such appointment shall be made by ballot, in such mode as may at the time be determined on, whenever there is more than one candidate for such permanent office.

Exceptional cases forwarded.

18. Nothing herein contained shall be held to prevent the appointment by the Council, without advertisement, of any salaried officer or servant of the Corporation, to any other permanent office or employment at the disposal of such Council to which no further salary is attached; or to prevent the appointment in like manner of any such officer or servant to any other office or employment of which the duties require only occasional attention, and are to be paid for by allowances proportionate to the extent of such duties; or to prevent any similar appointment or employment by the Mayor, or by any Committee or officer of the Council, of any such officer or servant under the authority of any By-law, or to prevent the employment, as may be from time to time found necessary, and as may be ordered by the Council, of any workmen or labourers on the public works of this Municipality.

Bonds for good conduct.

19. All bonds given by officers or servants of the Council for the faithful performance of their duties, shall be deposited with the attorney or the banker of the Corporation, as the Council may order; and no officer or servant of the Council shall be received as surety for any other such officer or servant.

Duties of Council Clerk forwarded.

20. The Council Clerk, in addition to the duties which by the Municipalities Act of 1867, or by the present or any other By-laws thereunder he may be required to perform, shall be the Clerk of all Revision Courts held in this Municipality, under the provisions of the said Municipalities Act. He shall also, under the direction of the Mayor, conduct all correspondence which may be necessary on the part of the Council. He shall likewise have charge of all the records of such Council, except such books or documents as may (as hereafter provided) be entrusted to any other officer, and shall be responsible for the safe keeping of such records. He shall generally assist the Mayor in carrying out the orders of the Council and the duties of such Mayor.

How books of account are to be kept and inspected.

21. The Treasurer shall keep such books of account, and such records, statements, and memoranda of receipts and expenditure, in such manner and form as the Council may from time to time direct. It shall be the duty of the Finance Committee to inspect all such books of account, records, statements, and memoranda, from time to time, to ascertain that the same are properly kept, and to report at once to the Council any act of neglect or appearance of inefficiency which they may have discovered in the keeping of the same; also, to report to the Council, from time to time, any changes which such Committee may think advisable in the mode of keeping the accounts.

Duties of Treasurer, &c.

22. The Treasurer shall have charge of such books of account and other records of the Council as are mentioned in section 21 of this part of these By-laws, and shall be responsible for the safe keeping of the same. Any other officer of the Council may have any other records thereof committed in his charge, by an order of the Council, and in such case, shall be responsible for the safe keeping of such records.

Special powers of Mayor.

23. The Mayor shall exercise a general supervision over all officers and servants of the Corporation, and may order the preparation of any such return or statement, or the giving of any such explanation or information by any such officer or servant as he may think necessary, unless such return or statement shall have been already prepared, or such explanation or information already given, and such return, statement, explanation or information is on record, as hereinbefore provided; or unless the Council shall have expressly forbidden or dispensed with the preparation of such return or statement, or the

giving of such explanation or information. All returns or statements as aforesaid shall be in writing, and shall be recorded. All such explanations or information may, except as hereinafter provided, be either rendered *viva voce*, or put into writing, as the Mayor may direct.

How complaints against officers, &c., are to be dealt with.

24. All complaints against officers or servants of the Corporation must be in writing, and must in every case be signed by the person or persons complaining; and no notice whatever shall be taken of any complaint which is not in writing or is anonymous. All such complaints may be addressed to the Mayor, who, immediately upon the receipt of any such complaint, and without laying the same before the Council, shall have power to investigate the same. And if any such complaint be made to the Council, or to any member or officer thereof, it shall be referred to and investigated by the Mayor, before it shall be in any way (otherwise than by such reference) ordered upon or dealt with by the Council; provided that every report, explanation, and information which may be made or rendered in reference to every such complaint shall be in writing, and such Mayor shall state in writing the result of every such investigation, and his opinion as to what order (if any) ought to be made in connection therewith. And such complaints, with all reports, explanations, and informations as aforesaid, in connection therewith, and the Mayor's statement as aforesaid, thereon, shall be laid before the Council at the next meeting thereof, which shall be holden after the Mayor shall have made such statement, and shall be duly recorded. Provided further, that nothing herein contained shall be held to affect in any way the special powers conferred on the Mayor by section 152 of the Municipalities Act of 1867, or any other special power which now is or hereafter may be conferred by statute on such Mayor.

Common Seal of the Council.

25. The Common Seal shall not be attached to any document without an express order of the Council. In every case where such Common Seal has been ordered to be attached to any document, such document shall also be signed by the Mayor, or in case of his absence or illness, by two Aldermen, and countersigned by the Council Clerk.

Impressions of Seal not to be taken, &c., without leave of Council. Penalties.

26. No member or officer of the Council shall be at liberty to take any impression of the Corporate Seal, or to show, lay open, or expose any of the books or records of the Council, to any person other than a member of the same, without leave from such Council, except as otherwise provided by law. Any member or officer of the Council who shall be guilty of a breach of this section, shall be liable on conviction, for the first offence, to a penalty of not less than five shillings nor more than two pounds; for a second offence, to a penalty of not less than one pound nor more than ten pounds; and for a third offence, and every subsequent one, to a penalty of not less than five pounds nor more than twenty-five pounds.

Records not to be removed, &c. Penalties. Exceptional circumstances. Receipt to be given in every case before document received. Records not to be removed. Proviso as to use of records as matters of evidence.

27. Any person removing any such book or record of the Council as aforesaid, from the Council Chamber, or the place where by direction of the Council, such book or other record is usually kept, without leave for such removal having been first obtained from such Council, or without other lawful cause for such removal, as hereinafter provided, shall for every such offence, be liable to a penalty of not less than ten shillings nor more than ten pounds. And nothing herein contained shall be held to affect the further liability of any person who shall have removed such book or other record as aforesaid, and shall have not returned the same, to prosecution for stealing such book or record, or to an action at law for detention of the same, as the circumstances of the case may warrant. Provided that leave for temporary removal of a book or other record may be granted to the Council Clerk or the Treasurer, by the Mayor, in order that such Clerk or Treasurer may post up entries, prepare returns, or perform any other duty which it may be necessary that he should perform. Also, that the Mayor, or the Chairman of any Committee, or any Alderman acting for any such Chairman of any Committee, may temporarily remove any record necessary for the preparation of a minute or a report, or for the purposes of any prosecution or suit at law by, against, or at the instance of the Council. But in all such cases, such Clerk, Treasurer, Mayor, Chairman, or Alderman, as the case may be, shall give a receipt under his hand for every document so removed; and every such receipt shall be carefully preserved among the records until the book or other record to which it refers shall have been returned, when such receipt shall be destroyed. And provided also, that the Mayor, Council Clerk, or other officer of the Council, who may be subpoenaed to

produce any book or other record of the Council in a Court of law, shall have the right to remove such book or other record for the purpose of obeying such summons, but shall return such book or record as speedily as may be, and shall before removing the same, leave at the Council Chamber a receipt for such book or other record as aforesaid. And every such person so temporarily removing any book or other record of the Council as aforesaid, shall be legally responsible for the safe keeping and return of the same.

Penalty for defacing or destroying record.

28. Any person destroying, defacing, or altering any record of the Council shall, for every such offence, be liable to a penalty of not less than five pounds nor more than fifty pounds.

SUPPRESSING OF NUISANCES, &c.

Dead animals, &c., not to be thrown into any water-course, &c.

29. Any person who shall cast any filth, rubbish, or any dead animal, or any animal with intent of drowning, into any public water-course, drain, sewer, water-hole, river, creek, or canal, or shall permit or suffer any slops, or suds, or filth, to flow from his or her premises, over any of the footways, streets or roads, of this Municipality, or shall obstruct or divert from its channel any drain, sewer, or water-course, river, creek, or canal, shall, on conviction thereof, forfeit and pay a sum not exceeding one pound, and shall pay the cost of removing such filth or obstruction, or of restoring such drain, sewer, water-course, river, creek, or canal to its proper channel.

Swine not to be kept; or swine, horse, goat, &c., suffered to wander about the roads or streets, &c.

30. Any person who shall breed, feed, or keep, any kind of swine in any house, building, yard, garden, or other hereditament, situate and being in or within forty yards of any road, street, or public place in this Municipality, or shall suffer any kind of swine belonging to him or her, or under his or her charge, to stray or go about, or to be tethered or depastured in any such road, street, or public place, shall, on conviction thereof, forfeit and pay for such offence a sum not exceeding forty shillings.

Putrid carcass of any animal lying exposed in the Municipality without being removed or destroyed.

31. Any person who being the owner of the putrid carcass of any dead horse, bullock, cow, sheep, pig, goat, dog, or other animal, and shall allow the same to lie exposed within any part of this Municipality, and who shall not destroy by burning, or burying such putrid carcass under the surface of the ground, three feet at least, within twelve hours after due notice has been given him, shall, for the first offence, forfeit and pay a sum not exceeding twenty shillings,—for the second offence, a sum not exceeding forty shillings,—and for every subsequent offence, a sum not exceeding five pounds.

Throwing filth, &c., on public roads, streets, &c.

32. That if any person shall throw, deposit, place, or leave, or permit, or suffer to run or flow, any night-soil, offal, putrid meat or fish, or entrails of fish, carrion, dead animals, blood, dung, manure, oyster-shells, bones, broken glass, earthenware, or china, cut pieces of tin, zinc, hoop-iron, or sheet iron, dust, ashes, refuse of fruit or vegetables, or other offensive or dangerous matter or thing, or earth thrown out from excavations, into or upon any public thoroughfare, court, market, wharf, highway, or reserve within the said Municipality, or into any channel, drain, sink, creek, or water-course, or shall allow any such or any deleterious matter or thing whereby the health and safety of the inhabitants might be endangered, to accumulate or remain on any private premises, land, or property within this Municipality, every person so offending shall, for such offence, forfeit and pay a sum not exceeding forty shillings.

Hog-sties, privies, or other matters, becoming a nuisance.

33. In case any privy, hog-sty, or any other matter or thing whatsoever, shall at any time be or become a nuisance, by causing unwholesome smells to arise within any part of this Municipality, it shall be lawful for any two Justices, upon complaint thereof by any person, to investigate such complaint, and to order that such privy, hog-sty, boiling-down establishment, or other matter or thing, being a nuisance as aforesaid, to be cleansed, removed, or discontinued, as the case may be, within seven days after such order has been made, and notice given to the owner or occupier of the premises whereon such nuisance shall exist; and every such owner or occupier neglecting to remedy or remove such nuisance pursuant to such notice or order; and to the satisfaction of such Justices, shall forfeit and pay a sum not exceeding ten pounds for every such neglect or disobedience; and also, it shall be lawful for such Justices to indict, or cause to be indicted, for such nuisance, such person or persons so neglecting or disobeying any such notice or order, at the then next Court of General Quarter Sessions to be held nearest to this Municipality; and the person or persons found guilty shall be subject to said punishment, and to such further order as the Justices assembled at such Sessions shall lawfully decide.

Ferocious dogs or bitches on public road or street, &c.

34. That if any person shall permit or suffer to be at large, in any public thoroughfare, road, or street, market, wharf, highway, or reserve within this Municipality, any ferocious dog or bitch not being muzzled, or if any person shall, after public notice given by the Mayor or his deputy, directing dogs to be confined on suspicion of canine madness, permit or suffer any dog or bitch to go at large, or if any dog or bitch otherwise quiet shall at any time run after and annoy any person on foot or on horseback, or in any vehicle, so as to cause alarm and danger, then the owner of such dog or bitch shall, for such offence, forfeit and pay a sum not exceeding five shillings,—and for the second offence pay a sum not exceeding ten shillings,—and for every subsequent offence, pay a sum not exceeding forty shillings.

Furiously riding or driving horses, &c.

35. That if any person riding or driving any horse, mule, or other animal harnessed to any dray, cart, waggon, buggy, gig, truck, or other carriage or vehicle, or shall within this Municipality, ride or drive the same furiously so as to create alarm and danger to the public, or to endanger the safety of any person on any public thoroughfare in this Municipality, every person so offending shall for such offence forfeit and pay a sum not exceeding ten pounds nor less than two pounds.

Cattle, &c., not allowed to go about roads, streets, &c.

36. It shall not be lawful for any person whomsoever to suffer any kind of cattle, horse, ass, mule, sheep, swine, or goat, belonging to him or her, or under his or her charge, to depasture, stray, or go about, or to be tethered or depastured in any street, road, or public place within this Municipality; and any person who shall so offend, shall forfeit and pay, in respect of every such offence, any sum not exceeding two pounds nor less than five shillings.

Indecent exposure.

37. It shall not be lawful for any person to bathe in any waters exposed to public view from any road, street, or public place within this Municipality, between the hours of six a.m. and eight p.m.; and every person who shall indecently expose himself or herself, by bathing as aforesaid within the prohibited time herein mentioned, shall on conviction forfeit and pay any sum not exceeding one pound.

Carrying meat for sale uncovered.

38. Every person who shall carry or convey, or cause to be carried or conveyed in any road, street, or public place in this Municipality, the carcass, or any part of the carcass of any newly-slaughtered animal, without a sufficient and proper cloth covering the same for the concealment from public view, or shall hawk or carry about butchers' meat for sale, without covering the same as aforesaid, shall on conviction for every such offence, pay a penalty not exceeding two pounds.

Blacksmith's furnace.

39. Every blacksmith, whitesmith, nail-maker, metal-founder, lime-burner, brick-maker, potter, or other person using a forge, furnace, or kiln, and having a door, window, or aperture fronting or opening into or towards any road, street, lane, or passage, and not closing such door, or not fastening the shutters or other fastenings of such window, and closing such aperture or placing a screen before the same every evening, within one hour after sunset, so as to effectually prevent the light from showing through the doorway, window, or aperture, next or upon such road, street, lane, or passage, shall, upon conviction for every such offence, pay a penalty not exceeding two pounds.

Coach, cart, waggon, dray, &c., lying on road, streets, in this Municipality.

40. Any person who shall set or place, or shall set out, lay or place, or shall cause or procure, permit or suffer to be set out, laid or placed, any coach, cart, wain, waggon, dray, wheelbarrow, hand-barrow, sledge, truck, or other carriage, upon any road, street, or carriage-way within this Municipality, or shall set out, lay and place, or shall cause or procure, permit or suffer to be set out, laid or placed, any coach, cart, wain, waggon, dray, sledge, truck, wheelbarrow, hand-barrow, or other carriage, upon any such road or carriage-way, except for the necessary time of loading or unloading such cart, wain, waggon, dray, sledge, truck, or other carriage, or taking up or setting down any fare, or waiting for passengers when actually hired, or harnessing or unharnessing the horses or other animals from such coach, cart, wain, waggon, dray, sledge, truck, or other carriage, or if any person shall set or place, or cause to be set or placed in or upon any road, street, or carriage-way within this Municipality, any timber, stones, bricks, lime, or other materials or things for building whatsoever, unless the same shall be enclosed, or shall set or place or cause to be set or placed, any plough, harrow, or other farming implements, upon any road, street, or carriage-way of this Municipality, and shall not immediately remove all or any such matters or things, after notice being served upon him or her, shall upon conviction for

every such offence, forfeit and pay for the first offence a sum not exceeding two pounds nor less than five shillings.

Obnoxious weeds.

41. Any person allowing the weeds known as the Bathurst burr, or Scotch thistle, or other noxious weed, to grow upon his or her land, and failing to destroy the same within three days after due notice from the Council has been served upon the owner or occupier of such land, shall forfeit and pay a sum for such offence, not less than ten shillings nor more than five pounds.

INJURIES TO ROADS OR STREETS.

Drawing timber, stones, on roads, streets, &c., not suspended or placed from wheel carriage. Overloading drays, &c. Penalties.

42. If any person shall draw any timber, stone, or water-cask, or other weighty matter, on or along any road, street, or highway maintained at the cost or being under the control and management of this Municipality, without the said articles being placed upon or suspended from a wheeled carriage proper for the purpose, or shall suffer any timber, stone, or other thing, which shall be carried principally or in part upon any wheeled vehicle or barrow, to drag or trail upon any part of such street, road, or public place, to the injury of the same, or shall lock or cause to be locked the wheel or wheels of any timber-carriage or other vehicle, or shall so overload his dray, cart, or other vehicles, so that an injury be caused to the said road, shall, for such offence, forfeit and pay the fine or sum of forty shillings.

Obstructing roads by falling timber, &c., or opening drains. Removing turf, gravel, stone, or other material, without leave from the Council.

43. Any person who shall dig or open any drain, or who shall cause any obstruction by falling trees or other materials in any road, street, or thoroughfare, or who shall remove from the banks of any creeks or river, or other lands over which the Council may have control, any turf, gravel, stone, or other material, without leave in writing first obtained from the Council, shall, on conviction before any Justice of the Peace, forfeit and pay, for every such offence, any sum not exceeding five pounds, nor less than one pound.

Destroying any shrub or tree, fence, gate, buildings, &c., on roads, streets, &c. Penalties.

44. Any person who shall wilfully destroy or damage any shrub or tree growing on any street, thoroughfare, or other place within this Municipality, or shall injure any hedge or fence, gate, building, in such street, thoroughfare, or other public place, or shall cut or remove any timber from any such street, thoroughfare, or other public place as aforesaid, shall, on conviction thereof, forfeit and pay for every such offence any sum not exceeding five pounds.

MISCELLANEOUS REGULATIONS.

Proprietor or driver of omnibus, coach—pay license.

45. Each proprietor or driver of every omnibus, coach, or other vehicle plying within this Municipality, shall pay to the Council thereof the charge or sum mentioned in the schedule hereunto annexed marked A.

Bakers, butchers, carriers, &c., pay license.

46. Each proprietor or driver of every butcher's, baker's, fruit and vegetable, fish, or other cart, plying within this Municipality, shall pay to the Council thereof the charge or sum mentioned in the schedule hereunto marked A.

License for power of plying within the Municipality.

47. Any person holding an authority or license from the Council as such proprietor, according to the form marked B, shall be permitted to ply within this Municipality, for the term therein mentioned, but it shall not be lawful for any person to ply as aforesaid until having obtained the said authority or license so to do. The said sum or charge for any vehicle shall be paid in advance for the year commencing on the first Tuesday of February, and ending on the last day of the municipal year, or rateably according to the date of such authority or license; and the production of such authority, license, or receipt, shall free the vehicle mentioned therein from all other charges by the Council, except fines and tolls, during the current year or the period therein specified.

Penalties for plying without license first obtained.

48. The driver of every such omnibus, coach, cart, or other public vehicle plying within this Municipality, shall, previous to doing so, pay into the said Council the said charge or sum therein provided in schedule marked A. And any person found plying in any vehicle within this Municipality without first having paid the said sum or charges, shall forfeit and pay, for every such offence, any sum not exceeding one pound nor less than ten shillings,—and in case of a second conviction within six months, not less than one pound.

SCHEDULE OF CHARGES.

A.

	s.	d.
For every vehicle plying within the Municipality, having four wheels, per annum	10	0
For every vehicle plying within the Municipality, having two wheels, per annum	5	0

SCHEDULE B.

License and certificate of payment for public vehicles. Municipality of Numba.

The undersigned do certify, that _____ of public vehicle No. _____, has paid unto the Council of this Municipality the sum of £ _____ for permission to ply within this Municipality for the period of _____ from the date hereof, and that the said _____ is hereby authorized and entitled to ply with the said vehicle within the limits of the said Municipality, for the period above stated.

Registered,

Council Clerk.

Mayor.

Approve of sites for slaughter-houses, &c.

49. The Council of this Municipality may appoint houses and places for the slaughtering of cattle and other animals, in such place or places as the said Council shall approve.

Cleanliness as to slaughter-houses, &c. Penalties.

50. Any officer of the Council shall be at liberty, at all times during the day, to enter such house or premises for the purpose of inspecting the same with reference to its cleanliness, and also all cattle slaughtered or intended to be slaughtered in such house or premises. And the owner or occupier of such house or premises who shall neglect to keep such house or premises in a clean and wholesome state, or shall refuse to admit the said officer for the purpose aforesaid, shall, for every such offence, on conviction thereof, forfeit and pay the sum of not more than two pounds.

Slaughtering infectious cattle.

51. Any person who shall knowingly slaughter, for human food, any animal infected with any disease affecting the milt or spleen, or shall offer or expose for sale any such animal or part thereof, or any animal which shall, after being slaughtered, be found to be so diseased, shall, on conviction thereof, forfeit and pay, for every such offence, any sum not exceeding fifty pounds nor less than ten pounds.

Estimates.

52. No work affecting the expenditure of the funds of the Municipality shall be undertaken until an estimate of the expense shall have been laid before the Finance Committee, reported thereon at the next meeting, and approved of by the Council.

Inspection of Works.

53. A Committee or Surveyor shall in all cases be appointed to inspect the work performed as soon as completed, and on the written approval of such Committee or Surveyor, the same shall be paid for.

Special Powers as to repairs on roads, &c.

54. The Mayor and any two Aldermen, or in the absence of the Mayor from the Municipality, any three Aldermen may, in writing, order any sum not exceeding £20 to be expended in repairing any public work under the control of the Council, which may be suddenly damaged: Provided that it shall appear to them that such repairs cannot be delayed until the next sitting of the Council, and they may appoint a proper person to execute such repair: Provided, always, that the making of such order shall be reported at the next meeting of the Council: And provided also, that no more than one such order shall be made between the termination of one meeting and the commencement of another.

COLLECTING AND ENFORCING PAYMENT OF RATES.

Limits as to payment of Rates, yearly or half-yearly.

55. The rates of this Municipality shall be levied and collected yearly or half-yearly as the Council shall deem fit; and, in the case of yearly collections, such rate shall be payable on or before the first Tuesday of August, and in the case of half-yearly payments, shall be payable on or before the first Tuesday of August and the first Tuesday of February, in each municipal year.

Office hours and days for attendance of Council Clerk.

56. All persons liable to pay any rates or assessments shall pay the same within the time prescribed by law, to the Council

Clerk, at the Municipal Chamber, Numba, during office hours, that is to say, between the hours of 10 o'clock a.m. and 4 o'clock p.m., on Mondays and Fridays in each week.

Council Clerk to report defaulters.

57. It shall be the duty of the Council Clerk to furnish the Council with a list of the names of all persons whose rates are unpaid at the expiration of thirty days from the time of notice prescribed by the Act; and the Mayor of the Municipality shall take immediate proceedings authorized by law, against all defaulters reported to the Council, in the manner aforesaid.

BAILIFF AND HIS DUTIES.

Appointment—find sureties.

58. The Bailiff shall be appointed by the Mayor and Council, and shall find two sureties to the extent of ten pounds each for the faithful performance of his duty, such sureties to be approved of by the Mayor.

Levies and distress. Bailiff's fees.

59. The Bailiff shall make all levies and distress for the recovery of rates under warrant in the form of the Schedule A in Municipalities Act of 1867, under the hand of the Mayor, or any Alderman who may for the time being be duly authorized to perform the duties of said office. The Bailiff shall be paid for every entry and levy made under these By-laws, according to the schedule B hereunto annexed.

Bailiff's powers. Sale by auction.

60. The Bailiff, and such assistants as he may take with him, shall enter into any part of the building or tenement in respect of which a warrant has been issued for the recovery of any rate or rates as aforesaid, and to distrain the goods therein or thereon, and to remain in such building, tenement, or other property in charge thereof; and if the sum for which such distress shall have been made or taken shall not be paid on or before the expiration of two days, it shall be lawful for the Bailiff to sell the goods so distrained, or a sufficient portion thereof, and if the party distrained upon shall so require, by public auction, either on the premises or at such other place within the Municipality as the Bailiff may think proper to remove thereto, such party consenting in writing to pay the charges of the auctioneer, if so sold; and the surplus, if any remain, after deducting the amount distrained for, together with the expenses attendant upon such distress and sale, shall be paid over to the owner of the goods so sold: Provided that nothing herein contained shall apply to the sale of any produce whatever, which may be growing upon the land at the time of making the distress: Provided always, that no distress shall be made on the goods of any casual visitor, or on the goods of any lodger in any house or apartment ordinarily let or used as a lodging house or apartment.

Inventory taken. In case of no person present. Posting same on some conspicuous place.

61. At the time of making a distress, the Bailiff shall make out a written inventory, in the form of the schedule hereto annexed and marked with the letter C, which inventory shall be delivered to the occupant of the land or premises, or the owner of the goods so distrained, or to some person for his or her behalf, resident at the place where the distress has been made; and in case there shall be no person at such place with whom such inventory can be left as aforesaid, then said inventory shall be posted on some conspicuous part of the land or premises on which the distress has been made.

Impounded on premises where rates are chargeable.

62. The Bailiff, in making a distress as aforesaid, may impound or otherwise secure the distress so made, of what nature or kind soever it may be, in such place or part of the land or premises chargeable with the rate as shall be most fit or convenient for this purpose; and it shall be lawful for any person whatsoever, after the expiration of the two days hereinbefore mentioned, to come and go to and from such place or part of the land or premises where any distress shall be impounded, in order to view and buy, and in order to carry off and remove the same on account of the purchase thereof.

Owner may direct the order for sale.

63. The owner of any goods so distrained upon, may at his or her option, direct and specify the order in which they shall be offered for sale; and the goods and chattels shall, in such case, be sold according to such directions.

Bailiff hand proceeds of sale to Council Clerk or Treasurer.

64. The Bailiff shall hand over to the Council Clerk or the Treasurer all proceeds of such distress, immediately after having received the same, with the particulars of the goods so distrained, and of the sale thereof.

Bailiff to appoint a deputy. Sanction of Mayor.

65. The Bailiff, with the sanction of the Mayor of this Municipality, may authorize any person to act temporarily as his deputy; and the person thus authorized shall have and exercise, for the time being, all the powers of the Bailiff himself; but the Bailiff and his sureties shall in every case be held responsible for the acts of his deputy.

SCHEDULE A.

Warrant of Distress.

I, _____, Mayor of the Municipality of Numba, do hereby authorize you, _____, the Bailiff of the said Municipality, or your deputy, to distrain the goods and chattels in _____, of _____, situate at _____, for _____, being the amount of rates due to this Municipality, to the day of _____, for the said _____, and to proceed thereon for the recovery of the said rate according to law.

Rate, £ _____
 Warrant _____
 Levy _____
 Dated this _____ day of _____ A.D. 18 _____
 To _____ Mayor.

SCHEDULE B.

Municipality of Numba.

Fees of Bailiff—	s.	d.
For making every entry or inventory in the execution of distress warrants.....	5	0
If in possession more than five hours, additional	5	0
And for every subsequent day whilst in possession	5	0
And 5 $\frac{1}{2}$ cent on the net amount of sale.		

SCHEDULE C.

Municipality of Numba.

I have this day, in virtue of a distress warrant under the name of the Mayor of this Municipality, dated _____, distrained the following goods and chattels in the dwelling-house, or in and upon the land and premises of _____, situate at _____, within the said Municipality of Numba, for the sum of _____, being the amount of rates due to the said Municipality, to the _____ day of _____, A.D. 18 _____.

Bailiff.

Penalties.

66. All penalties imposed under these By-laws may be sued for and recovered in a summary way, by distress and sale of the offender's goods, before any two Justices of the Peace, according to the provisions of the Act 14 Victoria, No. 43, and the Acts therein adopted; and all such penalties, when recovered as aforesaid, shall be paid into the corporate fund of the Municipality; and no person shall be liable to any penalty, fine, or forfeiture under these By-laws, unless proceedings in respect thereof be commenced within six months after the same shall have been incurred.

67. Every person committing a breach of any provision of any By-law hereinbefore mentioned, shall, when no specific penalty shall have been provided for such offence, be liable to a penalty not exceeding twenty pounds.

Made and passed by the Council of the Municipal District of Numba, this twenty-fourth day of June, in the year of our Lord one thousand eight hundred and sixty-nine.

HENRY GORDON MORTON,

Mayor.

JOHN BINDON,
 Council Clerk.

1869.

NEW SOUTH WALES.

MUNICIPALITIES.

(BOROUGH OF REDFERN—BY-LAWS.)

Presented to Parliament, pursuant to Act 31 Vict. No. 12, sec. 158.

Colonial Secretary's Office,
Sydney, 26th May, 1869.

BOROUGH OF REDFERN.

BY-LAWS.

THE following By-laws, made by the Council of the Borough of Redfern, to regulate their own proceedings—for the collection and enforcement of rates—for preventing and extinguishing fires—for the suppression of nuisances—for the care and management of the public roads and streets—for licensing vehicles plying for hire—and for the general good government of the Municipality,—having been confirmed by His Excellency the Governor, with the advice of the Executive Council, are published in accordance with the requirements of the Municipalities Act of 1867.

JOHN ROBERTSON.

BOROUGH OF REDFERN.

BY-LAWS.

BY-LAWS for regulating the proceedings of the Council of the Borough of Redfern—for the collection and enforcement of rates—for preventing and extinguishing fires—for the suppression of nuisances—for the care and management of the public roads and streets—for the licensing vehicles plying for hire, and general good government of the Municipality; and that the By-laws made and passed by the Municipal Council, under the Municipalities Act of 1858, sections 72 and 73, so far as the same may now be in force, shall be and the same are hereby repealed, and in lieu thereof the following shall be the By-laws of the Borough of Redfern.

No. 1.

General duties of the Mayor or Presiding Alderman.

1. The Mayor or Presiding Alderman shall preserve order, and his decision on all disputed points shall be final; but he is to state his decision without argument or comment.
2. The Mayor or Presiding Alderman may take part in all the proceedings of the Council.
3. The Mayor or Presiding Alderman shall put all questions, and declare the sense of the Council thereon.
4. If two or more members rise to speak at the same time, the Mayor or Presiding Alderman shall decide which member is entitled to pre-audience.
5. The Mayor or Presiding Alderman may, without waiting for the interposition of any member of the Council, call to order any member proceeding to speak a second time on the same question (except in explanation and without introducing any new matter). The member introducing a motion to have the right of reply; and every member shall have the liberty of speaking once on every amendment, as well as on the original motion.
6. The Mayor or Presiding Alderman shall, on every motion made and seconded, put the question first in the affirmative and then in the negative; and he may do so as often as may be necessary to enable him to form and declare his opinion from the show of hands as to which party has the majority.

Meetings.

7. The Council shall meet for the dispatch of business at the hour of seven p.m. on every alternate Friday, unless such day shall happen to be a public holiday. In the latter case the meeting shall be held on such other day as the Mayor may appoint.
8. If the Mayor be not present within thirty minutes after the time appointed for the meeting of the Council, an Alderman shall be elected Chairman for the time being.
9. In the event of a quorum not being present at such meeting within half an hour after the time appointed, the names of the Aldermen present shall be entered in the minute-book by the Council Clerk, and each Alderman absent shall pay a fine of five shillings, such fine to be remitted only in the case of illness or other cause deemed sufficient by a majority of the Council at the next meeting.
10. In the months of March and September in each year, the Mayor shall lay before the Council, for its adoption, the Treasurer's account for the previous half-year, duly audited, but should any Auditor not attend for the purpose of auditing the accounts, when required by authority of the Mayor to do so, or refuse to certify to the correctness of the account, unless he can prove to the satisfaction of the Council that the account is incorrect, he shall pay a fine of ten pounds, to be recovered in a summary way before any two Justices of the Peace, the said fine to be carried to the credit of the Municipal funds.
11. The first business at every regular meeting of Council shall be the reading, confirmation, and signing the minutes of the proceedings of the last preceding meeting.
12. After the minutes of the last preceding meeting are signed, reports from Committees shall take precedence of any other business, but shall not be considered or adopted without due notice thereof.
13. The presentation of petitions and reading of correspondence shall be next in order of business after the consideration of reports.
14. Every member shall stand when speaking, and shall address the Chair.
15. Whenever any matter of order arises it shall be taken into immediate consideration.

16. No member shall deviate from the subject under debate, or make personal reflections upon any other member.

17. No member shall speak on any motion or amendment longer than ten minutes, without the consent of the Council.

18. When any member shall make use of any expression capable of being applied offensively to any other member, the offending member shall be required by the Mayor or Presiding Alderman to withdraw the expression, and make a satisfactory apology to the offended member and Council.

19. A debate may be adjourned to a later hour of the same day or to another day specified.

20. The member upon whose motion any debate shall be adjourned, shall be entitled to pre-audience on the resumption of the debate.

21. The Council shall vote by show of hands, but any Alderman may divide the Council on any question, both in full Council or in Committee of the Whole, in which case every Alderman there present shall be compelled to vote; and all divisions shall be entered in the minute book.

22. Any member may require the question under discussion to be read for his information at any time during the debate, but not so as to interrupt any other member whilst speaking.

23. After the presentation of reports and petitions, the reading of correspondence and the reception of notices of motions shall take precedence of all other business of the day.

24. Any number of amendments may be proposed on a motion before the Council, and, if seconded, the question shall first be put on the last amendment, and then on the next preceding amendment, and so on in the inverse order in which they are moved, except when such motions or amendments shall relate to financial matters, in which case the lowest sum shall be put first, and so on to the highest.

25. Any motion for adjournment, if seconded, shall be immediately put without discussion, but if such motion be negatived it shall not be competent for any member to make a like motion until the lapse of half an hour.

26. No notice shall be taken by the Mayor or Presiding Alderman of any motion unless it be seconded.

27. All notices of motion shall be in writing, dated and signed by the Alderman proposing the same, previous to being handed to the Council Clerk, and shall not be withdrawn from the business paper without the leave of the majority of the Council.

28. No motion, the effect of which, if carried, would be to rescind any motion which has already passed the Council, shall be entered on the business paper, unless a "Call of the Whole Council" has been duly made and granted for that purpose.

29. A call of the Council may be ordered by any resolution of which due notice shall have been given, for the consideration of any motion or matter of business before such Council.

Petitions.

30. On the presentation of a Petition, no debate shall take place until notice has been given in the usual manner; and the only question that can be entertained by the Council, on the day of its presentation, shall be that the Petition be received, or that it be referred to a Committee.

31. It shall be required of any Alderman presenting a Petition, to acquaint himself with the language thereof, and report to the Council that he considers it unobjectionable.

32. All Petitions to be received only as the Petition of the parties signing the same.

Committees.

33. Besides such Special Committees as may from time to time be found necessary, there shall be two Standing Committees, namely,—a Finance and an Improvement Committee. The Standing Committees shall be appointed by resolution of the Council, within thirty days after the election of the Mayor for the municipal year.

34. The By-laws, as to the proceedings of meetings of the Council, shall be observed in a Committee of the Whole Council, except the rule limiting the times of speaking.

35. Every Committee of which the Mayor shall not be a member shall elect a permanent Chairman of such Committee, and such Chairman may direct the Council Clerk to call meetings whenever he shall think it expedient.

36. Every Report of a Committee shall be signed by the Chairman thereof.

37. No work affecting the funds of the Municipality shall be undertaken until the probable expense be first ascertained by the Council; and all accounts to be paid by the Council shall be examined by the Finance Committee and reported on by them before any warrant shall be issued for the payment thereof: Provided that, in cases of emergency, the Mayor, with the assent of any three Aldermen of different Wards, may authorize the expenditure of any sum not exceeding thirty pounds, and such expenditure shall be reported to the Council at its next sitting.

38. No officer or servant appointed by the Council shall be at liberty to shew, lay open, or expose any of the books, papers, or records of the Council to any person not a member of the Council, without leave from the said Council, except as provided by law.

No. 2.

Collection and enforcement of Rates.

1. All rates made and authorized by the Council shall be paid half-yearly, within the time prescribed by law, at the Municipal Council Chambers, George-street, Redfern, during office-hours, on Mondays, Wednesdays, and Fridays, between the hours of 10 o'clock a.m. and 4 o'clock p.m.

2. The Council Clerk shall prepare, every half-year, a list of the names of all persons whose rates are unpaid on the thirtieth day of June and thirty-first day of December, and the Mayor of the Borough shall take immediate proceedings, either by summons or by the issue of distress warrants, against all defaulters.

3. The Bailiff shall be appointed by the Council, and shall give such security as they shall approve for the faithful performance of the duties of such office.

4. The Bailiff shall make all levies and distresses for the recovery of rates under the warrant of the Mayor, such warrant to be made in accordance with the form in the Schedule hereto annexed marked A.

5. The Bailiff shall be paid for entry and levy made under these By-laws, according to the annexed Schedule marked B.

6. At the time of making a distress, the Bailiff shall forthwith make out a written inventory, in the form or to the effect of the Schedule annexed hereto marked C, which inventory shall be delivered to the occupant of the land or premises, or the owner of the goods so distrained, or to some person on his or her behalf resident in the place where the distress has been made; and in case there shall be no person at such place with whom such inventory can be left as aforesaid, then such inventory shall be posted in some conspicuous part of the land or premises on which the distress has been made, and the Bailiff shall deliver a copy of such inventory to the Council Clerk of the Borough for the information of all parties concerned.

7. It shall be lawful for the Bailiff, and such assistants as he may require, to enter into any part of the land, building, tenement, or other property, in respect of which a warrant has been issued for the recovery of any rate or rates as aforesaid, and to distrain the goods therein or thereon, and to remain in such building, tenement, or other property, in charge thereof; and if the sum for which distress shall have been made or taken shall not be paid on or before the expiration of five days, it shall be lawful to sell the goods so distrained, or a sufficient portion thereof, by public auction, either on the premises or at such other place within the Borough as the said Bailiff may think proper to remove them to for such purpose, and the surplus (if any) that may remain after deducting the sum distrained for, together with the expenses attendant upon such distress, shall be paid over, on demand, to the owner of the goods so sold: Provided always, that nothing herein contained as to the time of sale shall apply to any crop of cereals, fruit, or vegetables which may be growing at the time when such distress shall be made.

8. The Bailiff, when making a distress as aforesaid, may impound or otherwise secure the distress so made, of what nature or kind soever it may be, in such places or in such part of the land or premises chargeable with the rate, as shall be most fit and convenient for such purpose; and it shall be lawful for any person whatsoever, after the expiration of the five days hereinbefore mentioned, to come and go to and from such place or part of the said land or premises where any distress shall be impounded and secured as aforesaid, in order to view and buy, and in order to carry off and remove the same on account of the purchaser thereof.

9. The owner of any goods so distrained upon may, by writing, direct and specify the order in which they shall be successively sold; and the said goods and chattels shall in such case be put up for sale according to such direction.

10. The Bailiff shall hand over to the Council Clerk all proceeds of such distresses as soon as possible after such sale; also, the copy of every inventory and account of every such sale or sales.

11. The Bailiff, with the sanction of the Mayor, may authorize any person to act temporarily as his deputy; and the person thus authorized shall have and exercise, for the time being, all the powers of the Bailiff himself; but the Bailiff and his sureties shall in every case be held responsible for the acts of such deputy.

SCHEDULE A.

Warrant of Distress.

I, _____ Mayor of the Borough of Redfern, do hereby authorize you _____ Bailiff of the said Borough, to distrain the goods and chattels in the dwelling-house, or in and upon the land and premises of _____ situate at _____ for the sum of _____ being the amount of Municipal rates due to the said Borough to the _____ day of _____ for the said dwelling-house, land, or premises, as the case may be, and to proceed thereon for the recovery of the said rates according to law.—Dated this _____ day of _____ 18 _____

Mayor.

SCHEDULE B.

Fees of Bailiff.

	s.	d.
1. For making every entry and inventory in the execution of the warrant	3	0
2. If in possession more than five hours	5	0
3. For every other day or part of a day	5	0

And five per cent. on net amount of sale.

SCHEDULE C.

Inventory.

I HAVE this day, in virtue of a warrant under the hand of the Mayor of the Borough of Redfern, dated _____, distrained the following goods and chattels in the dwelling-house, or in and upon the land and premises of _____ situate at _____ within the said Borough, for the sum of _____ being the amount of rates due to the said Borough to the _____ day of _____ 186 _____.

Bailiff.

No. 3.

Preventing and extinguishing Fires.

1. No householder shall place, or knowingly permit to be placed, in any house, yard, workshop, out-office, or other premises, fire, powder, or combustible materials of any kind, in such a manner as to endanger contiguous buildings.
2. The Inspector of Nuisances, upon the representation of any person that fire is being used to the danger of contiguous buildings, shall cause the same to be removed immediately.
3. In cases where fire shall take place, it shall be lawful for the Mayor to allow one pound for the first load of water, and fifteen shillings for the second load, to be used for extinguishing the said fire.

No. 4.

Suppression of Nuisances.

1. No householder or resident in the Borough shall be allowed to permit his or her premises, yards, closets, or drains, to be offensive or a nuisance to the adjoining householders or residents.
2. No noisome or offensive trade shall be permitted to be carried on in any premises to the inconvenience of the residents of adjoining or other houses.
3. Upon complaint being lodged at the Council Chambers that the yard, closets, or drains of any premises is or are a nuisance or offensive, and after inspection such shall be found to be the case, notice shall be given in writing to the proprietor or tenant of such premises to remove or abate such nuisance within twenty-four hours after such notice; and, if after such notice the nuisance shall not be removed or abated, the proprietor or tenant of the said premises shall be liable to a penalty not exceeding forty shillings nor less than five shillings.
4. Upon complaint being lodged at the Council Chambers the Inspector of Nuisances may, at all reasonable hours, with or without assistants, enter into and inspect any building, stall, or place kept or used for the sale of butchers' meat, and examine any carcase, meat, flesh, or fish which may be therein; and in case any of such articles shall appear to him to be intended for human food but unfit, the same may be seized by him; and if it shall appear to a Justice of the Peace, upon competent evidence, to be unwholesome, he shall order it to be destroyed; and the owner thereof, or person in whose custody it was found, shall be liable to a penalty not exceeding forty shillings nor less than ten shillings.
5. Any person who shall breed, keep, or feed any kind of swine in any house, building, yard, garden, or other hereditament, situate and being in, or within forty yards of, any street or public place in the said Borough, or shall suffer any kind of swine, or any horse, ass, mule, sheep, goat, or other cattle belonging to him or her, or under his or her charge, to stray or go about, or to be tethered or depastured in any such street or public place, shall, on conviction, forfeit and pay for such offence a sum not exceeding forty shillings, nor less than ten shillings, for every such offence.

No. 5.

Care and management of the Public Roads and Streets.

1. In any street or road where it may be deemed necessary to alter the level more than one foot, the Council shall cause a plan, and section, shewing the proposed cuttings and fillings, to be exhibited at the Council Chambers for fourteen days, for the information and inspection of ratepayers, and notify the same in one or more of the daily papers.
2. At a subsequent meeting of the Council the said plan and section shall be adopted by the Council and signed by the

Mayor and the proposer and seconder, and be counter-signed by the Council Clerk: Provided no valid objection has been lodged within the time specified.

3. No person shall be permitted to erect any house, shop, or other building, in any street, lane, or place in the Municipality, without first serving notice, in writing, on the Mayor or Council Clerk, on any lawful day, between the hours of 10 a.m. and 4 p.m., stating such intention, and describing the proposed situation of the building or erection, and without having received an authority from the Mayor or Council Clerk, who will give the required level and alignment, if in a proclaimed street, on payment of a fee of five shillings.

4. No person shall be at liberty to encroach beyond the building-line in any street or lane, by the erection of houses, verandahs, door-steps, fences, or any other obstruction whatever.

5. All proprietors of houses within the Municipality, having a frontage to any main thoroughfare, shall be bound to have the same sufficiently spouted with down pipe, to be carried under the surface of the foot-path into the gutter.

6. No person shall be allowed to throw rubbish, sweepings, dead fowls or other animals, or deposit of any kind whatever, on the streets, pathways, or channels.

7. No driver, carter, or other person shall wilfully or negligently do or suffer or cause to be done any damage or injury to the kerb-stones, gutters, or pathways of any street or roadway; and no person shall be at liberty to drive a wheeled vehicle of any kind, or horses or carts, on the footways.

8. No person shall be allowed to alter, cut up, or destroy the pathways or roads, or to remove loam, sand, or gravel from any of the streets or roads of the Municipality, without the authority of the Mayor, in writing, and counter-signed by the Council Clerk; and for such authority a fee of one shilling and sixpence must be paid.

9. No person shall be allowed to place on the streets or pathways building materials otherwise than is absolutely necessary, and by the sanction in writing of the Mayor or Council Clerk; and no person shall be allowed to leave water-holes or excavations for cellars, or other purposes, unfenced, or in such a manner as to be dangerous to passers-by; and all places where buildings are being carried on, or where any obstruction to the danger of passers-by exists, the person causing such obstruction shall be required to provide lights on either side, and keep the same lighted from sunset to sunrise; and for such sanction being given a fee of one shilling and sixpence must be paid.

10. No person shall place or expose for sale on the pathways or streets, carts, goods, parcels, or produce of any kind whatever to the obstruction of the public.

11. No goats or dogs shall be permitted to be used as animals of draught in the streets or thoroughfares of this Municipality.

12. Any person wantonly or maliciously breaking or injuring any lamp-post, or street name-plate, or extinguishing any light set up for public convenience, shall be liable to the penalty hereinafter mentioned.

No. 6.

Regulating and licensing Public Vehicles plying for hire within the Borough of Redfern.

1. The proprietor or driver of every omnibus, car, or other public conveyance plying for passengers within the Borough of Redfern, shall pay to the Treasurer or Council Clerk thereof, for the uses of said Borough, annually or rateably, the charge or sum mentioned in the Schedule hereunto annexed marked A.

2. Every person holding an authority or license from this Council as such proprietor or driver, according to the form annexed marked B, shall be permitted to ply for hire and carry passengers within the said Borough for the term therein mentioned; but it shall not be lawful for any person to ply for hire, or carry passengers as aforesaid, until having obtained the said authority or license so to do.

3. The said charge or sum for every such vehicle shall be paid in advance, commencing on the first Tuesday in February in every year, or rateably, according to the date of the said authority or license; and the production of such authority, license, or receipt shall free the vehicle numbered therein from all other charges by this Council, except fines and tolls, during the current Municipal year, or the period therein specified.

4. The driver of every such omnibus, coach, or other vehicle, plying for hire or carrying passengers within or through any part of this Borough, shall, previous to doing so, pay unto the said Council the said charge or sum therein provided; and any person found plying for hire, or carrying passengers in any vehicle, within this Borough (except in hackney carriages and other conveyances hired by an individual or party for an especial occasion, and who shall not take up or set down passengers during their route), shall forfeit and pay for every such offence any sum not more than one pound nor less than ten shillings; and, in case of a second conviction within six months, not less than one pound.

5. Every public vehicle, driven to or from any public stand for vehicles, now appointed by the Council of the City of Sydney, or which may be appointed by the Council of this

MUNICIPALITIES.—BOROUGH OF REDFERN—BY-LAWS.

Borough, or shall be employed in carrying passengers in or through this Borough, shall be deemed and taken to be a public vehicle plying for hire.

6. The Council of this Borough may appoint stands for public vehicles within their own boundaries, at such times and places as may be considered necessary by any resolution of Council, and may also, under any such resolution, regulate the time of starting of every such vehicle from any such public stand, on giving public notice thereof to the licensed drivers; and any person who shall offend against this or any other such regulation shall forfeit and pay for every such offence not more than forty shillings nor less than ten shillings.

SCHEDULE OF CHARGES.

A.	£	s.	d.
1st. For every vehicle plying for passengers, having four wheels,—rate per annum	3	0	0
2nd. For every vehicle plying for passengers, having two wheels,—rate per annum	1	10	0

SCHEDULE B.

License and Certificate of payment for Public Vehicles.

Borough of Redfern, 186 .

I, THE undersigned, do hereby certify, that _____ of the public vehicle number _____ has paid unto the Council of this

Borough the sum of £ _____ for permission to ply for hire and carry passengers within this Borough, for the period of _____ from the date hereof; and that the said _____ is hereby authorized and entitled to ply for hire, and to carry passengers in the said vehicle, within the limits of the said Borough, for the period above stated.

Registered.

Council Clerk.

Mayor.

PENALTY.

For every offence against the provisions of these By-laws, except as otherwise provided, the offender shall be liable to and shall pay a penalty not exceeding five pounds nor less than five shillings, to be recovered in a summary way before any Justice of the Peace; and all other penalties and fines imposed by these By-laws, except as otherwise provided, shall also be recoverable in a summary way before any Justice of the Peace.

Made and passed by the Municipal Council of the Borough of Redfern, this 25th day of March, 1869,—

GEO. RENWICK,
Mayor.

W. S. WARDROP,
Council Clerk.

1869.

NEW SOUTH WALES.

MUNICIPALITIES.

(BOROUGH OF SHELLHARBOR—BY-LAWS.)

Presented to Parliament, pursuant to Act 31 Vict. No. 12, sec. 158.

Colonial Secretary's Office,
Sydney, 30th July, 1869.

BOROUGH OF SHELLHARBOR.

BY-LAWS.

The following By-laws, made by the Council of the Borough of Shellharbor, for regulating their own proceedings,—the collection of rates,—for preventing cattle, &c., straying on roads and streets,—for preventing injury and obstruction to roads and streets,—for the suppression of nuisances,—for preventing the growth of weeds detrimental to good husbandry,—and for the management of the Shellharbor Jetty and Goods Store,—having been confirmed by His Excellency the Governor, with the advice of the Executive Council, are published in accordance with the requirements of the Municipalities Act of 1867.

WILLIAM FORSTER.

BY-LAWS of the Municipal Council of the Borough of Shellharbor, made at their meeting held on the 12th day of June, one thousand eight hundred and sixty-nine.

General duties of the Mayor.

1. The Mayor shall preserve order, and his decision on disputed points of order shall be final.
2. The Mayor may give notice of and move any resolution he may think proper, and shall, on all questions on which he shall vote as Alderman, have an opportunity of stating the reasons which influenced him in so doing.
3. When the Mayor is called upon to decide upon any point of order or practice, he shall state the rule applicable to the case, without argument or comment.
4. The Mayor shall put all questions, and declare the sense of the Council thereon.
5. If two or more members rise to speak at the same time, the Mayor shall decide which member shall be entitled to pre-audience.
6. The Mayor may, without waiting for the interposition of any member of the Council, call to order any member proceeding to speak a second time upon the same subject, except in explanation and without introducing any new matter.
7. The Mayor shall, upon every motion made and seconded, put the question first in the affirmative and then in the negative; and he may do so as often as may be necessary to enable him to form and declare his opinion, from the show of hands, which party has the majority.

General rules for the conduct of business.

8. The minutes of the proceedings of the Council shall be openly read at the commencement of each succeeding meeting, and after being confirmed by the meeting, shall be signed by the Mayor.
9. Reports from Committees shall be received before any other business, but shall not be considered or adopted without due notice thereof.

10. After the presentation of reports and petitions, the reading of correspondence shall take precedence of all other business of the day.

11. Every member shall stand when speaking, and shall address the Chair.

12. Whenever any matter of order arises, it shall immediately be taken into consideration.

13. Except in Committee, no member shall speak twice on the same question, unless in explanation where he has been misrepresented or misunderstood: Provided, however, that the mover shall be allowed to reply, and that every member shall have the liberty of speaking once on every amendment, as well as on the original motion.

14. No member shall digress from the matter under discussion, to make personal reflections on members, or to impute motives.

15. No member shall speak upon any motion or amendment for a longer period than fifteen minutes, without the consent of the Council.

16. When any member shall use an expression capable of being applied offensively to any other member, the member so offending shall be required by the Mayor to withdraw the expression, and to make a satisfactory apology to the Council; and in case he shall refuse so to do, he shall pay to the Council the sum of five pounds sterling, and a minute expressive of the Council's disapprobation shall be recorded against him. All fines to be paid to the Treasurer of the Council, for Municipal purposes only.

17. A debate may be adjourned to a later hour of the same day, or to another day which may be specified.

18. The member upon whose motion any debate shall be adjourned by the Council, shall be entitled to pre-audience on the resumption of the debate.

19. It shall be competent for any member to divide the Council on any question, both in full Council and in Committee of the whole Council; and, upon such divisions, those who are

on the affirmative side shall seat themselves on the benches on the right of the Mayor, and those on the negative shall seat themselves on the left hand; and no member shall leave his seat till the names of the members be taken down by the Council Clerk, or person officiating for him:

20. In all divisions of the Council, every member shall be compelled to vote; and all divisions of the Council shall be entered in the minute-book.

21. Any member may require the question or matter under discussion to be read for his information at any time during the debate, but not so as to interrupt any other member while speaking.

Motions.

22. It shall be incompetent to give notice of motion for the rescinding of any resolution on the same day on which such resolution shall have been passed by the Council.

23. Any number of amendments may be proposed on a motion before the Council; and, when more than one amendment is moved and seconded, the question shall be first put on the last amendment, and then on the next to the last, and so on in the inverse order in which they are moved, except when such motion or amendment shall relate to the fixing of salaries, rates, or other matters of finance, in which case the lowest sum shall be put first, and then the next lowest, and so on to the highest.

24. Any motion for adjournment, if seconded, shall be immediately put, without discussion; and, if such motion be negatived, it shall not be competent for any member to make a similar motion till half an hour at least shall have elapsed from the period of moving the one that has been negatived.

25. No notice shall be taken by the Mayor of any motion unless seconded.

26. The Council Clerk shall put every motion in writing, which shall be signed by the proposer and seconder; and every motion after being so seconded and read by the Council Clerk, shall be considered the property of the Council, and shall not be withdrawn without leave of the Council.

Petitions.

27. On the presentation of a petition, no debate shall take place until notice has been given in the usual manner, and the only question which can be entertained by the Council on the day of its presentation shall be, that the petition be received or that it be referred to a Committee.

28. It shall be incumbent upon any member presenting a petition, to acquaint himself with the language thereof, and to report to the Council that he considers it unobjectionable.

29. All petitions shall be received as the petitions only of the parties signing the same.

Committees.

30. No Committee of the Council shall consist of less than five members, three of whom shall form a quorum.

31. The appointment of Special Committees shall continue until the specific duties for which they are appointed shall have been discharged, provided that such Committee may at any time be dissolved by a vote of the Council.

32. The rules of Council shall be observed in a Committee of the whole Council, except the rule binding the number of times of speaking.

33. Every report of the Committee shall be signed by the Chairman thereof.

Miscellaneous Regulations.

34. In case where security is required by the Municipalities Act of 1867, the sureties shall be approved of by the Council; and it shall not be competent to accept as surety any of its members, or any person holding office under the Council.

35. No work affecting the funds of the Council shall be undertaken until the probable expense be first entertained by the Council; and all accounts to be paid by the Council shall be examined by the Finance Committee, and reported on by them, before any warrant shall be issued for the payment thereof.

36. The Treasurer's accounts shall be laid before the Council by the Mayor at the first meeting of each quarter, or oftener, if required by the Council.

37. No officer appointed by the Council shall be at liberty to show, lay open, or expose, any books, papers, or records of the Council, to any person not a member of the Council, without leave of the Council, excepting as otherwise provided by law.

Collection of rates.

Every person who shall have been assessed, or who shall be liable to pay any rate or assessment, shall pay the amount of such rate or assessment to the Treasurer, or other person appointed, in accordance with notice, at such time and place as the Council may by any resolution appoint.

The Council Clerk shall prepare a list of the names of all persons whose rates are unpaid, when required by the Mayor, who shall, as soon as the necessary arrangements are made, proceed against such persons for the recovery of the rates and assessments then due and unpaid, either by summons or distress-warrant, as he may determine.

Bailiff and his duties.

The Bailiff shall be appointed by the Mayor, and shall give such security as he shall approve, for the faithful performance of the duties of his office.

The Bailiff shall make all levies and distresses for the recovery of rates under the warrant of the Mayor; such warrant to be made in accordance with the form in the schedule hereto annexed marked A.

The Bailiff shall be paid, for every entry and levy made under these By-laws, according to the annexed schedule marked B.

At the time of making a distress, the Bailiff shall forthwith make out a written inventory in the form or to the effect of the schedule annexed hereto marked C, which inventory shall be delivered to the occupant of the land or premises, or to the owner of the goods so distrained, or to some person on his or her behalf, resident in the place where the distress has been made. And in case there shall be no person at such place with whom such inventory can be left as aforesaid, then such inventory shall be posted on some conspicuous part of the land or premises on which the distress has been made; and the Bailiff shall deliver a copy of such inventory to the Council Clerk of the Borough, for the information of all parties concerned.

It shall be lawful for the Bailiff and such assistants as he may require, to enter into or upon any part of the land, building, tenement, or other property, in respect of which a warrant has been issued for the recovery of any rate or rates as aforesaid, and to distrain the goods therein or thereon, and to remain in such building, tenement, or other property, in charge thereof; and if the sum for which the distress shall have been made or taken shall not be paid on or before the expiration of five days, it shall be lawful for such bailiff to sell the goods so distrained, or a sufficient portion thereof, by public auction, either on the premises or at such other place within the Borough as the Mayor may direct them to be removed to for such purpose; and the surplus (if any) that may remain after deducting the amount of the sum distrained for, together with the expenses attending such distress, shall be paid over on demand to the owner of the goods so sold; provided always, that nothing herein contained as to the time of sale shall apply to any growing crop or vegetables which may be growing at the time when such distress shall be made.

The Bailiff, in making a distress as aforesaid, may impound or otherwise secure the distress so made, of what nature or kind soever it may be, in such place, or in such part of the land or premises chargeable with the rate, as shall be most fit and convenient for such purpose. And it shall be lawful for any person whomsoever, after the expiration of five days hereinbefore mentioned, to come and go to and from such place, or any part of the said land or premises where the distress shall be impounded and secured as aforesaid, in order to view and buy, and in order to carry off and remove the same, on account of the purchaser thereof.

The owner of any goods so distrained upon, may by writing direct and specify the order in which they shall be successively sold; and the said goods and chattels shall in such case be put up for sale according to such direction.

The Bailiff shall hand over to the Council Clerk all proceeds of such distress within three days, or at such earlier period as may be directed by the Mayor, after such sale; also, the copy of every inventory and account of every such sale or sales.

The Bailiff, with the sanction of the Mayor, may authorize any person to act temporarily as his deputy; and the person thus authorized shall have and exercise, for the time being, all the powers of the Bailiff himself; but the Bailiff and his sureties shall in every case be held responsible for the acts of such deputy.

SCHEDULE A.

Warrant of Distress.

I, _____, Mayor of the Borough of Shellharbor, do hereby authorize you _____, the Bailiff of the said Borough, or your deputy, to enter in and upon the land or premises, or into the dwelling-house of _____, situate at _____, and to distrain the goods and chattels you may there find, for the sum of _____, being the amount of rate or rates due to this Municipality, according to the schedule hereto annexed, for the said land or premises or dwelling-house; and to proceed thereon for the recovery of the said rate or rates, together with costs of the warrant and your authorized charges for taking, keeping, and selling the said distress according to law.

Given under my hand and the common seal of the Mayor and Aldermen of the Borough of Shellharbor aforesaid, at the Council Chamber, Shellharbor, this _____ day of _____, 18 _____

Mayor. [Seal.]

B. SCHEDULE OF FEES.

	£	s.	d.
For making every entry and inventory in execution of the warrant	0	5	0
If in possession more than five hours	0	5	0
For every other day or part of a day	0	5	0
And 5 per cent. on net amount of sale.			

SCHEDULE C.

Inventory.

I have this day, in virtue of a warrant under the name of the Mayor of the Borough of Shellharbor, dated _____, distrained the following goods and chattels in the dwelling-house, or in and upon the land and premises of _____, situate at _____, within the Borough of Shellharbor, for the sum of _____, being the amount of rates due to the said Borough, to the day of _____, 18 _____.

Dated this _____ day of _____, 18 _____.

Bailiff.

By-laws for preventing cattle, &c., straying on roads and streets, for preventing injury and obstruction to roads and streets, for the suppression of nuisances, and for preventing the growth of weeds detrimental to good husbandry.

It shall not be lawful for any person whomsoever to suffer any kind of cattle, horse, mule, swine, sheep, or goats, belonging to him or her, or under his or her charge, to depasture, stray, or go about, or to be tethered in or on any street, road, or public place within the said Borough; and any person who shall so offend, shall forfeit and pay in respect of every such offence, any sum not exceeding two pounds nor less than five shillings.

It shall not be lawful for any person to remove any stone, sand, turf, clay, gravel, or other material, from any road, street, or public place within this Borough, without the authority of the Council; neither shall it be lawful for any person to place any timber or other material on any such road, or street, or public place, or to cause any obstruction whatever to any such road, street, or public place, or to ride or drive upon any foot-path, or to furiously ride, race, or drive any horse or other animal through, in, or upon any such road, street, or public place aforesaid, or to draw any timber, logs, or saplings, or any other materials or things, on any such road, street, or public place, unless such timber, logs, saplings, or other materials or other things are raised from the ground upon wheels.

Neither shall it be lawful for any person to lock the wheels of any kind of vehicle, upon any road, street, or public place within the boundary of the aforesaid Borough; and any person who shall offend against any of these provisions, shall forfeit and pay any sum not exceeding five pounds and not less than ten shillings.

In case any privy, hog-sty, boiling-down establishment, slaughter-yard, or any other place, matter, or thing whatsoever, which shall at any time be or become a nuisance, by causing unwholesome smells to arise within any part of this Borough, it shall be lawful for any two Justices, upon complaint thereof by any person authorized by the Shellharbor Council, to investigate such complaint, and to order that such privy, hog-sty, boiling-down establishment, slaughter-yard, or any other matter or thing being a nuisance as aforesaid, to be cleared or removed or discontinued, as the case may be, within fourteen days after such order has been made, and notice given to the owner or occupier of the premises whereon such nuisance shall exist; and every such owner or occupier neglecting to remove any such nuisance pursuant to such notice and order, and to the satisfaction of such Justices, shall forfeit and pay any sum not exceeding ten pounds nor less than twenty shillings for every such neglect and disobedience; and also, it shall be lawful for such Justices to indict or cause to be indicted for such nuisance, any such person or persons so neglecting or disobeying any such notice or order, at the next Court of General Quarter Sessions to be held nearest to the said Borough; and such person or persons being found guilty, shall be subject to such punishment and such further order as the Justices assembled at such sessions shall lawfully decide.

Any person who shall cast any filth or rubbish into any public water-course, or drain supplying water, or used for drainage, within this Borough, or shall obstruct or divert from its proper channel or course, any such water-course or drain, except under the authority of the said Council, shall, on conviction of any such offence, forfeit and pay any sum not exceeding five pounds nor less than twenty shillings; and any person or persons being convicted of any such offence, who shall fail to remove such filth or obstruction, or to restore such water-course or drain to its proper channel or connection, within seven

days from the date of such conviction, shall forfeit and pay any sum not exceeding fifty pounds nor less than twenty shillings.

It shall not be lawful for any person, being the owner, lessee, or occupier of any land within the aforesaid Borough, to permit to grow on any such land the weeds known as the Bathurst burr, Scotch thistle, wild cotton plant, or any other noisome weeds and every owner, lessee, or occupier of lands as aforesaid, who shall fail to extirpate or remove from any such land all or any of the aforesaid weeds or plants which may be growing thereon, within thirty days from the date of being ordered so to do by the aforesaid Council, shall, upon conviction of any such offence, forfeit and pay any sum not exceeding two pounds nor less than ten shillings.

By-laws and regulations for the management of the Shellharbor Jetty and Goods Store.

Any owners or masters, or person acting as such master, of steamers, or steamers' boats, that shall use the jetty or goods store for the purpose of loading or unloading, shall pay to the Shellharbor Municipal Council the sum of twenty shillings for each trip.

The master or owner of any sailing vessel that shall use the jetty or store for the purpose of loading or unloading, shall pay jetty dues according to the tonnage of such vessel, viz. :—

	s.	d.
For each trip, vessels under 20 tons burden	2	6
Do. over 20 and under 50 tons ...	5	0
Do. over 50 and under 100 tons	10	0

All jetty dues shall be paid to the Treasurer of the Municipal Council of Shellharbor, before vessels shall load or unload or break bulk; and, in default of owners or masters of vessels so making payment, they shall forfeit and pay a penalty of two pounds for each and every such offence.

The receipt of the Treasurer of the Shellharbor Municipal Council, shall be a sufficient discharge for claims for jetty and store dues.

The payment of the above-named dues shall be sufficient for the loading and unloading for one voyage.

The Treasurer shall keep a separate account of receipts and disbursements made on account of the jetty and store.

All jetty and store dues shall in no way be expended but for the purpose of keeping in repair such jetty and store, or for making such improvements thereto as may be deemed necessary.

No vessel shall be allowed to be made fast to the jetty by any lines, warps, or chains, but for the purpose of loading or unloading; and any person or persons in any way making fast vessels to the jetty, otherwise than for the purposes herein provided, shall, for each and every such offence, forfeit and pay a sum not exceeding twenty pounds.

The vessel first arriving in the harbor shall be entitled to precedence in the use of the jetty and store, and shall be loaded and discharged with all due despatch; and if any other vessel than that first arriving shall be requiring the use of the jetty, then the owner or master of the vessel first arriving shall haul off after having had the use of the jetty for a period of four hours; and the second or any vessel subsequently arriving shall, in like manner, be allowed a period not exceeding four hours, for the purpose of loading or unloading; and every master or owner of a vessel so refusing to haul off and not giving to the next vessel the free use of the jetty, after the expiration of four hours as herein provided, shall forfeit and pay a sum not exceeding ten pounds for each and every such offence.

Gunpowder or other explosive materials, vitriol or other such mineral acid, shall not be landed or stored, unless a plain brand or superscription showing what material the case or package contains, and the quantity therein, be appended thereto; and any person or persons offending by landing or storing any of the material or materials above named, otherwise than as herein provided, shall forfeit and pay, for each and every such offence, a sum not exceeding ten pounds.

Goods remaining in the store over a period of fourteen days shall be subject to a charge for storage, at the rate of five shillings per ton per week.

Made and passed by the Borough Council of Shellharbor, this 12th day of June, in the year of our Lord one thousand eight hundred and sixty-nine.

WILLIAM FRYER,
Mayor.

1869.

NEW SOUTH WALES.

MUNICIPALITIES.

(BOROUGH OF St. LEONARDS—BY-LAWS.)

Presented to Parliament, pursuant to Act 31 Vict. No. 12, sec. 153.

Colonial Secretary's Office,
Sydney, 18th September, 1869.

BOROUGH OF St. LEONARDS.

BY-LAWS.

THE following By-laws made by the Council of the Borough of St. Leonards, to better enable them to collect their rates, and to delegate to their Council Clerk the powers conferred upon them by the 123th section of the Municipalities Act of 1867, having been confirmed by His Excellency the Governor, with the advice of the Executive Council, are published in accordance with the requirements of that Act.

JOHN ROBERTSON.

BOROUGH OF St. LEONARDS.

By-laws the better to enable the Municipal Council of the Borough of St. Leonards to collect their rates.

1. All rates levied or imposed by the Council under the provisions of section 164 of the Municipalities Act of 1867, and for the purposes mentioned in the said section, shall be payable by annual or half-yearly instalments, as the Council from time to time shall direct, and shall be due and payable on and after such days as the Council shall by resolution appoint at the time of making or imposing such rate.

2. All rates levied or imposed by the Council under sections 165, 166, and 167 of the said Municipalities Act of 1867, and for the purposes mentioned in the said sections, or under the provisions of any of the said sections, or for any of the purposes mentioned therein, shall be collected in such manner and shall be held to be due and payable on and after such day or days as the Council may, by resolution, at the time of making or imposing such rates, or any of them, have appointed.

3. All persons liable to pay any rates as aforesaid shall pay the amount thereof within the time prescribed by the Act, into the office of the Council Clerk, during the office hours appointed by the Council by resolution from time to time for that purpose.

4. It shall be the duty of the Council Clerk to furnish the Mayor with a list of the names of all persons whose rates are unpaid at the expiration of the times fixed for payment of the same as aforesaid.

5. It shall be the duty of the Mayor to issue distress warrants against all such persons, and to cause such warrants to be enforced, or to cause such defaulters to be sued for the amount of such rates in a Court of competent jurisdiction.

Enforcement by distress.

The Bailiff shall be appointed by resolution of the said Council, and shall be at any time removable by a like resolution.

The Bailiff shall find two sureties to the satisfaction of the Mayor, to the extent of fifty pounds each, for the faithful performance of his duty.

It shall be the duty of the Bailiff to make all levies by distress, for the recovery of rates, in the manner hereinafter provided.

All levies and distresses shall be made under warrant, in the form of schedule A hereto, under the hand of the Mayor, or any Alderman who may for the time being be duly authorized to perform the duties of that office.

If the sum for which any such distress shall have been made shall not be paid, with costs as hereinafter provided, on or before the expiration of three days, the Bailiff shall sell the goods so distrained, or a sufficient portion thereof, by public auction, either on the premises, or at such other place within the said Borough as the said Bailiff may think proper to remove them to, for such purpose; and shall pay over the surplus (if any) that may remain after deducting the amount of the sum distrained for, and costs, as hereinafter provided, to the owner of the goods so sold, on demand of such surplus by such owner.

At the time of making a distress the Bailiff shall make out a written inventory, in the form of schedule B hereto, which inventory shall be delivered to the occupant of the land or premises, or the owner of the goods so distrained, or to some person on his or her behalf, resident at the place where the distress shall be made; and in case there shall be no person at such place, with whom such inventory can be left as aforesaid, then such inventory shall be posted on some conspicuous part of the land or premises on which the distress is made; and the Bailiff shall give a copy of the inventory to the rate-payer, on demand, at any time within one month after the making such distress.

The Bailiff, on making such distress as aforesaid, may impound, or otherwise secure the goods or chattels so distrained, of what nature or kind soever, in such place or places, or in such part of the land or premises chargeable with rates, as shall be most fit and convenient for this purpose; and it shall be lawful for any person whomsoever, after the expiration of the three days hereinbefore mentioned, to come and go to and from such place, or part of the said land or premises where such goods or chattels shall be impounded and secured as aforesaid, in order to view and buy, and in order to carry off and remove the same, for the period of three days, on account of the purchaser thereof.

The owner of any goods or chattels so distrained upon, may, at his or her option, direct and specify the order in which they shall be successively sold; and the said goods or chattels shall in such case, be put up for sale according to such direction.

The Bailiff shall hand over to the Council Clerk all proceeds of every such distress, within forty-eight hours after having received the same.

There shall be payable to the Bailiff, for the use of the Council, for every levy and distress made under this by-law, the costs and charges in the Schedule hereunto annexed, marked C.

SCHEDULE A.

WARRANT OF DISTRESS.

I, _____, Mayor of the Borough of Saint Leonards, do hereby authorize you _____, the Bailiff of the said Municipality, to distrain the goods and chattels in the dwelling-house of _____ situate at _____ for _____, being the amount of rates due to the said Borough, to the _____ day of _____ for the said dwelling-house, and to proceed thereon for the recovery of the said rates, according to law.

Dated this _____ day of _____ 18 .

Mayor.

SCHEDULE B.

INVENTORY.

I have this day, in virtue of the warrant under the hand of the Mayor of the Borough of Saint Leonards, dated _____, distrained the following goods and chattels in the dwelling-house of _____ situate at _____ within _____ of the said Borough for _____ being the amount of rates due to the said Borough to the _____ day of _____ 18 .

Dated this _____ day of _____ 18 .

Bailiff.

SCHEDULE C.

Costs.

	s.	d.
For making every entry and inventory in execution of warrant	3	0
If in possession more than five hours	5	0
For every other day, or part of a day	5	0
And five per cent. on the net amount of sale.		

Passed by the Municipal Council of St. Leonards, this thirteenth day of August, in the year one thousand eight hundred and sixty-nine.

WILLIAM TUNKS.

13th August, 1869.

GEORGE PILE, Junr., Council Clerk.

BY-LAW to delegate to the Council Clerk the powers conferred upon the Council by the 128th section of the Municipalities Act of 1867.

WHEREAS it is enacted by the 128th section of the Municipalities Act of 1867, that the Council of every Municipality shall alone, in and for such Municipality, have, exercise, and incur certain powers and obligations therein specified (provided that the said Council may by any by-law delegate all or any of the said powers to any officer of such Council) and as it is expedient that the Council Clerk of this Municipality should, in and for this Municipality, have, exercise, and incur such powers and obligations: Be it therefore enacted, that the Council Clerk of this Municipality shall, in and for this Municipality, have, exercise, and incur the powers and obligations conferred by the 128th section of the Municipalities Act of 1867, upon the Council.

Passed by the Municipal Council of St. Leonards, this thirteenth day of August, one thousand eight hundred and sixty-nine.

WILLIAM TUNKS.

13th August, 1869.

GEORGE PILE, Junr., Council Clerk.

1869.

NEW SOUTH WALES.

MUNICIPALITIES.

(BOROUGH OF WOOLLAHRA—BY-LAWS.)

Presented to Parliament, pursuant to Act 31 Vict., No. 12, sec. 158.

Colonial Secretary's Office,
Sydney, 2nd April, 1869.

BOROUGH OF WOOLLAHRA.

BY-LAWS.

THE following By-laws, made by the Council of the Borough of Woollahra, for regulating their own proceedings—for the protection of the funds and records of the Borough—for levying rates, &c.,—for regulating the roads and streets, and encroachments thereon, &c., &c.—having been confirmed by His Excellency the Governor, with the advice of the Executive Council, are published in accordance with the requirements of the Municipalities Act of 1867.

JOHN ROBERTSON.

BOROUGH OF WOOLLAHRA.—BY-LAWS.

REGULATION OF PROCEEDINGS.

Days of ordinary meeting.

1. The Council shall meet on the second Tuesday in every month, at the hour of half-past seven in the evening, or at such other day and at such hour as may by resolution of the Council be from time to time appointed.

Course of procedure.

2. The following shall be the course of procedure at such meetings, viz. :—

1. The reading and confirmation of the minutes of the proceedings of the previous meetings.
2. Statement of accounts, showing the moneys received and paid since last meeting, with the balance in the Bank to the credit of the Municipality.
3. The presentation of reports and petitions.
4. The reading of correspondence.
5. Motions.
6. Such other business as may lawfully be brought before the Council.

Petitions.

3. All petitions shall be received as the petitions of the persons signing the same only; and it shall be incumbent on any Alderman presenting a petition to acquaint himself with the language thereof, and to report to the Council that he considers it unobjectionable.

Petitions and correspondence may be dealt with without previous notice.

4. The Council may at any meeting resolve, without previous notice, that any petition be received, and that the same, or any correspondence read, be referred to a Committee.

Mayor to preserve order.

5. The Mayor shall preserve order, and may at any time call to order any Alderman who may appear to him to be out of order.

Calls to order.

6. Any Alderman may at any time call the attention of the Mayor to any Alderman being out of order, or to any other point of order.

Mayor's decision on points of order final.

7. Every point of order shall be taken into consideration immediately upon its arising, and the decision of the Mayor thereon shall be conclusive.

Mayor may take part in proceedings.

8. The Mayor may take part in all the proceedings of the Council.

Questions put by Mayor.

9. The Mayor shall put all questions, first in the affirmative and then in the negative, and may do so as often as may be necessary to enable him to determine the sense of the Council thereon, and thereupon he shall declare his decision, which shall be final.

Mayor to decide as to pre-audience of Aldermen.

10. If two or more Aldermen rise to speak at the same time, the Mayor shall decide which of them shall be entitled to pre-audience.

No Alderman to speak twice on same question or amendment, except in Committee.

11. No Alderman shall speak twice on the same question, unless in Committee, or in explanation, where he shall have been misrepresented or misunderstood: Provided that any Alderman, although having previously spoken, may speak once on every amendment, and that the mover of every question shall always have the right of final reply.

No Alderman to make personal reflections.

12. No Alderman shall digress from the matter under discussion, or make personal reflections on, or impute motives to, any other Alderman.

No Alderman to speak for more than fifteen minutes.

13. No Alderman shall speak upon any motion or amendment for a longer period than fifteen minutes, without the consent of the Council.

Alderman using offensive expressions to apologize.

14. When any Alderman shall make use of any language or expression offensive, or capable of being applied offensively, to any other Alderman, the Alderman offending shall be required by the Mayor, or if in Committee, by the Chairman of such Committee, to withdraw such language or expression, and to make an apology satisfactory to the Council.

Debate may be adjourned.

15. A debate may be adjourned to a later hour of the same day or to another day.

Alderman adjourning debate entitled to precedence on resumption.

16. The Alderman upon whose motion any debate shall be adjourned shall be entitled to precedence on the resumption of the debate.

Any Alderman may divide Council.

17. It shall be competent for any Alderman to divide the Council on any question, both in full Council and in Committee of the whole Council; and upon such division those who are upon the affirmative side shall seat or range themselves on the right hand of the Mayor, and those who are on the negative side shall seat or range themselves on his left hand, and no Alderman shall leave his seat or place till the names of the Aldermen and how voting shall have been taken down by the Council Clerk, or person officiating for him.

Divisions to be entered on minutes.

18. All divisions of the Council shall be entered on the minutes of the proceedings.

Question to be read when required.

19. Any Alderman may require the question or matter under discussion to be read for his information, and upon such request the question or matter under discussion shall be read.

How amendments to be put.

20. Any number of amendments may be proposed on a motion before the Council, and when more than one amendment shall have been moved and seconded the question shall first be put on the last amendment, then on the next preceding the last, and so on, in inverse order to that in which they shall have been moved, unless when such motion or amendment shall relate to the fixing of salaries, rates, or other matters of finance, in which case the lowest sum shall be put first, then the next lowest, and so on to the highest.

Adjournments.

21. Any motion for adjournment, if seconded, shall be immediately put without discussion; but if such motion be negatived, it shall not be competent for any member to make a similar motion until thirty minutes shall have elapsed from the period of moving the motion which shall have been so negatived.

Motions must be seconded.

22. No notice shall be taken by the Mayor of any motion unless it be seconded.

Motions to be in writing, and not withdrawn without leave.

23. The Council Clerk shall put every motion into writing, which shall be signed by the mover; and every motion, when seconded and read by the Clerk, shall be considered the property of the Council, and shall not be withdrawn without leave of the Council.

Council Clerk to give notice of Committee meetings.

24. The Council Clerk shall give notice of the intended meetings of any Committee to the members thereof, whenever requested so to do by the Chairman of such Committee.

Duration of special Committee.

25. The appointment of special Committees shall continue until the specific duty for which they shall have been appointed shall have been discharged: Provided that such Committees may at any time be dissolved by vote of the Council.

Rules observed in Committee of the Whole, except &c.

26. The rules of the Council shall be observed in a Committee of the whole Council, except the rule limiting the number of times of speaking.

Report of Committee to be signed by Chairman.

27. Every report of a Committee shall be signed by the Chairman thereof.

Proceedings.—By-laws may be suspended on emergency.

28. Any of these by-laws, relating to or affecting proceedings at meetings of the Council, may be suspended *pro tempore* in cases of emergency, if all the members of the Council then present shall deem such suspension necessary.

PROTECTION OF FUNDS AND RECORDS.

Officer of Council may not be surety.

29. In cases where security is required by the Municipalities Act, it shall not be competent for the Council to accept as surety any of their members, nor any person holding office under the Council.

Expense of proposed works to be first ascertained—Accounts to be examined by Finance Committee.

30. No work affecting the funds of the Municipality shall be undertaken until the probable expense thereof shall have been previously ascertained by the Council; and all accounts to be paid by the Council shall be examined by a Finance Committee and reported on by them before any warrant shall be issued for the payment thereof.

Records, &c., to be kept private.

31. Excepting as otherwise provided by law, if any person shall, without the permission of the Council first had and obtained, shew, lay open, or expose any of the books, papers, or records of the Council to any person, not being a member of the Council, the person so shewing, laying open, or exposing the said books, papers, or records shall, on conviction thereof, forfeit and pay a penalty of not less than ten shillings nor more than five pounds, and on every subsequent conviction a penalty of not less than two pounds.

Custody of records, seal, &c.

32. The common seal and all charters, deeds, muniments, papers, and records of the Council shall be kept in the Council Chambers or office of the Council, in the custody of the Council Clerk, unless the Council shall otherwise order for any purpose; and the common seal shall not be used, except at a meeting of the Council and with the signature of the Mayor.

Records, &c., not to be defaced or altered.

33. Any person who shall deface, alter, or destroy, or attempt to deface, alter, or destroy any such common seal, charter, deed, muniment, paper, or record shall, on conviction thereof, forfeit and pay for the first offence a penalty not exceeding fifty pounds nor less than five pounds, and upon every subsequent conviction a penalty of not less than twenty pounds.

Nor removed.

34. Any person who shall remove or attempt to remove any such seal, charter, deeds, muniment, paper, or record from the Council Chamber, without leave from the Council first had and obtained, shall, on conviction thereof, forfeit and pay a penalty of not more than twenty pounds nor less than two pounds, and for every subsequent offence a penalty of not less than five pounds.

LEVYING RATES, &C.

Due dates for rates—Defaulters.

35. The rates and taxes levied by the Council shall be held to be due and payable on such day or days as the Council shall, by resolution, from time to time appoint. Every person not paying his or her rates or taxes at the office of the Council, or to the Council Clerk or other proper officer of the Council, within thirty days after any of the days so appointed for payment thereof, shall be deemed a defaulter: Provided that due notice of such rate shall have been given in manner as required by the Municipalities Act of 1867.

Council Clerk to furnish list of defaulters.

36. It shall be the duty of the Council Clerk to furnish the Mayor and Council, or any Committee as directed, with lists of all persons so in default.

Mayor to issue distress warrants.

37. It shall be the duty of the Mayor to issue and direct the enforcement of distress warrants against the goods, chattels, and effects of all such defaulters, as by resolution of the Council from time to time directed.

How distresses to be made.

38. All levies and distresses shall be made under warrant, signed by the Mayor, and all proceedings under or in respect of such distresses and warrants, and the sale of goods levied upon by virtue thereof, shall be the same as in distresses for rent under a lease or demise.

ROADS AND STREETS, AND ENCROACHMENTS THEREON, &C.

Who to mark out roads, &c.

39. The Surveyor of the Municipality, or other officer or person duly authorized by the Council in that behalf, shall be the proper officer for marking out when and where necessary the roads, streets, lanes, and thoroughfares, which now are or shall hereafter be under or subject to the care, construction, or management of the Council. In marking out such roads, streets, lanes, or thoroughfares, recourse shall be had, when practicable, to the plans under which land with frontage to the road, street, lane, or thoroughfare in question shall have been sold. The Surveyor shall also be the proper officer for marking out, when deemed necessary by the Council, the carriage and footways in such roads, streets, lanes, or thoroughfares, or other public places; but it shall be sufficient for him, for this purpose, to place posts at the corners or intersections of the streets, roads, lanes, or thoroughfares, or wherever the same may be necessary or desirable, so as to give a width of forty-two feet for the carriageway and twelve feet for the footway on each side when the road, street, lane, or thoroughfare shall be sixty feet wide, and in proportion, and in the discretion of the said officer, in any public roads, streets, lanes, or thoroughfares, or other public places of other width than sixty-six feet.

No encroachment allowed on streets, &c.

40. Whenever any road, street, lane, or thoroughfare has been marked out in manner herein provided, no house, shop, fence, or other structure, shall be allowed, except as hereinafter mentioned, to project or encroach on any part thereof; and in order that the due alignment of the roads, streets, lanes, or thoroughfares within the said Borough shall be observed, and that no encroachment shall be made thereon, it shall not be lawful for any person, unless for any temporary or other purpose permitted by the Council, to erect or put up any building, erection, obstruction, fence, or enclosure; or make any excavation or hole on, under, or near such road, street, lane, or thoroughfare, unless due notice of the same shall have been given to the Council of the Borough at least three weeks before any such building, erection, obstruction, fence or enclosure, excavation or hole, as aforesaid, shall be commenced to be erected or put up, or made, and the assent of the Council first obtained. And in default of the same, the person so offending shall forfeit and pay for every such offence a sum not exceeding five pounds nor less than forty shillings; and on every successive conviction for a similar offence, shall forfeit and pay a penalty of not less than three pounds.

No balcony, &c., to project more than 18 inches.

41. With regard to buildings hereafter to be built or rebuilt, it shall not be lawful for any portico, balcony, coping, parapet, overhanging eaves, cornice, windows, string-cornice, string-course dressing, or other architectural decoration forming part of, or attached to, any external wall, to project more than eighteen inches beyond the general line of front in any street or road; nor shall any balcony, or any other external projection as aforesaid, which may hereafter be added to any existing building, be allowed to project more than eighteen inches, as aforesaid, under a penalty not exceeding five pounds, nor less than one pound.

Footways may be levelled, &c.

42. When any footway shall have been marked out in manner hereinbefore directed, the Surveyor may cause the same to be levelled, and made as nearly as practicable of equal height and breadth, and with an equal slope and inclination; and for this purpose may remove any flagging, steps, or other matter, thing, or obstruction that may injure or obstruct the said footway, or render it unequal or inconvenient, and which now is or may hereafter be erected or placed on the space marked out for any of the said footways.

Encroachments must be removed on notice.

43. The Surveyor or other such officer or person may at any time, on the order of the Council, and upon due notice of thirty days, direct the removal of any building, fence, or other obstruction or encroachment in and upon any road, street, lane, or thoroughfare under the charge of the Council. Notice shall, in this case, be served either personally or at the usual or last known place of abode of the person to whom such obstruction or encroaching structure belongs, or who has erected the same, or caused it to be erected.

44. In any case where, after service of notice for the removal of any obstruction or encroachment as aforesaid, the person causing the same shall not remove it within a reasonable time, it shall be lawful for the Council to direct the removal of the same under the superintendence of its own proper officer, and at the cost of the person so offending, provided that the expenses thereby incurred shall in no case exceed the sum of ten pounds, or, at the Council's option, to proceed against the offender for breach of by-law, the penalty not to exceed twenty-five pounds, nor be less than one pound; and, in case of every successive offence, the penalty, on conviction, not to be less than five pounds.

Or may proceed by action.

45. In every case where the obstruction or encroachment cannot be removed, unless at a greater cost than ten pounds, it shall be open to the Council either to direct such removal and to pay all the costs thereof above ten pounds from the funds of the Council, or to proceed by action of trespass against the person causing such obstruction or encroachment, or to proceed as for breach of such by-laws as aforesaid.

To apply also to obstructions by digging, &c.

46. The foregoing provisions shall be equally applicable to all obstructions by digging or excavation; and any person who shall wilfully obstruct or interfere with the Surveyor or other officer as aforesaid, or any person acting for or under him, or either of them, in the exercise of any of the duties or powers by these by-laws imposed or cast on the said Surveyor or officer, shall, on conviction, forfeit and pay a penalty of not less than two pounds nor more than twenty pounds.

OFFENCES, NUISANCES—GENERAL GOOD ORDER OF THE MUNICIPALITY.

As to damaging public buildings, &c.

47. Any person who shall damage any public building, wall, parapet, sluice, bridge, road, street, sewer, watercourse, or other property of the Municipality, shall pay the cost of repairing the same; and if the same be wilfully done shall also forfeit and

pay a sum not exceeding twenty pounds, nor less than five pounds: Provided that such cost and penalty shall not exceed in the whole the sum of fifty pounds.

48. Any person who shall cast any filth or rubbish into any public watercourse, sewer, or canal, or shall obstruct or divert from its channel any such sewer, canal, or watercourse, shall forfeit a sum not exceeding five pounds, nor less than one pound, and shall, in addition to any such forfeiture, pay the cost of removing such filth or obstruction, or of restoring such watercourse or canal to its proper channel: Provided that such cost and penalty shall not together exceed the sum of fifty pounds.

As to injuring public fountains, &c.

49. Any person who shall injure any public fountain, pump, cock, or water pipe, or any part thereof, shall pay the cost of repairing the same; and if the injury be wilfully done, shall also forfeit a sum not exceeding twenty pounds, nor less than one pound; and any person who shall have in his possession any private key for the purpose of opening any cock, or who shall in any manner clandestinely or unlawfully appropriate to his own use any water from any public fountain or pipe, shall forfeit a sum not exceeding twenty pounds, nor less than five pounds; and any person who shall open or leave open any cock of any public fountain or pump, so that the water shall or may run to waste, shall forfeit a sum not exceeding two pounds, nor less than five shillings; and any person who shall wash any clothes, omnibus, carriage, cart, or other vehicle, or any horse, at any public fountain or pump, shall forfeit and pay a sum not exceeding one pound, nor less than five shillings.

Throwing filth on carriageways, &c.

50. If any person shall, in any street, road, or lane, throw, cast, or lay, or shall cause, permit, or suffer to be thrown, cast, or laid, or to remain, any ashes, rubbish, offal, dung, soil, dead animal, blood, or other filth or annoyance, or any matter or thing in or upon the carriageway or footway of any such street or road, or shall kill, slaughter, dress, scald, or cut up any beast, swine, calf, sheep, lamb, or other cattle in or so near to any of the said streets or roads as that any blood or filth shall run or flow upon or over, or be on any such carriage or footway, or shall run, roll, drive, draw, place, or cause, permit, or suffer to be run, rolled, driven, drawn, or placed upon any of the footways of any street or road, any waggon, cart, dray, sledge, or other carriage, or any wheelbarrow, or truck, or any cask, or shall wilfully lead, drive, or ride any horse or other beast upon any of the footways aforesaid, in, upon, or abutting, or within twenty feet of any such road, street, or lane, shall forfeit and pay a sum not exceeding forty shillings, nor less than five shillings.

Placing carriages, goods, &c., on footway, &c.

51. If any person shall set or place, or cause or permit to be set or placed, any stall, board, chopping-block, show-board, basket, wares, merchandise, casks, or goods of any kind whatsoever, or shall hoop, place, wash, or cleanse, or shall cause to be hooped, placed, washed, or cleansed any pipe, barrel, cask, or vessel in or upon or over any of the carriage or footways in any street, road, or public place within the said Borough, or shall set out, lay, or place, or shall cause or procure permit or suffer to be set out, laid, or placed, any coach, cart, wain, waggon, dray, barrow, sledge, truck, or other carriage, upon any of the said carriage or footways, except for the necessary time of loading or unloading the same, or taking up or setting down any fare, or waiting for passengers when actually engaged, or harnessing or unharnessing the horses or other animals from any coach, cart, wain, waggon, dray, sledge, truck, or other carriage; or if any person shall set or place, or caused to be set or placed, in, upon, or over any of the said carriage or footways, any timber, stones, bricks, lime, or other materials or things for building whatsoever (unless the same shall be enclosed as hereinafter is directed), or any other matters or things whatsoever; or shall hang out or expose, or shall cause or permit to be hung out or exposed, any meat, or offal, or other thing or matter whatsoever, from any house or houses, or other buildings or premises, over any part of either or any of such footways or carriageways, or over any area or areas of any house, or other buildings or premises, or any other matter or thing from and on the outside of the front or any other part of any house or houses, or other buildings or premises, over or next unto any such street or road, and shall not immediately remove all or any such matters or things, being thereto required by the Council or an officer thereof, and shall not continue and keep the same so removed; or if any person having, in pursuance of any such requisition as aforesaid, removed, or caused to be removed, any such stall-board, show-board, chopping-block, basket-wares, merchandise, cask-goods, coach, cart, wain, waggon, dray, barrow, sledge, truck, carriage, timber, stone, brick, lime, meat, offal, or other matters or things, shall at any time thereafter again set lay or place, expose, or put out, or cause, procure, permit, or suffer to be set, laid, placed, exposed, or put out, the same or any of them, or any other stall-board, show-board, chopping-block, basket-wares,

merchandise, goods, timber, stones, bricks, lime, coach, cart, wain, waggon, dray, truck, barrow, sledge, meat, offal, or other things or matters whatsoever (save and except as aforesaid) in, upon, or over any of the carriage or footways of or next unto any streets or roads as aforesaid,—then and in every such case, every person so offending shall forfeit and pay a sum not exceeding forty shillings nor less than five shillings; and it shall then be lawful for any constable, without any warrant or other authority than this by-law, to seize any such stall-board, show-board, chopping-block, basket-wares, merchandise, casks, goods, coach, cart, wain, waggon, dray, barrow, sledge, truck, or other carriage, together with the horses or other animals, if any shall be thereunto belonging, with the harness, gear, and accoutrements thereof, or any such timber or other materials or other matters or things aforesaid, or any of them; and in case any of the goods, wares, or merchandise so seized shall be perishable, or shall be articles of food, then the same shall be immediately forfeited, and the person or persons who shall seize the same shall deliver the same or cause the same to be delivered to the Superintendent for the time being of the Benevolent Asylum, and the same shall and may be distributed for the benefit of the inmates of the said asylum; but otherwise, such constable shall cause the stall-board, basket, cask, goods, coach, cart, waggon, wain, dray, barrow, sledge, truck, or other carriage, horses, or other animals, materials, or other things so seized, and not being of a perishable nature, to be removed to any place appointed for the reception thereof (if any such there be), or otherwise to such place or places as he or they shall judge convenient, giving verbal notice of such place unto the owner, driver, or person having interest in the things so seized and removed, if he shall be then there present; and the same shall be there kept and detained until such owner, driver, or other person interested therein as aforesaid, shall cause to be paid the penalty in which he shall be convicted, together with the charges for taking and removing the same, and of keeping such horses or other animals (if any); and in case the animals or other things so removed shall not be claimed and the said penalty and charges be paid within five days next after such removal, it shall be lawful for any Justice to order the same to be appraised and sold, and the overplus of the money arising from such sale (if any) shall be paid to the owner thereof: Provided that the penalty and charges hereinbefore mentioned shall not together exceed fifty pounds.

Not to prevent awnings being erected in front of shops.

52. Nothing in these by-laws contained shall be deemed to prevent any person from placing a movable awning in front of his or her shop or house: Provided, however, that such awning be at least seven feet above the height of the footway in front of such house or shop, and that the posts be placed close up to the kerbstone or outer edge of such footway.

Discharging firearms, &c.

53. Any person who shall discharge any firearms without lawful cause, or let off any fireworks or other explosive matter in or near to any road or street, shall forfeit and pay a sum not exceeding five pounds nor less than ten shillings.

Burning shavings, &c., in streets.

54. Any person burning any shavings, or other matters or things, in any street, road, or public place, shall forfeit and pay a sum not exceeding forty shillings, nor less than five shillings.

Bathing prohibited within certain limits.

55. It shall not be lawful for any person to bathe within the said Municipality in any waters exposed to view from any road, street, or dwelling-house, in or near to the said Municipality, between the hours of six in the morning and eight in the evening; and any person who shall offend against this by-law shall forfeit and pay a sum not exceeding twenty shillings, and it shall be lawful for any constable to arrest any person who shall be found bathing contrary to the provisions hereof, and such person to convey before any Justice of the Peace, to be dealt with according to law.

Indecent exposure of person.

56. Any person who shall offend against decency by the exposure of his or her person in any street or public place within the said Municipality, or in the view thereof, shall forfeit and pay a sum not exceeding ten pounds nor less than five pounds; and it shall be lawful for any constable to apprehend any person whom he may find in the act of committing such offence, and him or her to convey before any Justice of the Peace, to be dealt with according to law.

Swine, &c., not to wander about streets, &c.

57. It shall not be lawful for any person to suffer any kind of swine, or any horse, ass, mule, sheep, goat, or other cattle belonging to him, or under his charge, to stray or go about, or to be tethered or depastured in any road, street, or public place; and any person who shall so offend, shall forfeit and pay, in respect of every such offence, a sum not exceeding forty shillings nor less than five shillings.

Entrance to cellars, &c., to be covered, &c.

58. If the owner or occupier of any premises, having any rails or bars over the areas or openings to any kitchen or cellars or other part of the said premises beneath the surface of the footway of any streets or public places, or having any doorway or entrance into the basement or cellar story thereof, shall not either keep the same, or the rails of such kitchens, cellars, or other parts, in sufficient and good repair, or constantly keep the same securely guarded by rails, or cover the same over with a strong flap or trap-door according to the nature of the case, and so as to prevent danger to persons passing and repassing,—or if any such owner or occupier shall leave open, or not sufficiently and substantially keep covered and secured, any coal or other hole, funnel, trap-door, or cellar-flap, belonging to or connected with his premises (save and except only during reasonable time for use, alteration, or repair),—or if such owner or occupier shall not repair, and from time to time keep in good and substantial repair, all and every or any such rails, guard-rails, flaps, trap-doors, and other covering,—then and in every such case the person neglecting so to do shall, for every or any such offence, forfeit and pay a sum not exceeding five pounds nor less than forty shillings.

Cellars or openings beneath footways prohibited, &c.

59. It shall not be lawful for any person to make any cellar, or any opening, door, or window in or beneath the surface of the footway of any road, street, or public place, within the said Municipality; and if any person shall offend in the premises, he shall forfeit and pay any sum not exceeding five pounds over and above the expense of remedying or removing any such cellar, opening, door, or window, such expense to be assessed and allowed by the convicting Justice or Justices: provided that such expense and penalty shall not together exceed fifty pounds.

Wells to be covered over within three months, &c.

60. Every person who shall have a well situated between his dwelling-house or the appurtenances thereof, and any road, street, or footway, within the limits of the said Borough, or at the side of such road, street, or footway, or in any yard or place open and exposed to such road, street, or footway, shall cause such well to be securely and permanently covered over; and if any person having such well as aforesaid shall fail to cover and secure the same within the time and in the manner hereby required and directed, such person shall forfeit and pay the sum of two shillings and sixpence for every day that such well shall remain open or uncovered contrary to the provisions hereof: provided that, with respect to wells open at the time when this by-law shall come into operation, such penalty shall not be recoverable if the same be properly covered within three months thereafter.

Holes made for vaults, &c., to be enclosed, &c.

61. If any person shall dig or make, or cause to be dug or made, any hole, or leave, or cause to be left, any hole in or adjoining to any street, road, or public place, for the purpose of making any vault or vaults, or the foundation or foundations to any house or other building, or for any other purpose whatsoever, and shall not forthwith enclose the same in a good and sufficient manner, or shall keep up or cause to be kept up and continued, any such enclosure, for any time which shall be longer than shall be reasonably required, or shall not, when thereunto required by the said Council, well and sufficiently fence or enclose any such hole, within twenty-four hours after he shall be required to do so by the said Council, and in the manner and with such materials as they shall direct, and to their satisfaction, and shall not place a light upon the said enclosure and keep the same constantly burning, from sunset to sunrise, during the continuance of such enclosure, then and in every such case the person so offending shall forfeit and pay for every such offence and for every such refusal or neglect, any sum not exceeding five pounds nor less than ten shillings, and on conviction for every subsequent offence a sum not less than one pound.

Excavation, &c., to be protected by fence or wall.

62. It shall not be lawful for any person to make any quarry, excavation, or opening in the ground, on any premises within six feet of any public road or footpath within the limits of this Borough, until the owner or occupier of the said property shall have erected a good substantial fence or wall at the least four feet high around such parts of the said property as adjoin such public road or footpath; and any person neglecting or refusing to enclose any premises upon which any such quarry or excavation shall be made, shall forfeit and pay for every such offence a sum not exceeding five pounds nor less than ten shillings; and all existing quarries or excavations situated within the limits of this Borough shall be enclosed and protected in the manner aforesaid, within one month after due notice to that effect shall have been given by the Municipal Council; and in the event of the failure or neglect of the owner or occupier of any such last-mentioned premises to enclose the same, after notice as aforesaid, such person so offending shall be subject to the penalty aforesaid.

Swine, &c., not to be kept within 20 yards of a dwelling-house.

63. It shall not be lawful for any person whomsoever to breed, feed, or keep any kind of swine in any house, building, out-house, yard, garden, or other tenement or hereditament situate and being in or within twenty yards of any street, way, or public place or dwelling-house now erected, or hereafter to be erected, within the limits of this Borough; and every person who shall so offend shall, on conviction, forfeit and pay for every such offence a sum not exceeding two pounds nor less than five shillings.

Hog-sties and nuisances not removed on complaint, &c.

64. In case any privy, hog-sty, or any other yard, enclosure, matter, or thing which shall at any time or times hereafter be in any place within the said Borough, shall be or become a nuisance, it shall be lawful for two Justices, upon complaint thereof to them made by any of the inhabitants, and after due investigation of such complaint, by notice in writing, to order that such privy, hog-sty, or other matter or thing, being a nuisance, shall be remedied and removed within seven days after such notice shall have been given to the owner or occupier of the premises wherein such nuisance shall exist, or shall have been left for such owner or occupier at his or her last or usual place of abode, or on the said premises; and every such owner or occupier neglecting to remedy or remove such nuisance, pursuant to such notice and to the satisfaction of such Council, shall forfeit and pay a sum not exceeding ten pounds. And also it may be lawful for such Council to indict or cause to be indicted for such nuisance, such person so neglecting or disobeying any such notice, at the then next Court of General or Quarter Sessions, to be held nearest to the said Borough; and such person or persons being found guilty thereof, such nuisance or nuisances shall be removed, taken down, and abated, according to the law with regard to public or common nuisances; and the person so offending shall be subject to such punishment for the misdemeanour as the Justices assembled at such Sessions shall direct.

As to cleaning private avenues, &c.

65. Any owner or occupier of any house or place who shall neglect to keep clean all private avenues, passages, yards, and ways within the said premises, so as by such neglect to cause a nuisance by offensive smell or otherwise, shall forfeit and pay a sum not exceeding forty shillings for any such offence, nor less than ten shillings.

Cleansing butchers' shambles, slaughterhouses, &c.

66. For preserving the cleanliness of the said Borough and the health of the inhabitants thereof it shall be lawful for any police officer, authorized and deputed by any writing, under the hand of a Justice of the Peace, from time to time, and when and as often as he shall see occasion, to visit and inspect the butchers' shambles and slaughterhouses within the said Borough, and to give such directions concerning the cleansing the said shambles and slaughterhouses, both within and without, as to him shall seem needful; and any butcher, or the owner or occupier of any such shamble or slaughterhouse, who shall obstruct or molest any such officer in the inspection thereof, or who shall refuse or neglect to comply with such directions, within a reasonable time, shall forfeit and pay a sum not exceeding forty shillings, nor less than ten shillings.

Drawing or trailing timber, &c.

67. If any person shall haul or draw, or cause to be hauled or drawn, upon any part of the streets, roads, or public places, any timber, stone, or other thing, otherwise than upon wheeled carriages, or shall suffer any timber, stone, or other thing, which shall be carried principally or in part upon wheeled carriages, to drag or trail upon any part of such street or public place to the injury thereof, or to hang over any part of such carriage so as to occupy or obstruct the street or road beyond the breadth of the said carriage, every such person so offending shall forfeit and pay for every such offence the sum of forty shillings over and above the damages occasioned thereby: Provided that such penalty and damages shall not together exceed the sum of fifty pounds.

Restrictions on certain trades, &c.

68. It shall not be lawful for the business of a soap-boiler, tallow-melter, tripe-boiler, tanner, currier, or cow-keeper, or any other trade or manufacture of an obnoxious or unwholesome nature, prejudicial to the health of or otherwise offensive to the inhabitants, to be newly established or carried on in any building or place within the limits of this Borough, except in such place or places as shall be previously approved by the said Municipal Council, so that the same shall not be a nuisance to the inhabitants or prejudicial to public health; and that from and after the first day of January, in the year of our Lord one thousand eight hundred and sixty-nine, the business of a soap-boiler, tallow-melter, tripe-boiler, tanner, currier, or cow-keeper, or any other obnoxious, offensive, or unwholesome trade or manufacture, as aforesaid, which has been already established, shall not be continued or carried on in any building or place

within the limits of this Borough, except with such approval as aforesaid; and whosoever shall offend against this by-law shall forfeit and pay, on conviction for every such offence before any two or more Justices of the Peace, a penalty not exceeding fifty pounds.

Slop, night-soil, &c., to be conveyed away only at certain hours, &c.

69. It shall not be lawful for any person or persons to drive, or cause to be driven, any cart or carriage of any kind with any night-soil or ammoniacal liquor therein, through or in any of the streets, roads, or public places within the said Municipality, between the hours of 5 o'clock in the morning and 10 o'clock at night, or to fill any cart or other carriage so as to turn over or cast any night-soil, ammoniacal liquor, slop, urine, or channel dirt or filth, in or upon or near to any of the said streets, roads, or other public places; and in order to prevent nuisances it shall not be lawful for any person to deposit night-soil, ammoniacal liquor, or other offensive matter, nearer to any street, road, or dwelling-house, than shall be directed by the said Council; and all night-soil and other offensive matter shall be removed within the hours before prescribed, in properly-covered and water-tight carts or other vehicles; and no vehicles used for this purpose shall be allowed to stand on any premises nearer to any road, street, or dwelling-house than shall be directed by the said Council; and every person offending against this by-law shall for every such offence forfeit and pay a sum not exceeding five pounds, nor less than ten shillings.

Hours for removing night-soil, &c.

70. If any person shall take away night-soil from any house or premises within the streets, roads, or thoroughfares of the said Borough, or shall come with carts or carriages for that purpose, except between the hours of 10 at night and 5 in the morning, or if any person or persons shall put in or cast out of any cart or tub, or otherwise, any night-soil in or near any of the streets or public places, he shall forfeit and pay a penalty of five pounds for every such offence; and in case the person or persons so offending cannot be found, then the owner or owners of such cart, carriage, or other vehicle employed in and about emptying and removing such night-soil, and also the employer or employers of the person or persons so offending shall be liable to and forfeit and pay such penalty as aforesaid.

Injuring or extinguishing lamps, &c.

71. Any person who shall be convicted of wantonly or maliciously breaking or injuring any lamp or lamp-post, or extinguishing any lamp set up for public or private convenience, shall over and above the necessary expense of repairing the injury committed, to be estimated by the Council, forfeit and pay a sum not exceeding five pounds, nor less than one pound, provided that such penalty and expense shall not together exceed the sum of fifty pounds.

No rock to be blasted without notice to the Surveyor, &c.

72. Any person who shall be desirous of blasting any rock within the distance of 100 feet of any street, road, or other public place, shall give notice in writing twenty-four hours previously, to the said Council or Surveyor thereof, who shall appoint in writing a time when the same may take place, and give such other directions as they or he may deem necessary for the public safety; and if any person shall blast or cause to be blasted any rock within the limits aforesaid, without giving such notice, or shall not conform to the directions given to him by the said Council or Surveyor, he or she shall forfeit and pay for every such offence a sum not more than twenty pounds nor less than one pound, and for every subsequent offence shall pay a penalty of not less than five pounds.

No turf, gravel, &c., to be removed from streets without leave, &c.

73. Any person who shall form, dig, or open any drain or sewer, or who from any part of the roads, streets, or thoroughfares, shall remove or cause to be removed any turf, clay, sand, soil, gravel, stone, or other material, without leave first had and obtained from the officers or persons having lawful charge of such roads, streets, or thoroughfares respectively, or who shall wantonly break up or otherwise damage any part of the said roads, streets, or thoroughfares, shall, on conviction, forfeit and pay for every such offence any sum not exceeding five pounds, nor less than five shillings, and for every subsequent offence shall forfeit and pay a sum of not less than one pound.

If any driver ride on vehicle without a person to guide his beast, cart, with reins excepted, or go to a distance from his vehicle, or drive on wrong side, &c.

74. If the driver of any waggon, wain, cart, dray, or vehicle of any kind shall ride upon the same in any street, road, or thoroughfare as aforesaid, not having some person on foot to guide the animals drawing the same (such carts as are drawn by one horse and driven or guided with reins only excepted),—or if the driver of any carriage or vehicle whatsoever shall wilfully be at such a distance from such carriage or vehicle, or in such a situation whilst it shall be passing upon each street, road, or thoroughfare that he cannot have the direction or government of the horse or horses, or cattle drawing the same,—or if the

driver of any waggon, cart, dray, coach, carriage, or other vehicle, shall not drive on the left or near side of any such road, street, or thoroughfare,—or if any person shall in any manner wilfully prevent any other person or persons from passing him or her, or any vehicle under his or her care, upon such street, road, or thoroughfare, or by negligence or misbehaviour prevent, hinder, or interrupt the free passage of any person or vehicle, or carriage, in or upon the same,—every such driver or person so offending shall forfeit and pay for every such offence any sum not exceeding forty shillings nor less than ten shillings.

As to riding or driving improperly through streets, &c.

75. Any person who shall ride or drive through any road, street, or public place negligently, carelessly, or furiously, or so as to endanger the life or limb of any person, or to the common danger of the passengers, shall forfeit and pay a sum not exceeding ten pounds nor less than two pounds.

Affixing placards on walls, and chalking thereon.

76. It shall not be lawful for any person to paste or otherwise affix any placard or other paper upon any wall, fence, house, or building, nor to deface any such wall, house, or building by chalk or paint, or in any other manner, unless

with the consent of the owner thereof. And any person who shall be guilty of any such offence shall forfeit and pay a sum not exceeding ten shillings.

Mayor to signify any Alderman acting as Mayor.

77. Wherever, under these by-laws, the word "Mayor" is made use of, it shall, unless the context shall indicate a contrary intention, be construed to signify and include any Alderman lawfully acting for the time being in the place or stead of the Mayor.

As to interference with Council in enforcing by-laws.

78. Any person obstructing or interfering with any officer of the Council or other person doing or performing any duty or act under these by-laws, shall forfeit and pay a penalty not exceeding ten pounds nor less than forty shillings.

Passed by the Municipal Council of the Borough of Woollahra, this eighth day of December, in the year of our Lord one thousand eight hundred and sixty-eight.

(L.S.) M. CONSETT STEPHEN,
Mayor of Woollahra.

1869.

NEW SOUTH WALES.

MUNICIPALITIES.

(BOROUGH OF ARMIDALE—BY-LAWS.)

Presented to Parliament, pursuant to Act 31 Vict., No. 12, sec. 158.

Colonial Secretary's Office,
Sydney, 13th September, 1869.

BOROUGH OF ARMIDALE.

BY-LAWS.

THE following By-laws, made by the Council of the Borough of Armidale, for better enabling them to control and better manage the Public Reserve known as the Armidale Race-Course Reserve, having been confirmed by His Excellency the Governor, with the advice of the Executive Council, are published in accordance with the requirements of the Municipalities Act of 1867.

JOHN ROBERTSON.

BY-LAWS made in accordance with the provisions of the Municipalities Act of 1867, for the better enabling the Council of the Borough of Armidale to control and better manage the Public Reserve known as the Armidale Race-Course Reserve.

1. The Council shall have power to let the reserve known as the Armidale Race-Course, to any race committee, or club, or body of persons, for the purpose of holding horse races, cricket matches, shows, or other public sports, meetings, or exhibitions, for any period not exceeding four days at any one time, subject to such terms, and on such conditions as the Council, or a majority thereof, shall agree upon: Provided that, during the period or periods of such letting, the By-laws hereinafter contained shall, notwithstanding such letting, have full force and effect. No race committee, club, or body of persons, or member thereof, shall enter upon, or use and occupy the said reserve, or any part thereof, for the purpose of holding any horse races, cricket matches, shows, or other public sports, meetings, or exhibitions, without the consent of the Council, or a majority thereof.

2. That, during the period or periods for which the said race-course or reserve shall be so let, no person or persons, vehicle, horses or other animals, shall have admission thereto, except with the consent of such race committee, club, or body of persons, and on such terms as to payment, but not exceeding the scale of fees or charges specified in the Schedule hereto marked with the letter A. Any person entering upon the said race-course or reserve, during such period or periods as aforesaid, or any of them, without such permission as aforesaid, shall forfeit and pay a penalty of not less than five shillings nor more than ten shillings; and any person entering the said reserve at any time other than such period or periods as aforesaid, in any other way than through the gates leading thereto, shall forfeit and pay a penalty of not less than two shillings nor more than five shillings.

3. The Council may erect on the said race-course or reserve such buildings, stands, booths, posts, fences, gates, gateways, and other structures, or allow the same to be erected, on such terms and conditions as may be deemed advisable; and may lay out, or allow to be laid out, so much of the said race-course

or reserve as may be deemed sufficient for a running-ground; and may otherwise improve the said race-course or reserve, and may plant on the same such trees, shrubs, and plants as they may think proper: Provided that the said Council shall allow such race committee, or club, or body of persons, who shall erect any buildings, stands, booths, posts, or other structures, on the said race-course or reserve, to remove the same.

4. Any person driving or riding, or causing to be driven or ridden, any horse or other animal, or any cart, dray, or other vehicle, over or along any ground laid out on the said race-course or reserve as a running-ground or otherwise, without the consent of the Council, or some person duly authorized in their behalf, shall forfeit and pay a penalty of not less than ten shillings nor more than two pounds.

5. Any person who shall at any time injure or destroy any fence, gate, gateway, stile, building, stand, booth, post, or any other structure, or any tree, shrub, plant, or other thing growing or to grow on the said race-course or reserve, or any part thereof, shall forfeit and pay a penalty of not less than ten shillings nor more than fifty pounds.

6. The Council may allow such horses, cattle, or sheep, to be depastured on the said race-course or reserve for such periods as they may think proper, and may charge for the agistment thereof the rates mentioned in the Schedule B hereto: Provided that the Council, or any person authorized thereby, shall not be responsible or liable to the owner or owners of any such horses, cattle, or sheep, for any injury that they may have sustained whilst depasturing thereon, or for any losses sustained by such owners by reason of the same having strayed or been stolen therefrom, or otherwise howsoever: Provided that no person shall be allowed to depasture on the said race-course or reserve at the same time more than fifty head of sheep, the property of such person.

7. Any person who shall furiously ride or drive any horse or other animal, or other vehicle, without the permission of the Council, or the lessee or lessees for the time being thereof, upon such race-course or reserve, or any part thereof, shall forfeit and pay a penalty of not less than ten shillings nor more than five pounds.

8. The Council may appoint a ranger or other person to take care and charge of the said race-course or reserve, and all fences, gates, gateways, stiles, buildings, stands, booths, or other structures, and all trees, shrubs, plants, or other things growing and to grow thereon; and also all horses, cattle, and sheep, depasturing thereon, under the By-laws hereinbefore contained. And such ranger or other person shall discharge and perform such other duties as the said Council shall direct.

9. Any ranger or other person appointed by the said Council as aforesaid, who shall wilfully neglect to fulfil and perform any of the duties hereby required of him, or directed by the said Council to be fulfilled and performed by him, shall for each such neglect forfeit and pay a penalty of not less than ten shillings nor more than two pounds.

10. The ranger or other person authorized by the said Council may impound, in the public pound in Armidale, any horses, cattle, sheep, or other animal, which are not authorized in manner hereinbefore mentioned to be depastured upon such race-course or reserve, or in respect of which the fees mentioned in the Schedule hereto have not been paid.

11. Any person or persons who shall erect, or cause to be erected, upon the said race-course or reserve, any buildings, stands, booths, posts, fences, gates, gateways, or any other structures, without the permission of the Council, or a majority thereof, or whom such Council, or a majority thereof, shall authorize, by writing, under the hand of the Mayor, to grant such permission, shall for every such offence forfeit and pay a penalty of not less than one pound nor more than twenty pounds.

12. That any race committee, club, or body of persons may, during any such periods as aforesaid, enclose or set apart any portions of the said reserve for any purpose they may think proper; and any person who shall, without the consent of such race committee, club, or body of persons, enter upon any such portions of the said reserve so enclosed or set apart, shall forfeit and pay a penalty of not less than two shillings nor more than five shillings.

13. Any race committee, club, or body of persons, or any such person who shall erect upon the said reserve, or any part thereof, any posts, booths, tents, or other structures, shall, at their own expense, remove the same, after notice so to do by the Council, and shall, on removing the same or any of them, level the ground from which the same or any of them shall have been removed, to the satisfaction of the Council, or whom they may appoint.

—
SCHEDULE A.

	£	s.	d.
For each person,—not exceeding	0	0	6
For each horse, ass, or mule,—not exceeding	0	1	0
For each head of cattle, sheep, or other animals,— not exceeding	0	1	0
For each wheel of each vehicle.....	0	0	6

—
SCHEDULE B.

For every head of horse stock,—per week, not exceeding.....	0	2	0
For every head of cattle,—per week, not exceeding	0	1	6
For fifty, or part of fifty head of sheep	0	15	0

—

I hereby certify that the foregoing By-laws, consisting of thirteen clauses, were duly passed by the Municipal Council of the Borough of Armidale, on the 22nd day of June, in the year of our Lord one thousand eight hundred and sixty-nine.

JAMES McLEAN,
Mayor.

THOMAS LAMB,
Council Clerk.

1869.

NEW SOUTH WALES.

MUNICIPALITIES.

(BOROUGH OF KIAMA—BY-LAW.)

Presented to Parliament, pursuant to Act 31 Vict., No. 12, sec. 158.

Colonial Secretary's Office,
Sydney, 24th September, 1869.

BOROUGH OF KIAMA.

BY-LAW.

THE following By-law, made by the Council of the Borough of Kiama, for the extirpation of noxious weeds in the Municipality, having been confirmed by His Excellency the Governor, with the advice of the Executive Council, is published in accordance with the requirements of the Municipalities Act of 1867.

JOHN ROBERTSON.

Extirpation of noxious weeds.

THE Council shall have power, in respect to all lands within the boundaries of the Municipal Borough of Kiama, where the lands are under cultivation, or have been cleared and fenced, to order and compel the extirpation of the weeds known as the Bathurst burr, the Scotch thistle, and the cotton plant, or other noxious weeds detrimental to good husbandry; and thirty days notice by advertisement in a local newspaper, or by a written or printed notice under the hand of the Council Clerk, or other officer appointed for that purpose, left at or sent through the post to the last known residence or place of business of the person upon whose land such weeds may exist, shall be deemed sufficient notice to owners or occupiers of property. And if, after the expiration of thirty days from the first publication of such notice by advertisement, or the delivering or posting of such written or printed notice, the owner or occupier of the land shall neglect or refuse to extirpate such weeds, by cutting, pulling, or grubbing and burning them, the Council shall have power, in a summary manner, before any two Justices, to recover a fine, not exceeding ten pounds, together with costs of Court, by levy and distress upon the goods and chattels of the person or persons so offending. Where noxious weeds are found growing upon land unoccupied, the owner or owners of which are unknown, the Council shall have power, at any time, to enter upon and clear the weeds from such lands.

Made and passed by the Borough Council of Kiama, this twentieth day of July, in the year of our Lord one thousand eight hundred and sixty-nine.

JOHN BLACK,
Mayor.

1869.

NEW SOUTH WALES.

MUNICIPALITIES.

(BOROUGH OF MARRICKVILLE—BY-LAWS.)

Presented to Parliament, pursuant to Act 31 Vict., No. 12, sec. 158.

Colonial Secretary's Office,
Sydney, 3rd November, 1869.

BOROUGH OF MARRICKVILLE.

BY-LAWS.

THE following By-laws, made by the Council of the Borough of Marrickville, for regulating the proceedings of the said Council and the duties of the officers and servants thereof—for preserving order at meetings of the said Council—for determining the times and modes of collecting and enforcing payment of rates—for preventing and extinguishing fires—for suppressing nuisances and houses of ill-fame—for preventing or regulating and licensing exhibitions held or kept for hire or profit, bowling-alleys, and other places of amusement—compelling residents to keep their premises free from offensive or unwholesome matters—opening new public roads, ways, and parks—aligning and cleansing roads and streets—regulating the supply and distribution of water, sewerage, and drainage—preserving trees and shrubs—regulating free libraries—preventing or regulating the bathing or washing the person in any public water near a public thoroughfare—preserving public decency—providing for the health of the Municipality, and against the spreading of contagious or infectious diseases—restraining noisome and offensive trades—and generally maintaining the good rule and government of the said Borough,—having been confirmed by His Excellency the Governor, with the advice of the Executive Council, are published in accordance with the requirements of the Municipalities Act of 1867.

JOHN ROBERTSON.

BY-LAWS for regulating the proceedings of the Council of the Borough of Marrickville and the duties of the officers and servants of such Council—for preserving order at meetings of the said Council—for determining the times and modes of collecting and enforcing payment of rates; for preventing and extinguishing fires—for suppressing nuisances and houses of ill-fame—for preventing or regulating and licensing exhibitions held or kept for hire or profit—bowling-alleys, and other places of amusement—compelling residents to keep their premises free from offensive or unwholesome matters—opening new public roads, ways, and parks—aligning and cleansing roads and streets—regulating the supply and distribution of water, sewerage, and drainage—preserving trees and shrubs—regulating free libraries—preventing or regulating the bathing or washing the person in any public water near a public thoroughfare—preserving public decency—providing for the health of the Municipality, and against the spreading of contagious or infectious diseases—restraining noisome and offensive trades—and generally maintaining the good rule and government of the said Borough.

PART I.

PROCEEDINGS of the Council and Committees—preservation of order at Council meetings—duties of officers and servants, &c.

Meetings of the Council.

Ordinary Meetings.

1. The Council shall meet for the dispatch of business at the hour of half-past seven p.m. on every alternate Monday, unless such day shall happen to be a public holiday. In the latter

case the meeting shall be held on such other day as the Mayor may appoint.

Election of Chairman in absence of Mayor. Adjournment for want of quorum.

2. If at any meeting of the Council the Mayor be absent at the expiration of fifteen minutes after the time appointed for holding such meeting, the Aldermen then present shall proceed to elect, from among themselves, a Chairman for such meeting. Whenever there shall be an adjournment of any such meeting for want of a quorum, the names of the members present shall be taken down, and shall be recorded in the Minute Book.

Order of Business.

Business of Ordinary Meetings.

3. The following shall be the order of business at all meetings of the Council other than special meetings:—

1. The minutes of the last preceding meeting to be read, corrected if erroneous, and verified by the signature of the Mayor or other Chairman. No discussion to be permitted on such minutes, except as to whether they are correct.
2. Petitions (if any) to be presented and dealt with.
3. Correspondence to be read, and, if necessary, ordered upon.
4. Reports from Committees, and minutes from the Mayor (if any) to be presented and ordered upon.
5. Questions as to any matters under the jurisdiction or within the official cognizance of the Council, to be put and replied to; and statements as to any facts, matters, or circumstances, requiring attention by the Council or any of its Committees or officers, to be made.

6. Motions of which notice has been given to be dealt with in the order in which they stand on the business paper.
7. Orders of the day to be disposed of as they stand on the business paper.

Business may be dealt with out of regular order.

Provided that it shall be competent to the Council at any time, by resolution, without notice, to entertain any particular motion, or to deal with any particular matter of business, out of its regular order on the business paper, without any formal suspension of this section; also, and in like manner, to direct that any particular motion or matter of business shall have precedence at a future meeting.

Business at special meetings.

4. At special meetings of the Council the business, after the minutes shall have been read and verified, which shall be done in the same manner as at an ordinary meeting, shall be taken in such order as the Mayor, or the Aldermen at whose instance such special meeting shall have been called, may have directed.

Business paper for ordinary meeting—how prepared.

5. The business paper for every meeting of the Council, other than a special meeting, shall be made up by the Council Clerk, not less than two nor more than three days before the day appointed for such meeting. He shall enter on such business paper a copy or the substance of every notice of motion, and of every requisition or order as to business proposed to be transacted at such meeting which he shall have received, or shall have been required or directed so to enter, in due course of law, and as hereinafter provided. Every such entry shall be made subject to the provisions of section 3 of this "Part" of these by-laws, in the same order as such notice, requisition, or direction shall have been received.

Business paper for special meeting.

6. The business paper for each special meeting shall contain only such matters as shall have been specially ordered to be entered thereon by the Mayor or Aldermen calling such meeting.

Summons to members.

7. The summons to members of the Council for every meeting thereof shall be prepared from the business paper for such meeting, and shall embody the substance of such business paper.

How business paper is to be disposed of.

8. The business paper for each meeting of the Council shall, at such meeting, be laid before the Mayor or Chairman, who shall make a note upon such business paper of the mode in which each matter entered thereon has been dealt with; and such business paper so noted shall be a record of the Council.

Notices of motion, &c., to be numbered as received, and preserved until matter disposed of; unless withdrawn before business paper made up.

9. All notices of motion, and all requisitions from Aldermen, and directions from the Mayor as to the entry of any particular matters of business for the consideration of the Council at its then next or any future meeting, shall be numbered by the Council Clerk as they are received; and each such notice, requisition, and direction shall be preserved by such Clerk until after the matter to which it relates shall have been disposed of, and the record in the minute book of the manner in which such matter has been so disposed of shall have been duly verified as required by section 3 of this "Part" of these by-laws: Provided, however, that the person giving or forwarding any such notice of motion, requisition, or direction to the Council Clerk shall be at liberty to withdraw the same at any time before the making up of the business paper.

After business paper made up, all notices, &c., to be the property of the Council.

10. After the business paper shall have been made up as aforesaid all the said notices of motions, requisitions, and directions, as to which entries have been made thereon, shall be the property of the Council, and shall not be withdrawn, altered, or amended without leave having been first obtained from the Council for such withdrawal, alteration, or amendment.

Motions and Amendments.

Motions—how to be moved.

11. Except by leave of the Council motions shall be moved in the order in which they stand on the business paper, and if not so moved or postponed shall be struck from such business paper, and be considered to have lapsed.

Absence of proposed mover.

12. No motion of which notice shall have been entered on the business paper, shall, except as hereinafter provided, be proceeded with in the absence of the Alderman by whom such notice shall have been given; unless by some other Alderman producing a written authority for that purpose from such first-named Alderman.

Motion to be seconded.

13. No motion in Council shall be discussed unless and until it be seconded.

Amendments may be moved.

14. When a motion in Council shall have been made and seconded any Alderman shall be at liberty to move an amendment thereon, but no such amendment shall be discussed unless and until it be seconded.

Motions and amendments to be in writing.

15. No motion or amendment shall be discussed until it shall have been reduced into writing.

Only one amendment at a time.

16. No second or subsequent amendment shall be taken into consideration until the previous amendment or amendments shall have been disposed of.

Amended question—further amendment may be moved thereon.

17. If an amendment be carried the question as amended thereby shall become itself the question before the Council whereupon any further amendment upon such question may be moved.

How subsequent amendments may be moved.

18. If any amendment, either upon an original question or upon any question amended as aforesaid, shall be negatived, then a further amendment may be moved to the question to which such first-mentioned amendment was moved, and so on: provided that not more than one question and one proposed amendment thereof shall be before the Council at any one time.

Motions for adjournment.

19. No discussion shall be permitted on any motion for adjournment of the Council; and if, upon the question being put on any such motion, the same be negatived, the subject then under consideration, or the next in order on the business paper, or any other on such paper that may be allowed precedence, shall be discussed before any subsequent motion for adjournment shall be receivable.

Requisitions from Aldermen how to be dealt with.

20. Every requisition by an Alderman, that any particular matter of business be brought before the Council, shall be regarded and treated as a notice of motion by such Alderman that such business be taken into consideration by the Council. And he shall be called upon in due order to move that such business be so considered, or to make any other motion which he may think fit in reference thereto, which shall be consistent with the notice of such business, and with good order. And if such Alderman be absent, or, if being present and so called upon, he shall make no such motion, then it shall be open to any other Alderman to make such motion. And when any such motion shall have been made it shall be dealt with in precisely the same manner as if notice thereof had been given, subject, however, to any objection which may exist as to its not being in accordance with the notice actually given of such business or with good order. And if no motion shall be made in reference to such business, the entry relating thereto shall be struck from the business paper.

Orders of the Day.

Of what orders of the day shall consist.

21. The orders of the day shall consist of any matters other than motions on notice, which the Council shall at a previous meeting thereof have directed to be taken into consideration, or which the Mayor or any committee of the Council shall have directed to be entered on the business paper for consideration.

How they are to be dealt with.

22. Section 20 of this "Part" of these by-laws shall be considered applicable to orders of the day. And the Alderman who has the usual charge of, or who has previously moved in reference to, the particular business to which any such order of the day relates, shall be the person called upon to move: Provided that as to any order of the day entered as aforesaid, by direction of the Mayor, such Mayor may arrange with any Alderman to move, and may in such case call upon the Alderman with whom he has so arranged.

Petitions.

Petitions to be respectfully worded.

23. It shall be incumbent on every Alderman presenting a petition to acquaint himself with the contents thereof, and to ascertain that it does not contain language disrespectful to the Council. The nature and prayer of every such petition shall be stated to the Council by the Alderman presenting the same.

Petitions—how received.

24. All petitions shall be received only as the petitions of the parties signing the same.

How petitions are to be dealt with.

25. No motion shall, unless as hereinafter provided, be permissible on the presentation of a petition, except that the same be received, or that it be received and referred to one of the permanent Committees hereinafter mentioned; or that it be received, and that its consideration stand an order of the day for some future meeting: Provided, however, that if any Alderman shall have given due notice of a motion in reference to any petition, and such petition shall have been presented before such Alderman shall have been called upon to move such motion, the said motion shall, if otherwise unobjectionable, be considered in order.

Correspondence.

Duties of Mayor as to correspondence.

26. The Mayor shall have the same duty in reference to letters addressed to the Council, before directing the same to be read as by section 23 of this "Part" of these by-laws is imposed upon Aldermen presenting petitions. The Mayor shall direct as to the order in which all correspondence shall be read, and no letter addressed to the Council shall be presented or read by any Alderman. If the Mayor be absent, and shall not have examined any such letters addressed to the Council, or have given any such directions as aforesaid, then the duties imposed by this section shall devolve upon the presiding Alderman.

Sec. 25 to apply to letters.

27. Section 25 of this part of these by-laws shall be considered as fully applicable to letters addressed to the Council as to petitions.

Letters sent not to be discussed, but every letter may be subject of motion.

28. No discussion shall be permitted in reference to any letters which have been written and sent by the Mayor, or by any officer of the Council, and copies of which may be read to such Council: Provided, however, that any notice of motion, consistent with good order, may be entertained with reference to any such letters, whether read or not, or with reference to any letters addressed to the Council, which the Mayor or presiding Alderman may not have ordered to be read as aforesaid.

Reports from Committees and Minutes from the Mayor.

Form of Report.

29. All reports from Committees shall be written on foolscap paper, with a margin of at least one-fourth of the width of such paper; and shall be signed by the Chairman of such Committee, or, in his absence, by some other member of the same.

Mayor's minute.

30. The Mayor shall have the right of directing the attention of the Council to any matter or subject within its jurisdiction or official cognizance, by a minute in writing. Every such minute shall be written upon paper of the same kind, and with the same margin as a report from a Committee, and shall be signed by such Mayor.

How reports, &c., are to be dealt with. Duties of Chairman, &c., in certain cases.

31. No motion shall (unless as hereinafter provided) be permissible on the presentation of a report from a committee or a minute from the Mayor, except that the same be received, or that it be received and that its consideration stand an order of the day for some future meeting: Provided, however, that if any Alderman shall have given due notice in reference to any such report or minute, or if an order for the consideration of such report or minute shall have been entered among the orders of the day, such motion or order may, if otherwise unobjectionable, be moved or considered in due course. And whenever any such report or minute embodies any recommendation which cannot legally be carried out without any due notice, and it is, nevertheless, desirable that such report or minute shall be definitely ordered upon during the meeting of the Council at which such report or minute is presented, it shall be the duty of the Chairman, or member of such Committee signing such report, or of such Mayor, as the case may be, to give or transmit to the Council Clerk such a notice of motion, requisition, or direction as aforesaid, as will enable such Council Clerk to make the necessary entry on the business paper, and to give such due notice.

Questions and statements.

Limitations as to questions and statements.

32. No question or statement shall be allowed to be put or made which is inconsistent with good order, or is not in strict accordance with the requirements of section 3 of this part of these by-laws.

Notice to be given.

33. Sufficient notice of every question shall be given to the person who is expected to reply thereto, to allow for the consideration of such reply, and, if necessary, for a reference to other persons or to documents.

Answer not compulsory.

34. It shall not be compulsory upon any person questioned as aforesaid to answer the question so put to him.

Question to be put without argument, &c.

35. Every such question must be put categorically, without any argument or statement of fact.

Similar provision as to statements.

36. Every such statement must be made without argument.

No discussion on question, &c. Rights of objection, and of subsequent motion reserved.

37. No discussion shall be permitted as to any such question, or as to any reply or refusal to reply thereto, or as to any such statement, at the time when such question is put, or such reply or refusal to reply is given, or such statement is made: Provided, however, that nothing herein contained shall prevent the taking of any objection as to any such question or statement being out of order, or shall prevent the discussion, after due notice, as hereinbefore provided, of any matters properly arising out of or relating to any such question, or reply, or refusal to reply, or any such statement as aforesaid.

Order of Debate.

Mode of addressing the Council, &c.

38. Every Alderman who shall make or second any motion, or shall propose or second any amendment, or shall take any part in any debate or discussion, or shall put or reply to any question, or shall make any statement, or shall in any other way, or for any other purpose, address observations to the Council, shall, while so doing, stand up in his customary place (unless he shall be prevented from so doing by reason of some bodily infirmity) and shall address himself to the Mayor, or other Chairman then presiding: Provided that in the case of a question such question may, by permission of such Mayor or Chairman, be put directly to the Alderman or officer to be questioned, and may be replied to in like manner; but in every such case the question so put and the answer thereto shall be subject to every legal objection, on the ground of disorder or irrelevancy. And all members of the Council shall, on all occasions, when in such Council address and speak of each other by their official designations, as Mayor, Chairman, or Alderman, as the case may be.

Speaker not to be interrupted, if in order.

39. No Alderman shall be interrupted while thus speaking, unless for the purpose of calling him to order, as hereinafter provided.

Limitations as to number of speeches, &c.

40. Every mover of an original motion shall have a right of general reply to all observations which may have been made in reference to such motion, and to any amendments moved thereon, as well as a right to speak upon every such amendment. Every Alderman, other than the mover of such original motion, shall have a right to speak once upon such motion, and on every amendment thereon. No Alderman shall speak oftener than once upon any question other than a question of order, unless when misrepresented or misunderstood, in which case he shall be permitted to explain, without adding any further observations than may be necessary for the purposes of such explanation.

Mover and seconder.

41. An Alderman who has moved any motion or amendment shall be considered to have spoken thereon; but an Alderman who shall have seconded any such motion or amendment without any further observation than that he seconded the same shall be at liberty to speak on such motion or amendment.

Speaker not to digress, &c.

42. No Alderman shall digress from the subject under discussion, or shall make personal reflections on, nor impute improper motives to, any other Alderman.

Adjournment of debate.

43. A debate may be adjourned to a later hour of the day, or to any other day specified; and the Alderman upon whose motion such debate shall have been so adjourned shall be entitled to pre-audience on the resumption of the same.

Mayor to decide as to pre-audience.

44. If two or more Aldermen rise to speak at the same time, the Mayor or Chairman shall decide which of such Aldermen shall be first heard.

Alderman may require questions to be stated, &c., under certain restrictions.

45. Any Alderman may request the question or matter under discussion to be read or stated, for his information, or may require the production of any records of the Council bearing upon such question or matter which are readily accessible: Provided however, that no such request or requisition shall be so made as to interrupt any other Alderman when speaking, or materially

to interrupt the discussion. Also, that if any such request or requisition shall appear to the Mayor or Chairman not to have been made *bonâ fide* it shall not be complied with.

Mayor or Chairman not to move or second motion, &c.; but may address Council thereon.

46. The Mayor or Chairman shall not move or second any motion or amendment, nor put any question, as provided for by section 3 of this "Part" of these by-laws, except as is further provided for by section 38 of the same. But such Mayor or Chairman shall have the same right as any other Alderman to speak once upon every such subject or amendment. The Mayor or Chairman shall rise when so speaking (unless prevented by some bodily infirmity from so doing) but shall be considered as still presiding.

Questions of Order.

Mayor or Chairman to decide points of order.

47. The Mayor or Chairman shall preserve order, and his decision on disputed points of order or practice shall be final, except in so far as the same may be questioned, as in the manner hereinafter provided.

Acts of disorder.

48. Every member of the Council who shall commit a breach of any section of this "Part" of these by-laws, or who shall move or attempt to move any motion or amendment embodying any matter as to which the Council has no legal jurisdiction, or who shall in any other way raise or attempt to raise any question, or shall address or attempt to address the Council upon any subject which the said Council has no legal right to entertain or to discuss, or who shall use any other language which according to the common usage of gentlemen would be held disorderly, or who shall say or do anything calculated to bring the Council into contempt, shall be out of order.

Mayor, &c., may call Member to order.

49. The Mayor or Chairman may, without the interposition of any other member of the Council, call any Alderman to order, whenever, in the opinion of such Mayor or Chairman, there shall be a necessity for so doing.

Any Member may raise question of order.

50. Every member of the Council shall have the right of calling the attention of the Mayor or Chairman to any motion, amendment, statement, argument, or observation moved, used, or made by any other member which such first-named member may consider out of order.

Mode of proceeding thereon.

51. A member called to order shall withdraw while the question of order is being discussed and decided upon, unless specially permitted to offer an explanation, retraction, or apology; but on obtaining such special permission such member may explain, retract, or apologize for the matter or remark alleged to have been out of order. And if such explanation, retraction, or apology be deemed satisfactory, no further discussion on the question of order shall be permitted. If any member, on being called to order, shall ask such permission to explain, retract, or apologize as aforesaid, the Mayor or Chairman may, of his own authority, grant or refuse such permission, as he may think fit, unless any member shall require the sense of the Council to be taken on this question. In such case it shall be the duty of the Mayor or Chairman to take the sense of the Council, at once, and without discussion, as to whether such permission shall be granted. And when any such explanation, retraction, or apology shall have been made or offered by permission of the Mayor or Chairman, the latter shall in like manner decide, or, if required so to do, shall take the sense of the Council as to whether such explanation, retraction, or apology is considered sufficient. If such permission be refused, or if such explanation, retraction, or apology be considered insufficient, the question of order shall be considered and decided before any further business is proceeded with: Provided that if such Mayor or Chairman shall have decided the question of order before any member shall have required the sense of the Council to be taken in reference thereto, such question of order shall not be re-opened. And provided further, that nothing herein contained shall be held to affect the right of such Mayor or Chairman to decide finally, as hereinbefore provided, upon any such point of order, after the same shall have been discussed.

Decision of points of order.

52. The Mayor or Chairman, when called upon to decide points of order or practice, shall state the provision, rule, or practice which he shall deem applicable to the case, without discussing or commenting upon the same.

Motions out of order to be rejected. Members to explain, retract, or apologize, &c.

53. Whenever it shall have been decided as aforesaid that any motion, amendment, or other matter before the Council is out of order, the same shall be rejected; and whenever any-

thing said or done in Council by any Alderman shall be similarly decided to be out of order, such Alderman shall be called upon by the Mayor or Chairman to make such explanation, retraction, or apology, as the case may require.

Penalties for persisting in disorderly conduct.

54. Any member of the Council who shall have been called to order, and who, after having been twice directed to withdraw as aforesaid, shall refuse to do so, or who shall persist in any line of conduct or argument, or of observations, which shall have been decided as aforesaid to be disorderly, or who shall refuse to make such explanation, retraction; or apology as aforesaid, when required so to do, or who shall be guilty of any other act of disorder, as defined in section 48 of this "Part" of these by-laws, and shall refuse to make such explanation, retraction, or apology, as a majority of the Aldermen then present shall consider satisfactory, shall be liable, on conviction for the first offence, to a penalty of not less than ten shillings, nor more than five pounds; and on a second conviction for the like offence he shall be liable to a penalty of not less than one pound, nor more than ten pounds; and on the third conviction and for every further conviction for the like offence, he shall be liable to a penalty of not less than two pounds, nor more than twenty pounds.

Power of Council as to laying down general rules, &c.

55. Any Alderman who is dissatisfied with the decision of the Mayor or Chairman on any such question of order or of practice, may, by motion on notice, respectfully worded, invite the Council to lay down a different rule or principle for the determination of any similar questions of order or of practice which may thereafter arise. Any rule or principle thus laid down shall be binding upon all parties, unless and until it be rescinded, but shall have no retroactive operation: Provided, however, that nothing herein contained shall be held to bind any Mayor or Chairman to put any motion to the Council which, in his opinion, is contrary to law.

Mode of Voting.

How questions are to be put.

56. The Mayor or Chairman shall put to the Council all questions on which it shall be necessary that a vote be taken, and shall declare the sense of such Council thereon; and he shall be at liberty to put any such question as often as may be necessary to enable him to form and declare his opinion as to the opinion of the majority.

Divisions.—Penalty for refusing to vote.

57. Any Alderman shall be at liberty to call for a division; in such case the question shall be put first in the affirmative and then in the negative; and the Aldermen shall vote by show of hands, and the names and votes of the Aldermen present shall be recorded. Any Alderman who shall be present when a division is called for, and shall not vote on such division, not being disabled by law from so voting, shall be liable for every such offence to a penalty of not less than ten shillings, nor more than five pounds.

Protests.

Mode of protesting.—Protest to be recorded, but may, under certain circumstances be expunged.

58. Every member of the Council (the Mayor included) may protest against any resolution or vote by the Council; notice of the intention so to protest must, however, be given at the meeting when such resolution is passed, or such vote is arrived at, and the protest itself must be handed or sent to the Council Clerk not later than seven days after such notice. The Council Clerk shall enter every such protest in the minute-book, but if, in the opinion of the Council, it be inconsistent with the truth, or disrespectfully worded, it may (by resolution on notice) be ordered to be expunged. In such case the expunction shall be made by drawing a perpendicular line with the pen through the entry of such protest, with a reference in the margin to the resolution ordering such expunction.

Committees of the whole Council.

Rules applicable to business in Committee.

59. The following sections of this "Part" of these by-laws shall (except as is herein excepted) be taken to apply to the conduct of business in Committee of the whole Council, namely—sections 14 (except that it shall not be necessary that any motion or amendment in Committee shall be seconded), 15, 16, 17, 18, 38, 39, 42, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 56, and 57.

Disorderly conduct in Committee.—Refusal to vote.

60. Whenever any member of the Council shall, while the Council is in Committee of the whole, be considered guilty of an offence against good order within the meaning of section 54 of this "Part" of these by-laws, it shall be competent to any Alderman to move that the Council resume its sitting, and that such matter be reported; and if such motion be carried such matter shall be reported accordingly, and an entry of such report shall be made in the minute-book; and whenever any Alderman

shall have failed to vote on any occasion in Committee of the whole Council, as required by section 57 of this "Part" of these by-laws, the facts shall be reported to the Council, and such report on such facts shall be duly recorded in the minute-book: Provided that in the case of an Alderman failing to vote as aforesaid, no special motion that the Council resume its sitting shall be necessary, but it shall be the duty of the Chairman of such Committee of the whole, in making his report of the proceedings in such Committee, whenever such report may be made, to include in such report a statement of such failure to vote as aforesaid, and of the question as to which such Alderman has so failed to vote.

Decisions in Committee on points of order may be reported.

61. Whenever a decision upon any question of order shall have been given by the Chairman of a Committee of the whole Council, under the provision of section 47 of this part of these by-laws, any Alderman may move that such decision be embodied in the report to the Council of the proceedings in such Committee; and if such motion be carried such decision shall be so embodied in such report, whenever the same shall be made.

How progress may be reported, &c.

62. Any Alderman may at any time during the sitting of a Committee of the whole Council move that the Chairman report progress (or no progress, as the case may be) and that leave be asked to sit again at a later period of the same day, or on any further day; or that no leave be asked to sit again; and if any such motion be carried, the Council shall resume its sittings, and a report shall be made accordingly; but no discussion shall be permitted on any such motion, and if the same be negatived, the subject then under consideration shall be discussed before another such motion shall be receivable.

Reports of proceedings in Committee.—Want of quorum in Committee.

63. All reports of proceedings in Committee of the whole Council shall be made to the Council, *viva voce* by the Chairman of such Committee; and a report of such proceedings shall be made in every case, except when it shall be found, on counting the number of members during the sitting of any such Committee, that there is not a quorum present. In the latter case the sitting of the Council shall be resumed without any motion for that purpose, and the proceedings in Committee shall be considered to have lapsed: Provided, that in the making of any such report as aforesaid, it shall not be necessary to report any such proceedings *in extenso*, but only to state the result, general effect, or substance of such proceedings.

How reports are to be dealt with.

64. All such reports of proceedings in Committee of the whole Council shall be recorded in the minute book; but, except as hereinafter mentioned, no such report shall be considered as adopted by the Council, nor shall any such application as aforesaid for leave to sit again be considered to have been granted by such Council, until a motion shall have been made and passed for such adoption, or for the granting of such leave. And every such motion for the adoption of a report or for the granting of leave as aforesaid, and the order of debate on such motion shall be subject to all the same rules as other motions in Council, and the order of debate on such other motions: Provided however, that where a report shall have been made under section 60 of this part of these by-laws, of disorderly conduct in Committee, or under section 57 of this part of these by-laws, of failure to vote on division, or of any decision in Committee upon any question of order, such report shall, so far as it relates to such facts, be regarded and recorded as a statement thereof; and to that extent shall not, unless for the correction of a manifest error, be interfered with upon any pretext whatever.

Calls of the Council.

How call may be ordered.

65. A call of the Council may be ordered by any resolution of which due notice shall have been given for the consideration of any motion or matter of business before such Council.

Such call compulsory in certain cases.

66. There shall, without any special order to that effect be a call of the Council for the consideration of every motion which may be made under section 55 of this part of these by-laws and of every motion for the rescission of any resolution, order, or decision of such Council.

Mode of proceeding.

67. The call shall be made immediately before the motion or business for which such call has been ordered, or is required to be made by the last preceding section, shall be moved or considered such call shall be made as follows:—The Council Clerk shall call the names of all the members in their alphabetical order; each member present shall answer to his name as so called; and if any members are absent a record shall be made of such absence; but if leave of absence to any such member shall have previously been granted, or if such an excuse in

writing shall have been forwarded to the Mayor or Council Clerk, as a majority of the Council then present shall consider satisfactory, such absent member shall stand excused, and a record shall be made of such excuse and of the reasons for the same.

Penalty for absence without legal excuse. Further call when question adjourned.

68. Any member of the Council who, having had notice of such call of the Council, shall not answer to his name as aforesaid, or who being absent, shall not be legally excused as aforesaid, or who, if absent and not so excused shall fail to show that by reason of extreme illness or any other sufficient cause, he has been unable to send an excuse in writing as aforesaid, or who, having answered to his name as aforesaid, shall not be present when a vote is taken on the motion or business as to which such call has been made as aforesaid, shall for every such offence be liable to a penalty of not less than ten shillings, nor more than five pounds. Provided that if the consideration of every such motion or matter of business be adjourned to a future day, there shall be a further call on the resumption of such consideration; and the provisions herein as to penalties for absence, shall have reference to such further call. And if there shall be more than one adjournment this proviso shall be taken to extend to the resumption of the consideration of such motion or matter of business after every such adjournment.

Standing and Special Committees.

Standing Committees.

69. There shall be four Standing Committees, namely, a By-law Committee, a Committee for Works, a Finance Committee, and a Committee for General Purposes. These Committees shall be re-appointed every year at the first meeting of the Council which shall be holden after the election of the Mayor.

Constitution of Standing Committees.

70. Each of the three Committees first named in the last preceding section shall consist of three members, of whom one shall be taken from among the Aldermen of each ward. The Committee for General Purposes shall consist of the Chairmen of the three said first named Committees.

Mode of re-appointing Standing Committees.

71. The re-appointment of the three said first-named Committees may, on resolution of the Council, be made by ballot. In such case a list or lists of the members for each ward shall be handed to each member then present, who shall mark against the name of each such member the title of the Committee to which, in his opinion, such member ought to belong. And the Mayor or Chairman shall thereupon examine such lists so marked, and shall declare the result. And if there shall be an equal number of votes for the appointment of any two or more members to any one of such first-named Committees, such Mayor or Chairman shall decide which of such members shall be appointed to such Committee.

By-law Committee.

72. The By-law Committee shall prepare for the consideration of the Council drafts of all such By-laws as may be required for the good government of the Borough. They shall also watch over the administration of the by-laws, and of any statute of which the operation has been or may be extended to the Borough; and shall take such steps as may be necessary for the prevention or punishment of offences against such by-laws or statutes, and for the preservation of public health, order and decency.

Committee for Works.

73. The Committee for Works shall have the general direction of all works ordered or sanctioned by the Council; and the general inspection of all streets, roads, ways, bridges, public reserves, and other public places under the care and management of the Council. They shall also inquire and report from time to time as to such improvements or repairs as they may think necessary, or as they may be directed by resolution of the Council to inquire and report upon.

Finance Committee.

74. The Finance Committee shall examine and check all accounts, and shall watch generally over the collection and expenditure of the Municipal revenues. They shall inquire and report from time to time as to all matters which they may consider to affect, or to be likely to affect, the finances of the Borough; and as to such matters or subjects of the like nature as they may be directed by resolution of the Council to inquire and report upon.

Committee for General Purposes.

75. The Committee for General Purposes shall take cognizance of every matter, subject, or question within the jurisdiction of the Council not coming within the province of one or other of the before-mentioned Standing Committees, and shall from time to time inquire into and report upon any such subject,

matter, or question as they may think necessary, or as they may be directed by resolution of the Council to inquire into and report upon.

Special Committees.

76. Special Committees may consist of any number of members, and may be appointed for the performance of any duty which may be lawfully entrusted to a Committee, and for which, in the opinion of the Council, a Special Committee ought to be appointed. And no Standing committee shall interfere with the performance of any duty which may for the time being have been entrusted to any such Special Committee. The appointment of every such Special Committee shall be made by resolution, after due notice; and it shall be incumbent on the mover of such resolution to embody therein a statement of the duties proposed to be entrusted to such Special Committee. The mover of any such resolution may name therein such members as, in his opinion, ought to constitute such Committee, or he may propose that such Committee consist of a certain number of members to be appointed by ballot; and in the latter case, or if an amendment to the effect that such Special Committee be appointed by ballot be carried, each member then present shall receive a list of all the members of the Council, from which list he shall strike out all names but those of the persons of whom, in his opinion, such Special Committee ought to be composed; and the Mayor or Chairman shall examine such lists, and shall declare the result. And in the event of its becoming necessary, through an equality of votes to decide as to which of two or more Aldermen shall serve on such Committee, such Mayor or Chairman shall so decide.

Chairman of Committee.

77. Every Committee, of which the Mayor shall not be a member, shall elect a permanent Chairman of such Committee, within seven days after their appointment.

Term of service in Committee.

78. Appointments to the By-law Committee, the Committee of Works, and the Finance Committee, shall be for the whole municipal year. The Chairmen of these three Committees as appointed or removed from the Chairmanship of the same, shall be thereby and without any further order regarded as having been appointed to or removed from the Committee for General Purposes. The appointment of every Special Committee shall be considered to endure until the duties for which such Committee have been appointed shall have been fully performed: Provided however, that nothing herein contained shall be held to affect in any way the right of such Committee to remove any Chairman of such Committee, or to appoint another such Chairman in his stead, or to militate against the general provisions as to Committees in sections 109 and 110 of the Municipalities Act of 1867; and that so much of this by-law as relates to the appointment, powers, and duties of Committees, shall be read and interpreted in connection with such last-mentioned general provisions.

Committee Meeting, how called.

79. The Council Clerk shall call a meeting of any Committee when requested so to do by the Chairman, or any two members of such Committee.

Records of transactions in Committee.

80. The Chairman of each Standing Committee shall make, or cause to be made, in a book to be kept by him for that purpose, memoranda of all the transactions of such Committee, which book he shall, on ceasing to be such Chairman, hand over to his successor.

Expenditure.

Except in emergent matters cost of all work to be estimated before undertaken.

81. With the exception of emergent matters hereinafter specially provided for, no work affecting the funds of the Borough shall be undertaken until the probable expense thereof shall have been first ascertained by the Council.

Emergent matters and necessary current expenses.—Expenses authorized to be reported.—Outlay to be in accordance with orders of the Council.

82. For emergent matters and for necessary current expenses during the intervals which may elapse between the meetings of the Council, outlays to the following extent may be incurred:—

1. By order of the Committee for Works, or of the Mayor and one member of such Committee, for repairs or emergent works, to the extent of five pounds.
2. By order of the Mayor for necessary current expenses, to the extent of two pounds.
3. By order of the Mayor and any two Aldermen, or without the Mayor, of any four Aldermen, for any emergent purpose, to the extent of five pounds.

Provided, that in every case a detailed report in writing of every such outlay shall be laid before the Council at its next meeting; such report to be signed by the Chairman of the Committee of Works, or the Mayor, or the Mayor and Aldermen, or the Aldermen without the Mayor, as the case may be, by whom such outlay shall have been authorized. Also, that such outlay shall

only be permissible in reference to matters coming strictly within the jurisdiction or functions of the Council; and that no outlay involving a disobedience or evasion of any order or resolution of such Council shall on any pretence be thus authorized.

All claims to be examined and reported upon by Finance Committee.

83. All accounts and demands of money against or from the Council, shall be examined and reported on by the Finance Committee before any order shall be made for payment of such accounts or demands.

Certificate required with each claim.—Salaries and wages to be payable on Mayor's order.—Certificates to be attached to report.

84. No payment shall be so ordered unless there shall be a certificate or memorandum from the Committee, from the Mayor, or from the officer of the Council to whom the direction or guardianship of such expenditure properly belongs, shewing that the demand is a legitimate one, and has been duly authorized or enquired into. It shall be the imperative duty of the Finance Committee to see that this requirement is fulfilled, or to report specially as to the reasons for its non-fulfilment, before recommending payment: Provided however, that such special report as last herein mentioned may be embodied with the report by which payment of the amount in question is recommended: Provided also that in cases of special expenditure under section 82 of this "Part" of these by-laws, the report directed by that section to be laid before the Council shall, if the outlay shall have been lawfully incurred, be deemed a sufficient certificate: And provided further, that in regard to salaries and wages of labour for officers, servants, and labourers employed at fixed rates of payment, by order of the Council, the certificate of the Mayor of the amount due to any such officer, servant, or labourer, and the order of such Mayor for payment of such amount, shall be a sufficient authorization for such payment; and such certificates, memoranda, and authorizations shall be attached respectively to the reports from the Finance Committee on the payments or outlays to which such certificates, memoranda, or authorizations have reference.

Common seal and records of the Council.

Common seal and press how secured.—Care of same.

85. The common seal and the press to which the same is attached shall be secured by a cover or box, which, except when such seal and press are in use, shall be kept locked. There shall be duplicate keys to the lock of this cover or box, of which keys one shall be kept by the Mayor and the other by the Council Clerk. Such common seal and press shall be in the custody and the care of the Council Clerk.

When and how common seal to be used.

86. The common seal shall not be attached to any document without an express order of the Council. In every case when such common seal has been ordered to be attached to any document, such document shall also be signed by the Mayor, or, in case of the absence or illness of such Mayor, by two Aldermen, and countersigned by the Council Clerk.

How books of account are to be kept and inspected.

87. The Treasurer shall keep such books of account and such records, statements, and memoranda of receipts and expenditure, in such manner and form as the Council may from time to time direct. It shall be the duty of the Finance Committee to inspect all such books of account, records, statements, and memoranda, from time to time, to ascertain that the same are properly kept, and to report at once to the Council any act of neglect, or appearance of inefficiency which they may have discovered in the keeping of the same; also, to report to the Council, from time to time, any changes which such Committee may think advisable in the mode of keeping the accounts.

Records of the Council defined.—Provisions for proper keeping of same.

88. The minute book, letter book, and all rate and assessment books, books of account, records, statements, and memoranda of receipts and expenditure, electoral rolls, and other records relating to elections, business papers, reports from Committees, minutes from the Mayor, petitions, letters on municipal business, addressed to the Council or to the Mayor, or to any officer or servant of the Council, orders, reports, returns, and memoranda, relating to Municipal business, drawings, maps, plans, contracts, specifications, agreements, and all other books and papers connected with the business of the Council, shall be deemed records of the Council. All such records other than the minute book and other books, and other than electoral rolls and other records relating to elections, shall be numbered and filed in due order, and shall be duly registered by the Council Clerk in a book to be kept by him for that purpose. Upon the face of every document thus registered, to which there is any reference in the minute book, there shall be a note of the page wherein it is so referred to. And when any order has been made by the Council, or a report has been brought up by any Committee thereof in reference to any document so registered as aforesaid, a note of such order or report shall be made upon such docu-

ment. It shall be the duty of the By-law Committee to inspect the records from time to time to ascertain that the same are properly kept as aforesaid, and to report at once to the Council any act of neglect or appearance of inefficiency which they may discover in the keeping of such records.

Impression of seal not to be taken, &c., without leave of Council.—Penalties.

89. No member or officer of the Council shall be at liberty to take any impression of the corporate seal, or to show, lay open, or expose any of the books or records of the Council to any person other than a member of the same, without leave from such Council, except as otherwise provided by law. Any member or officer of the Council who shall be guilty of a breach of this section shall be liable on conviction for the first offence to a penalty of not less than five shillings, nor more than two pounds; for a second offence to a penalty of not less than one pound, nor more than ten pounds; and for a third and every subsequent offence to a penalty of not less than five pounds, nor more than twenty-five pounds.

Records not to be removed, &c.—Penalties.—Exceptional circumstances.—Receipt to be given in every case before document received.—Proviso as to use of records as matter of evidence.

90. Any person removing any such book or other record of the Council as aforesaid, from the Council Chamber, or the place where by direction of the Council such book or other record is usually kept, without leave for such removal having been first obtained from such Council, or without other lawful cause for such removal, as hereinafter provided, shall, for every such offence be liable to a penalty of not less than ten shillings, nor more than ten pounds. And nothing herein contained shall be held to affect the further liability of any person who shall have removed such book or other record as aforesaid and shall not have returned the same, to prosecution for stealing such book or record, or to an action-at-law for detention of the same, as the circumstances of the case may warrant: Provided that leave for temporary removal of a book or other record may be granted to the Council Clerk or the Treasurer by the Mayor, in order that such Clerk or Treasurer may post up entries, prepare returns, or perform any other duty which it may be necessary that he should perform; also, that the Mayor, or the Chairman of any Committee, or any Alderman acting for any such Chairman, may temporarily remove any record necessary for the preparation of a minute or a report, or for the purposes of any prosecution or suit at law, by, against, or at the instance of the Council; but in all such cases such Clerk, Treasurer, Mayor, Chairman, or Alderman, as the case may be, shall give a receipt under his hand for every document so removed, and every such receipt shall be carefully preserved among the records until the book or other record to which it refers shall have been returned, when such receipt shall be destroyed: And provided also, that the Mayor, Council Clerk, or other officer of the Council, who may be subpoenaed to produce any book or other record of the Council in a Court of Law, shall have the right to remove such book or other record for the purpose of obeying such summons, but shall return such book or record as speedily as may be, and shall before removing the same leave at the Council Chamber a receipt for such book or other record as aforesaid; and every such person so temporarily removing any book or other record of the Council as aforesaid, shall be legally responsible for the safe keeping and return of the same.

Penalty for defacing or destroying record.

91. Any person destroying, defacing, or altering any record of the Council, shall for every such offence be liable to a penalty of not less than five pounds, nor more than fifty pounds.

Officers and Servants.

Notice to candidates in certain cases.

92. No appointment to any permanent office at the disposal of the Council, to which a salary or allowance of fifty pounds per annum, or a salary or allowance exceeding that amount, is attached, shall be made until public notice shall have been given, as hereinafter provided, inviting applications from qualified candidates for the same; the salary or allowance attached to such office shall in every case be fixed before such notice is given, and shall be stated in such notice.

Mode of appointment.

93. Every such appointment shall be made by ballot in such mode as may at the time be determined on, whenever there is more than one candidate for such permanent office.

Exceptional cases.

94. Nothing herein contained shall be held to prevent the employment as may be from time to time found necessary, and as may be ordered by the Council, of any workmen or labourers on the public works of the Borough.

Bonds for good conduct.

95. All bonds given by officers or servants of the Council for the faithful performance of their duties, shall be deposited with the Attorney or the Bankers of the Corporation, as the Council

may order; and no officer or servant of the Council shall be received as surety for any other such officer or servant.

Duties of Council Clerk.

96. The Council Clerk, in addition to the duties which by the Municipalities Act of 1867, or by the present or any other by-laws thereunder he may be required to perform, shall be the Clerk of all Revision Courts held in the Borough under the provisions of the said Municipalities Act. He shall also under the direction of the Mayor, conduct all correspondence which may be necessary on the part of the Council. He shall likewise have charge of all the records of such Council, except such books or documents as may (as hereinafter provided) be entrusted to any other office, and shall be responsible for the safe keeping of such records. He shall generally assist the Mayor in carrying out the orders of the Council and the duties of such Mayor.

Duties of Treasurer, &c.

97. The Treasurer shall have charge of such books of account and other records of the Council as are mentioned in section 87 of these by-laws, and shall be responsible for the safe keeping of the same; any other officer of the Council may have any other records thereof committed to his charge by an order of the Council, and in such case shall be responsible for the safe keeping of such records.

Duties of other officers and servants.

98. The duties of all officers and servants of the Corporation shall be defined by such regulations as may from time to time and in accordance with law, be made as follows, viz.:—As to the duties of the Council Clerk and his assistants (if any)—by the Mayor. As to the Treasurer, and all collectors of rates, bailiffs, bailiffs' assistants, and other officers and servants employed in and about the collection of revenue, whose superintendence is not hereinafter specially intrusted to any other Committee—by the Finance Committee. As to all surveyors, architects, clerks of works, overseers, inspectors of water supply, sewerage, or drainage, or other officers and servants employed in and about the public works of the Borough, and in the supply of water therefor, or the sewerage or drainage thereof, whose superintendence is not herein specially entrusted to any other Committee—by the Committee of Works. As to the Attorney for the Corporation, Inspector of Nuisances, and other officers and servants employed in and about the carrying out and enforcement of the general provisions of the Municipalities Act of 1867, and of any other statute of which the operation has been extended to the Borough, and of the by-laws for the general good government of such Borough, whose superintendence is not herein specially entrusted to any other Committee—by the By-law Committee. And as to librarians, managers of public institutions or reserves under the charge of the Council, and all other officers and servants employed in or about any matter over which the Council has control, and whose superintendence is not herein specially entrusted to any other Committee, or to the Mayor—by the Committee for General Purposes: Provided that all such regulations shall be in writing and shall be in all cases laid before the Council at the first meeting thereof, which shall be held after the making of any such regulations; and shall be in strict accordance with any such orders or directions as may have been at any time given by such Council touching the matters to which any such regulations may have reference.

Special powers of Mayor.

99. The Mayor shall exercise a general supervision over all officers and servants of the Corporation, and may order the preparation of any such return or statement, or the giving of any such explanation or information by any such officer or servant as he may think necessary, unless such return or statement shall have been already prepared, or such explanation or information already given, and such return, statement, explanation, or information is on record as hereinbefore provided; or unless the Council shall have expressly forbidden or dispensed with the preparation of such return or statement, or the giving of such explanation or information. All such returns or statements as aforesaid shall be in writing and shall be recorded. All such explanation or information may, except as hereinafter provided, be either rendered *viva voce*, or put into writing as the Mayor may direct.

How complaints against officers, &c., are to be dealt with.

100. All complaints against officers or servants of the Corporation must be in writing, and must in every case be signed by the person or persons complaining. And no notice whatever shall be taken of any complaint which is not in writing or is anonymous. All such complaints may be addressed to the Mayor who, immediately upon the receipt of any such complaint, and without laying the same before the Council, shall have power to investigate the same. And if any such complaint be made to the Council, or to any member or officer thereof, it shall be referred to and investigated by the Mayor before it shall be in any way (otherwise than by such reference) ordered upon or dealt with by such Council: Provided that every report, explanation, and information which may be made or rendered

in reference to every such complaint shall be in writing. And such Mayor shall state in writing the result of every such investigation and his opinion as to what order (if any) ought to be made in connection therewith; and such complaint, with all reports, explanations, and information as aforesaid, in connection therewith, and the Mayor's statement as aforesaid thereon, shall be laid before the Council at the next meeting thereof, which shall be holden after the Mayor shall have made such statement, and shall be duly recorded: Provided further that nothing herein contained shall be held to affect in any way the special power conferred on the Mayor by section 152 of the Municipalities Act of 1867, or any other special power which now is or hereafter may be conferred by statute upon such Mayor.

Miscellaneous.

Leave of absence.

101. No leave of absence shall be granted to the Mayor or to any Alderman otherwise than by a resolution of the Council adopted after due notice.

Mode of calling for Tenders.

102. Whenever it is decided that any work shall be executed or any materials supplied by contract, tenders for the execution of such work, or the supply of such material shall be called for by public notice, as hereinafter provided.

Drafts of intended by-laws.

103. A draft of every intended by-law shall lie in the office of the Council for at least seven days before such draft shall be taken into consideration by such Council, and shall be open to the inspection of any rate-payer who may desire to inspect the same; and public notice shall be given as hereinafter provided that such draft is so lying for inspection.

Motions for rescission of previous orders, &c.

104. Whenever a motion for the rescission of any order, resolution, or vote of the Council, shall have been negatived, no other motion to the same effect shall be permissible until a period of three months shall have elapsed from the time of negativing such first-mentioned motion: Provided that nothing herein contained shall be held to prohibit the reconsideration and amendment of any proposed by-law which may have been submitted to the Governor for confirmation, and may have been remitted to the Council with suggested amendments of the same, or the passage, after due notice as hereinbefore provided, and in due course of law of any by-law for the repeal or amendment of any other by-law.

Lapsed business.

105. Whenever the consideration of any motion or matter of business shall have been interrupted by reason of a quorum not having been present, the resumption of such consideration may be ordered by resolution of the Council, after due notice; and such consideration shall in such case be resumed at the point where it was so interrupted as aforesaid.

Suits and prosecutions for penalties, &c.

106. Such suits or informations for the enforcement of penalties for or in respect of breach of the Municipalities Act of 1867, or of any by-law made thereunder, or of any statute, the operation of which may have been extended to the Borough, as may have been directed by the Council or by the By-law Committee, or by the Mayor, to be commenced or laid, shall be so commenced or laid as follows, namely:—When against a member of the Council, or an Auditor, or any officer of the Corporation—by the Council Clerk, unless such Council Clerk shall be the officer to be proceeded against, and in such case by any other officer named by the Council for that purpose; when against any other person, by the officer to whom the carrying out of the statutory provision or by-law, imposing the penalty sought to be enforced, has been entrusted; and if there shall be no such officer then by any such officer or person as shall be appointed for that purpose by the Council or the By-law Committee, or the Mayor, as the case may be, on directing such suit or information as aforesaid; and no such suit shall be brought on information laid as aforesaid against any member of the Council, or Auditor, except by order of such Council; nor shall any similar proceeding be taken against any officer of the Council, except on the order of such Council, or of the Mayor, nor against any other person, except upon the order of the Council, or of the Mayor, or of the By-law Committee. And no such suit shall be directed to be brought, nor shall any such information be directed to be laid as aforesaid, except on an express resolution of the Council; in any case where the bringing of such suit, or the laying of such information will be adverse to any previous direction by such Council; or where, on the trial or hearing of any such suit or information, the same shall have been dismissed on the merits: Provided that in any such case the conduct or prosecution of any such suit or information may, on the order of the Council, be entrusted to an attorney.

How notices are to be published.

107. In all cases where public notice is or shall be required to be given by any by-law, of any appointment, resolution, act, order, or regulation done, made, or passed, or proposed to be made, done, or passed, by the Council, or by any Committee thereof, or by the Mayor or any officer of the said Council, such notice shall be given and published by posting the same on or near the outer door of the Council Chambers for the space of seven days, and by advertising the same twice in some newspaper circulating in the Borough.

Mode of proceeding in cases not provided for.

108. In all cases not herein provided for resort shall be had to the rules, forms, and usages of the Legislative Assembly of New South Wales, so far as the same are applicable to the proceedings of the Council.

Power to suspend, temporarily, certain portions of this by-law.

109. Any such section or sections of this "Part" of these by-laws, or any portion or portions of such sections or section as are not hereinafter excepted, may be suspended by resolution on notice at any meeting of the Council: Provided that there shall be a distinct statement in every such resolution, and in the notice of the motion whereon the same shall have been adopted, of the purpose for which such suspension is required, and that for every separate matter or business as to which such suspension is so required there shall be a separate resolution as aforesaid: And provided also that the following sections hereof shall never be suspended, nor shall any one of them, nor any portion of any of such sections, be suspended on any pretence whatever, namely:—Sections 5, 6, 7, 8, 9, 20, 21, 22, 23, 25, 26, 27, 28, 29, 30, 31, 34, 38, 39, 42, 44, 47, 48, 49, 50, 51, 53, 54, 55, 56, 57, 58, 59, 60, 61, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 95, 98, 99, 100, 101, 104, 106, 107, and 108.

PART II.

COLLECTION AND ENFORCEMENT OF RATES.

Times and modes of collection.

Rates under sec. 164 of the 31st Vict., No. 12, to be collected half-yearly.

1. All rates levied or imposed by the Council under the provisions of section 164 of the Municipalities Act of 1867, and for the purposes mentioned in the said section, shall be collected by half-yearly instalments. Each such instalment shall, as to every such rate and every such instalment thereof, be held to be due and payable on and after such days as the Council shall by resolution appointed at the time of making or imposing such rate.

Special rates.

2. All rates levied or imposed by the Council under section 165, 166, and 167 of the said Municipalities Act of 1867 and for the purposes mentioned in the said sections, or under the provisions of any of the said sections, or for any of the purposes mentioned therein, shall be collected in such manner, and shall be held to be due and payable on and after such day or days as the Council may by resolution, at the time of making or imposing such rates, or any of them, have appointed.

Rates to be paid at office of Council Clerk.

3. All persons liable to pay any rates as aforesaid shall pay the amount thereof, within the time prescribed by the said Act, into the office of the Council Clerk, during office-hours, that is to say, from five to six of the clock in the afternoon of every Monday, Wednesday, and Friday, except during such times as the Council may be actually sitting.

Defaulters.

4. It shall be the duty of the Council Clerk to furnish the Mayor with a list of the names of all persons whose rates are unpaid at the expiration of the times fixed for payment of the same as aforesaid.

Mayor to enforce payment.

5. It shall be the duty of the Mayor to issue distress warrants against all such persons, and to cause such warrants to be enforced, or to cause such defaulters to be sued for the amount of such rates in a Court of competent jurisdiction.

Enforcement by distress.

Bailiff.

6. A bailiff shall, when found necessary, be appointed by the Mayor.

Bailiff's sureties.

7. The bailiff shall find two sureties to the satisfaction of the Mayor, to the extent of twenty-five pounds each, for the faithful performance of his duty.

Duty of Bailiff.

8. It shall be the duty of the bailiff to make all levies by distress for the recovery of rates, in the manner hereinafter provided.

Warrant of distress.

9. All levies and distresses shall be made under warrant in the form of schedule A hereto, under the hand of the Mayor, or any Alderman who may for the time being be duly authorized to perform the duties of that office.

Distress and Sale, &c.

10. If the sum for which any such distress shall have been made shall not be paid, with costs as hereinafter provided, on or before the expiration of five days, the bailiff shall sell the goods so distrained, or a sufficient portion thereof, by public auction, either on the premises or at such other place within the said Borough as the bailiff may think proper to remove them to for such purpose; and shall pay over the surplus (if any) that may remain after deducting the amount of the sum distrained for, and costs, as hereinafter provided, to the owner of the goods so sold, on demand of such surplus by such owner.

Inventory.

11. At the time of making a distress the bailiff shall make out a written inventory in the form of schedule B hereto, which inventory shall be delivered to the occupant of the land or premises, or the owner of the goods so distrained, or to some person on his or her behalf resident at the place where the distress shall be made; and in case there shall be no person at such place with whom such inventory can be left as aforesaid, then such inventory shall be posted on some conspicuous part of the land or premises on which the distress is made; and the bailiff shall give a copy of the inventory to the rate-payer on demand, at any time within one month after making such distress.

Goods may be impounded.

12. The bailiff, on making a distress as aforesaid, may impound or otherwise secure the goods or chattels so distrained, of what nature or kind soever, in such place or places, or in such part of the land or premises chargeable with rates as shall be most fit and convenient for this purpose; and it shall be lawful for any person whomsoever, after the expiration of the five days, as hereinbefore mentioned, to come and go to and from such place or part of the said land or premises where such goods or chattels shall be impounded and secured as aforesaid, in order to view and buy, and in order to carry off and remove the same, on account of the purchaser thereof.

Owner to direct order of sale.

13. The owner of any goods or chattels so distrained upon, may, at his or her option, direct and specify the order in which they shall be successively sold, and the said goods or chattels shall in such case be put up for sale according to such direction.

Proceeds of distress.

14. The bailiff shall hand over to the Council Clerk all proceeds of every such distress within forty-eight hours after having received the same.

Costs.

15. There shall be payable to the bailiff for the use of the Council, for every levy and distress made under this by-law, the costs and charges in the schedule hereunto annexed, marked C (a).

SCHEDULE A.

Warrant of Distress.

I, Mayor of the Borough of do hereby authorize you the bailiff of the said Municipality, to distrain the goods and chattels in the dwelling-house (or in and upon the land and premises) of situate at for being the amount of rates due to the said Borough to the day of for the said dwelling-house (or land or premises, as the case may be) and to proceed thereon for the recovery of the said rates according to law.

Dated this day of 186 .

Mayor.

SCHEDULE B.

Inventory.

I HAVE this day, in virtue of the warrant under the hand of the Mayor of the Borough of dated distrained the following goods and chattels in the dwelling-house (or in and upon the land and premises) of situate at within the said Borough, for being the amount of rates due to the said Borough to the day of

Dated this day of 186 .

Bailiff.

SCHEDULE C.

Costs.

	s.	d.
For every warrant of distress	2	0
For serving every warrant and making levy where the sum is not more than £20	2	0
Above that sum, in addition for every £1	0	1
For making and furnishing copy of inventory...	2	0
For man in possession, each day, or part of a day	5	0
For sale, commission, and delivery of goods, per pound on proceeds of the sale	1	0

PART III.

PREVENTING AND EXTINGUISHING FIRES.

Fire or combustible materials, &c.

1. Every person who shall place, or knowingly permit to be placed, in any house, yard, workshop, out-offices, or other premises, fire, gunpowder, or combustible or inflammable materials of any kind, in such a manner as to endanger contiguous buildings, shall on conviction for every such offence forfeit and pay a penalty of not more than five pounds; and shall forthwith remove such fire, gunpowder, or combustible or inflammable materials. And every such person who shall suffer any such fire, gunpowder, or combustible or inflammable materials, to remain as aforesaid for forty-eight hours after any such conviction shall be deemed guilty of a further offence against this by-law.

Inflammable fences, &c.

2. Every person who shall erect any fence of brushwood, bushes, or other inflammable material, or shall make or place any stack of hay, corn, straw, or other produce, or place as or for the covering of any such stack, any inflammable material, so as to endanger contiguous buildings or properties, or any trees, shrubs, or other produce of such properties, or any chattels in or upon such buildings or properties, shall forfeit, on conviction for every such offence a penalty of not more than five pounds, and also shall remove such fence, stack, or covering, within a reasonable time after such conviction. And any person failing to remove such fence, stack, or covering, within a reasonable time after any such conviction as aforesaid, shall be deemed guilty of a further offence against this by-law.

Fireworks.

3. Every person who shall light any bon-fire, tar barrel, or firework upon or within sixty yards of any public or private street, or any public place, or shall sell gunpowder, squibs, rockets, or other combustible matter by gas, candle, or other artificial light, shall forfeit a sum not exceeding five pounds.

Wilfully setting fire to chimneys.'

4. Every person who wilfully sets, or causes to be set on fire, any chimney-flue, smoke-vent, or stove-pipe herein called in common a "chimney," shall forfeit a sum not exceeding five pounds: Provided always that nothing herein contained shall exempt the person so setting or causing to be set on fire any chimney, from liability to be informed against or prosecuted before any Criminal Court for such act as for an indictable offence.

Water carters to attend at fires.

5. Every owner and driver of a licensed water-cart shall keep such cart loaded with water during all times after sunset and before sunrise; and shall, if any building, premises, or property shall be on fire within the Borough, attend at the place of such fire with such cart loaded with water, and shall continue to cart water by full loads to such place, and shall deliver such water in such manner as may be required by the Mayor, or by any Alderman or Officer, or person duly authorized by the Council in that behalf, and then present, for extinguishing such fire; and every such owner or driver who shall, without reasonable excuse, fail to comply with the provisions of this section, shall forfeit a sum not exceeding ten pounds.

Compensation for attendance at fires.—Rewards.

6. There shall be paid out of the Borough funds, to the owner of every licensed water-cart who shall have attended with any water at the place of any fire as herein provided, and delivered the same as required for extinguishing such fire, such reasonable compensation as the Council shall, by resolution, have appointed in that behalf, and also to such owners of such carts as shall have first and second in order attended with loads of water, such further sums, by way of reward, as the Council may, by similar resolutions, have fixed.

PART IV.

STREETS AND PUBLIC PLACES.—PUBLIC HEALTH AND DECENCY,
&c.*Streets, &c.*

New roads to be reported upon.

1. No new public road, street, way, park, or other place proposed to be dedicated to the public shall be taken under the charge and management of the Council until after such road, street, way, or park shall have been examined by the Committee for Works and reported upon to the Council by such Committee.

Plans of proposed new road, &c., to be deposited.

2. Whenever any proprietor or proprietors of land within the said Borough shall open any road, street, or way, or lay out any park or other place for public use or recreation, through or upon such land, and shall be desirous that the Council shall undertake the care and management of such road, street, way, park, or other place, he or they shall furnish the Council with a plan or plans, signed by himself or themselves, showing clearly the position and extent of such road, street, way, park, or other place as aforesaid.

Dedication of new roads, &c.

3. If the Council shall determine to take charge of any such road, way, or other place as aforesaid, the plan or plans, so signed as aforesaid shall be preserved as a record or records of the Council, and the proprietor or proprietors aforesaid shall execute such further instrument dedicating such road, way, park, or other place to public use or recreation as aforesaid, as may be considered necessary by the Committee for General Purposes; and such further instrument of dedication shall also be preserved as a record of the Council.

Committee for Works to fix street levels, &c.

4. The Committee for Works, or any officer or person acting under the supervision of such Committee shall, subject to such orders as shall from time to time be made by the Council in that behalf, fix and lay out the levels of all public roads, streets, and ways within the Borough and the carriage and foot ways thereof; and it shall be the duty of such Committee, officer, or person to place posts at the corners or intersections of any such public roads and streets, and of the carriage-ways and foot-ways of such roads and streets, wherever the same may be considered necessary or desirable by the Council: Provided that there shall be no change of level in any such public road, street, or way, until the same shall have been submitted to and adopted by the Council, as hereinafter directed.

Change of street levels.

5. Whenever it may be deemed necessary to alter the level of any such public road, street, or way, as aforesaid, the Committee for Works shall cause a plan and section showing the proposed cuttings to be exhibited at the Council Chamber for fourteen days, for the information and inspection of ratepayers, and shall notify, by advertisement in some newspaper circulating in the Borough, that such plan is so open to inspection. At a subsequent meeting of the Council the said plan and section shall, if adopted, be signed by the Mayor or Chairman, and the proposer and seconder of the motion for such adoption, and countersigned by the Council Clerk. And such plan and section so signed and countersigned shall be a record of the Council.

No turf, gravel, &c., to be removed from streets without permission.

6. Any person who shall form, dig, or open any drain or sewer, or remove or cause to be removed, any turf, clay, sand, soil, gravel, stone, or other material, in or from any part of the carriage or foot way of any street or other public place within the said Borough, without leave first had and obtained from the Council, or who shall wantonly break up or otherwise damage any such carriage or foot way shall, on conviction, forfeit and pay for every such offence any sum not exceeding five pounds, nor less than one pound.

Holes to be enclosed.

7. Any person or persons who shall dig or make, or cause to be dug or made, any hole, or leave or cause to be left any hole, adjoining or near to any street or public place within the said Borough, for the purpose of making any vault or vaults, or the foundation or foundations to any house or other building, or for any other purpose whatsoever, or shall erect or pull down any building, and shall not forthwith enclose the same and keep the same enclosed in a good and sufficient manner, to the satisfaction of the Committee for Works of the said Borough, or shall keep up or cause to be kept up and continued any such enclosure for any time which shall be longer than shall be absolutely necessary in the opinion of the said Committee, and shall not place lights upon each side of the said enclosure, and keep the same constantly burning from sunset to sunrise during the continuance of such enclosure, shall forfeit and pay for every such refusal or neglect any sum not being less than forty shillings, nor exceeding five pounds.

Open spaces and steps adjoining the footways to be enclosed under penalty.

8. Every owner or occupier of any house, building, premises, or land, within the said Borough, having any entrance area, garden, or other open space, or any vacant building lot, water-hole, or excavated space, adjoining the footway of any street or public place in such Borough, shall protect and guard the same by good and sufficient rails, fences, or other enclosures, so as to prevent danger to persons passing and repassing; and every such owner or occupier of any such house, building, premises, or land, having any steps adjoining the footway of any such street or public place, shall in like manner protect and guard the same by fences, rails, or other enclosures, so as to prevent the like danger to persons passing and repassing; and on failure thereof every such owner or occupier shall, as often as he shall be convicted of such offence, forfeit and pay any sum not being less than forty shillings nor more than five pounds. And every such owner or occupier as aforesaid who shall fail to erect such rails, fences, or other enclosures as aforesaid, within seven days after any such conviction as aforesaid, shall be deemed guilty of a further offence against this by-law.

Wells to be covered over.—Penalty.

9. Every person who shall have a well situated between his or her dwelling-house or the appurtenances thereof, and any road, street, or footway, within the limits of the said Borough, or at the side of, or in any yard or place open or exposed to such road, street, or footway, shall cause such well to be securely and permanently covered over; and if any person having such well as aforesaid shall fail to cover over and secure the same within twenty-four hours after notice in writing shall have been given to him or her by any officer of the said Council, or shall have been left for such person at his or her usual or last known place of abode, or on the said premises, shall, on conviction, forfeit and pay the sum of ten shillings; and for every day after such notice that such well shall remain open or uncovered, contrary to the provisions hereof, such person shall be deemed guilty of a separate offence against this by-law.

Temporary stoppage of traffic for repairs, &c.

10. The Committee for Works, or any officer or person acting under the authority of such Committee, may at any time cause the traffic of any street, lane, or thoroughfare, or any portion thereof, to be stopped for the purpose of repairing the same, or for any necessary purpose; and any person or persons offending against this by-law, either by travelling on such street, lane, or thoroughfare, or by removing or destroying any obstruction that may be placed thereon for the purpose of suspending the traffic, shall forfeit and pay a penalty of any sum not exceeding five pounds for every such offence.

Drawing or trailing timber, &c.

11. Any person who shall haul or draw, or cause to be hauled or drawn, upon any part of any street or public place within the said Borough, any timber, stone, or other thing, otherwise than upon wheeled vehicles or barrows, or shall suffer any timber, stone, or other thing, which shall be carried principally or in part upon any wheeled vehicle or barrow, to drag or trail upon any part of such street or public place, to the injury thereof; or to hang over any part of any such vehicle or barrow, so as to occupy or obstruct the street beyond the breadth of the said vehicle or barrow, shall, upon conviction, forfeit and pay for every such offence a sum of not more than forty shillings, nor less than five shillings over and above the damages occasioned thereby.

Driving carriages, &c., on footways, and throwing filth, &c.

12. Any person who shall throw, cast, or lay, or shall cause, permit, or suffer to be thrown, cast, or laid, or to remain any ashes, rubbish, offal, dung, soil, dead animal, blood, or other filth or annoyance, or any matter or thing, in or upon the carriage-way or foot way of any street or other public place in the said Borough, or shall kill, slaughter, dress, scald, or cut up any beast, swine, calf, sheep, lamb, or other animal, in or so near to any such street or other public place as that any blood or filth shall run or flow upon or over, or be on any or either of any such carriage or foot way; or shall run, roll, drive, draw, place, or cause, permit, or suffer to be run, rolled, driven, drawn, or placed upon any of the said foot ways of any such street or public place any waggon, cart, dray, sledge, or other carriage, or any wheel, wheelbarrow, handbarrow, or truck, or any hogshead, cask, or barrel, or shall wilfully lead, drive, or ride, any horse, ass, mule, or other beast upon any such footway, shall, upon conviction, forfeit and pay for the first offence a sum not exceeding forty shillings, nor less than five shillings; for the second offence a sum not exceeding five pounds, nor less than ten shillings; and for a third and every subsequent offence a sum not exceeding ten pounds, nor less than one pound, for each such offence.

Placing carriages, goods, &c., on footways, &c.—Not removing when required.—Replacing the same after removal.—Not to prevent awnings being erected in front of shops.

13. Any person who shall set or place, or cause or permit to be set or placed, any stall-board, chopping-block, show-board (on hinges or otherwise), basket, wares, merchandise, casks, or goods of any kind whatsoever; or shall hoop, place, wash, or cleanse, or shall cause to be hooped, placed, washed, or cleansed, any

pipe, barrel, cask, or vessel, in or upon or over any carriage or foot way in any street or public place within the said Borough, or shall set out, lay, or place, or shall cause or procure, permit or suffer, to be set out, laid, or placed, any coach, cart, wain, waggon, dray, wheelbarrow, handbarrow, sledge, truck, or other carriage upon any such carriageway, except for the necessary time of loading or unloading such cart, wain, waggon, dray, sledge, truck, or other carriage, or taking up or setting down any fare, or waiting for passengers when actually hired, or harnessing or unharnessing the horses or other animals from such coach, cart, wain, waggon, dray, sledge, truck, or other carriage; or if any person shall set or place, or cause to be set or placed, in or upon or over any such carriage or foot way any timber, stones, bricks, lime, or other materials or things for building whatsoever (unless the same shall be enclosed, as herein directed) or any other matters or things whatsoever; or shall hang out or expose, or shall cause or permit to be hung out or exposed, any meat or offal, or other thing or matter whatsoever, from any house or other building or premises, over any part of any such footway or carriageway, or over any area of any house or other building or premises, or any other matter or thing from and on the outside of the front or any other part of any house or other building or premises over or next unto any such street or public place, and shall not immediately remove all or any such matters or things, being thereto required by the Inspector of Nuisances, or other proper officer of the Council; or if any person who having, in pursuance of any such requisition as aforesaid, removed or caused to be removed, any such stall-board, show-board, chopping-block, basket, wares, merchandise, casks, goods, coach, cart, wain, waggon, dray, wheelbarrow, handbarrow, sledge, truck, carriage, timber, stones, bricks, lime, meat, offal, or other matters or things, shall at any time thereafter again set, lay, or place, expose or put out, or cause, procure, permit, or suffer to be set, laid, placed, exposed, or put out, the same or any of them, or any other stall-board, show-board, chopping-block, basket, wares, merchandise, goods, timber, stones, bricks, lime, coach, cart, wain, waggon, dray, truck, wheelbarrow, handbarrow, sledge, meat, offal, or other things or matters whatsoever (save and except as aforesaid) in, upon, or over any such carriage or foot way of or next unto any such street or public place as aforesaid, shall upon conviction for every such offence forfeit and pay for the first offence a sum not exceeding forty shillings, nor less than five shillings; for the second offence a sum not exceeding five pounds, nor less than ten shillings; and for a third and every subsequent offence a sum not exceeding ten pounds, nor less than one pound: Provided that nothing herein contained shall be deemed to prevent any person from placing an awning in front of his or her shop or house in such manner as that such awning shall be at least seven feet above the height of the footway, and that the posts be placed close to the curb-stone or outer edge of such footway.

Slop, night-soil, &c., to be conveyed away only at certain hours.

14. Any person or persons who shall drive or cause to be driven any cart or other carriage with any night-soil or ammoniacal liquor therein, through or in any street or public place within the said Borough, between the hours of five o'clock in the morning and ten o'clock at night, or shall fill any cart or other carriage so as to turn over or cast any night-soil, ammoniacal liquor, slop, mire, or channel dirt, or filth, in or upon any such street or public place, or shall deposit night-soil, ammoniacal liquor, or other offensive matter, nearer to any street, road, or dwelling-house than shall be directed by the said Council, or by the Inspector of Nuisances; or shall remove night-soil or other offensive matter otherwise than in properly covered and watertight carts or other vehicles; or shall cause any vehicle used for this purpose to stand on any premises nearer to any road, street, or dwelling-house, than shall be directed by the said Council or the said Inspector of Nuisances, shall for every such offence forfeit and pay any sum not exceeding five pounds; and in case the person so offending shall not be known to the said Council or Inspector then the owner of such cart or carriage in which such night-soil or other offensive matter shall be put or placed, and also the employer of the person so offending, shall be liable to and forfeit and pay such penalty as aforesaid.

Riding on drays, careless driving, &c.

15. If the driver of any waggon, wain, cart, or dray of any kind, shall ride upon any such carriage in any street as aforesaid, not having some person on foot to guide the same (such carts as are drawn by one horse and driver, or guided with reins only, excepted); or if the driver of any carriage whatsoever shall wilfully be at such a distance from such carriage, or in such a situation whilst it shall be passing upon such street, that he cannot have the direction and government of the horse or horses, or cattle drawing the same; or if the driver of any waggon, cart, dray, or coach, or other carriage whatsoever, meeting any other carriage, shall not keep his waggon, cart, dray, or coach, or other carriage, on the left or near side of the road, street, or thoroughfare; or if any person shall in any manner wilfully prevent any other person or persons from passing him or her, or any carriage under his or her care upon such street;

or by negligence or misbehaviour prevent, hinder, or interrupt the free passage of any carriage or person in or upon the same, every such driver or person so offending shall, upon conviction forfeit and pay any sum not exceeding forty shillings.

Riding or driving furiously, &c.

16. Any person who shall ride or drive through or upon any street or public place within the said Borough, so negligently, carelessly, or furiously, that the safety of any other person shall or may be endangered, shall on conviction forfeit and pay a sum not exceeding ten pounds, nor less than two pounds.

Blasting Rock.

No rock to be blasted without notice to the Council Clerk.

17. Any person who shall be desirous of blasting any rock within one hundred yards of any street or public place, or dwelling-house in the said Borough, shall give notice in writing twenty-four hours previously to the Council Clerk, who shall appoint a time when the same may take place, and give such other directions as he may deem necessary for the public safety; and if any person shall blast, or cause to be blasted, any rock within the limits aforesaid, without giving such notice, or shall not conform to the directions given to him by the said Council Clerk, he or she shall on conviction forfeit and pay for every such offence any sum not less than five pounds, nor more than twenty pounds.

Public Property.

Injuring or extinguishing lamps.

18. Any person who shall wantonly or maliciously break or injure any lamp or lamp-post, or extinguish any lamp set up for public convenience in the said Borough, shall, over and above the necessary expense of repairing the injury committed, forfeit and pay for every such offence any sum not less than one pound, nor more than five pounds.

As to damaging buildings.

19. Any person who shall damage any public building, toll-gate, toll-bar, toll-board, wall, parapet, fence, sluice-bridge, culvert, sewer, water-course, or other public property within the said Borough, shall pay the costs of repairing the same; and if such damage be wilfully done, shall forfeit and pay a sum not exceeding twenty pounds, nor less than five pounds.

Damaging trees.

20. Any person who shall wilfully, and without the authority of the Council, cut, break, bark, root up, or otherwise destroy or damage the whole or any part of any tree, sapling, shrub, or underwood, growing in or upon any street or place under the management of the Council, shall forfeit any sum not exceeding ten pounds, nor less than one pound.

Nuisances.

Dead animals, &c., not to be thrown into any public watercourse, &c.

21. Any person who shall cast any filth, rubbish, or any dead animal, or any animal with intent of drowning, into any public water-course, sewer, water-hole, river, creek, or canal; or who shall suffer slops, suds, or filth of any kind to flow from his or her premises into any such water-course, water-hole, river, creek, or canal, or who shall permit or suffer any such slops, suds, or filth, to flow from his or her premises over any of the footways or streets of the Borough, or shall permit or cause, by means of pipes, shoots, channels, or other contrivances, filth of any kind whatsoever to flow into any public water-course, water-hole, river, creek, or canal; or shall obstruct or divert from its channel any sewer or water-course, river, creek, or canal, shall forfeit any sum not exceeding five pounds.

Swine not to be kept.

22. Any person who shall breed, feed, or keep any kind of swine, in any house, building, yard, garden, or other hereditament situate and being in or within forty feet of any street or public place or any dwelling-house in the said Borough, or shall suffer any kind of swine, or any horse, ass, mule, sheep, goat, or other cattle belonging to him or her, or under his or her charge, to stray or go about, or to be tethered or depastured in any such street or public place shall, on conviction forfeit and pay for every such offence a sum not exceeding forty shillings, nor less than five shillings.

As to private avenues, &c.

23. Any owner or occupier of any house or place within the said Borough, who shall neglect to keep clean all private avenues, passages, yards, and ways, within the said premises, so as by such neglect to cause a nuisance by offensive smell or otherwise, shall on conviction forfeit and pay a sum not exceeding forty shillings, nor less than ten shillings, for every such offence.

Cleansing butchers' shambles, slaughter-houses, &c.

24. For preserving the cleanliness of the said Borough and the health of the inhabitants thereof, it shall be lawful for the Inspector of Nuisances, or for any other officer or officers appointed by the Council from time to time, and when and as

often as he or either of them shall see occasion, to visit and inspect the butchers' shambles, slaughter-houses, boiling-down establishments, tanneries, and fellmongering establishments in the said Borough, and to give such directions concerning the cleansing the said shambles, slaughter-houses, tanneries, and establishments, both within and without, as to him shall seem needful; and any butcher, or the owner or occupier of any such shamble, slaughter-house, tannery, or establishment, who shall refuse or neglect to comply with such directions within a reasonable time, shall forfeit and pay a sum not exceeding ten pounds, nor less than ten shillings.

Inspection of premises, &c.

25. Upon the reasonable complaint of any householder that the house, premises, yards, closets, or drains of the neighbouring or adjoining premises are a nuisance or offensive, the Inspector of Nuisances, or any other person appointed by the Council, shall make an inspection of the premises complained of; and the officer of the Council shall have full power, without any other authority than this by-law, to go upon such premises for the aforesaid purpose.

Various obstructions and annoyances.

26. Every person who, in any street or other public place or passage within the said Borough, to the obstruction, annoyance, or danger of the residents or passengers, shall commit any of the following offences, shall on conviction for any and every such offence forfeit and pay a penalty of not more than two pounds:—

Every person who shall hoist, or cause to be hoisted, or lower, or cause to be lowered, goods of any description from any opening in any house, fronting any street or public place, and close to the footway thereof, without sufficient and proper ropes and tackling.

Every person who shall carry or convey, or cause to be carried or conveyed, in any street or public place the carcase, or any part of the carcase, of any newly-slaughtered animal, without a sufficient and proper cloth covering the same, for the concealment from public view, or shall hawk or carry about butcher's meat for sale without covering the same as aforesaid.

Every person who shall place any line, cord, or pole across any street, lane, or passage, or hang or place clothes thereon to the danger or annoyance of any person.

Every person who shall place any flower-pot in any upper window, near to any street or public place, without sufficiently guarding the same from being thrown down.

Every person who shall throw or cast from the roof, or any part of any house or other building, any slate, brick, part of a brick, wood, rubbish, or other material or thing (unless within a hoard or enclosure when any house or building is being erected, pulled down, or repaired).

Every blacksmith, whitesmith, anchor-smith, nailmaker, metal-founder, lime-burner, brickmaker, potter, or other person using a forge, furnace, or kiln, and having a door, window, or aperture fronting or opening into or towards any street, lane, or passage, and not enclosing such door, or not fastening the shutters or other fastenings of such window and closing such aperture, or placing a screw before the same every evening, within one hour after sunset, so as effectually to prevent the light from showing through the doorway, window, or aperture next or upon such street, lane, or passage.

Every person who shall, within the distance of one hundred yards from any dwelling-house, burn any rags, bones, cork, or other offensive substance, to the annoyance of any inhabitant.

Every person who shall carry goods or any frame to the annoyance of any person upon the footway of any street or other public footway.

Every person who shall be the keeper of, or have any dog or other animal which shall attack or endanger the life or limb of any person who may have the right-of-way or use of any private yard, alley, street, or any other place within the said Borough.

Premises in state to endanger public health.

Houses to be purified on certificate of two medical practitioners.

27. If, upon the certificate of any two duly qualified medical practitioners, it appear to the Council that any house, or part thereof, or the premises occupied in connection therewith, within the limits of the said Borough, is in such a filthy or unwholesome condition that the health of any person is or may be liable to be affected or endangered thereby, and that the whitewashing, cleansing, or purifying of any house, or part thereof, or the premises occupied in connection therewith, would tend to prevent or check infectious or contagious disease, the said Council shall give notice in writing to the owner or occupier of such house or part thereof, or the premises occupied in connection therewith, to whitewash, cleanse, or purify the same, as the case may require; and if the person to whom notice is so given shall fail to comply therewith, within such time as shall be specified in the said notice, he shall be liable to a penalty not exceeding ten shillings

for every day during which he continues to make default: Provided that no such penalties shall collectively amount to any greater sum than twenty pounds.

Offences against public decency.

Bathing prohibited within certain limits.

28. Any person who shall bathe near to or within view of any inhabited house, or of any public wharf, quay, bridge, street, road, or other place of public resort within the limits of the said Borough, between the hours of six o'clock in the morning and eight in the evening, shall on conviction forfeit and pay a sum not exceeding one pound for every such offence.

Penalty on indecent exposure of the person.

29. Any individual who shall offend against decency by exposure of his or her person in any street or public place within the said Borough, or in the view thereof, shall on conviction forfeit and pay for every such offence a sum not exceeding ten pounds, nor less than five pounds.

Houses of ill-fame.

30. Upon representation of any respectable ratepayer, that any house or premises within the Borough, and near to the residence of such ratepayer, is of ill-fame, it shall be lawful for the By-law Committee to cause the residents of such house or premises to furnish to the Council a list of names, ages, sexes, and occupations of all the inmates of the said house or premises; and upon non-compliance with such request, or if, upon consideration, the said Committee consider the house to be one of ill-fame, they shall, with the sanction of the Council, declare the same to be a nuisance; and shall cause a notice, in writing, to be served upon the holder of such house or premises, or any person resident or being therein, to discontinue or abate the said nuisance within forty-eight hours after the receipt of such notice. And if such nuisance be not so abated the holder of such house or premises, or other person residing or being therein and acting as such holder, shall be liable to be proceeded against for such nuisance, and shall, on conviction thereof, forfeit and pay any sum not less than two pounds, nor more than twenty pounds. And if such nuisance shall not be abated within forty-eight hours after such conviction such holder of such house or such other person residing or being therein as aforesaid, shall forfeit and pay for such second offence a sum of not less than five pounds, nor more than fifty pounds. And if a further period of forty-eight hours shall elapse after such second conviction without the abatement of such nuisance, such holder of such house, or other person residing or being therein as aforesaid, shall for such third offence forfeit and pay any sum not less than ten pounds, nor more than fifty pounds.

PART V.

Noisome and Offensive Trades.

No noisome or offensive trades to be carried on to injury of any inhabitants.

1. No person shall carry on any noisome or offensive trade within the said Borough, so as to injure or be a nuisance, as hereinafter stated, to the inhabitants thereof.

Definition of "noisome and offensive trades."

2. Any manufacture, trade, calling, or operation, in the conducting, following, or carrying on of which, or in consequence of or in connection wherewith, or from the premises where the same is conducted, followed, or carried on, any gas, vapour, or effluvia, or any large quantities of smoke shall be evolved or discharged, which gas, vapour, effluvia, or smoke shall be calculated to injure animal or vegetable life, or in any other way to injure or be a nuisance to the inhabitants of the said Borough, shall be considered a "noisome and offensive trade" within the meaning of these by-laws.

Complaint.—Inquire and report.—Order of Council thereon.—Notice to discontinue, &c.—Penalty.

3. Upon complaint in writing by any householder that any noisome or offensive trade is being so followed, conducted, or carried on in the vicinity of his or her residence or property as to injure his or her health, or the health of any member of his or her family, or to be a nuisance to such householder, and to his or her family, the Inspector of Nuisances, or any other person or persons appointed by the Council, shall make an inspection of the premises where such trade is alleged to be so conducted, followed, or carried on as aforesaid, and of the premises or property of the complainant, and shall inquire into the grounds for such complaint, and shall report thereon to the said Council. And if the said Council shall, on the consideration of such report, or after any such further inquiry as may be deemed necessary, be of opinion that the said complaint is well founded, and that any manufacture, trade, calling, or operation, so complained of, and so being conducted, followed, or carried on as aforesaid, is a "noisome or offensive trade" within the meaning of these by-laws, notice shall be given to the person or persons conducting, following, or carrying on such trade to cease and discontinue the same within such reasonable time, not being less than thirty days nor more than sixty days, as the

said Council may direct, or so to conduct, follow, or carry on his, her, or their manufacture, trade, calling, or operation, as that within such reasonable time as aforesaid the same shall wholly and permanently cease to be noisome and offensive, within the meaning of these by-laws, either to the said complainant or to any other resident within the said Borough. And if such trade shall not be discontinued as aforesaid, or shall not be so conducted as that it shall wholly cease to be noisome and offensive as aforesaid, within the time named in such notice as aforesaid, any person conducting, following, or carrying on such trade as aforesaid shall for the first offence forfeit and pay a sum of not less than forty shillings, nor more than five pounds; for a second offence a sum of not less than five pounds, nor more than twenty-five pounds; and for the third and every subsequent offence a sum of not less than ten pounds nor more than fifty pounds.

Mode of proceeding when "noisome and offensive trade" is about to be commenced.—Penalty.

4. The like proceedings shall be taken as aforesaid whenever there shall be a complaint as aforesaid that any manufacture, trade, calling, or operation, is about to be commenced or entered upon which is likely to prove "noisome and offensive" within the meaning of these by-laws, save and except the notice to be given as aforesaid shall be given to the person or persons about to commence or enter upon such manufacture, trade, calling, or operation, and shall require him, her, or them, not to commence or enter upon the same, or to take such measures as shall effectually and permanently prevent the same from becoming "noisome or offensive" within the meaning of these by-laws, to any resident within the Borough. And any person who shall in any such case commence, enter upon, or continue any such manufacture, trade, calling, or operation, so that the same shall be in any way "noisome and offensive" within the meaning of these by-laws, shall for every such offence forfeit and pay a sum of not less than ten pounds, nor more than fifty pounds.

Service of Notice.—Liabilities.

5. Service of any such notice as aforesaid upon the occupier or owner of any premises or land wherein or whereon any such manufacture, trade, calling, or operation is being conducted, followed, or carried on, or is about to be commenced or entered upon, or at the last known place of abode of such occupier or owner, or upon any person on the said premises or land, shall be a good and sufficient service of such notice for all the purposes of these by-laws. And every person who shall be actually engaged in superintending, directing, or managing, or who shall be in any other way actually engaged or employed in any such manufacture, trade, calling, or operation as aforesaid, shall be liable to be regarded and treated as a person conducting, following, or carrying on such manufacture, trade, calling, or operation, within the meaning and for all the purposes of these by-laws.

PART VI.

PUBLIC EXHIBITIONS, &c.

Exhibitions, &c., to be licensed.

1. No exhibition, other than exhibitions licensed by the Colonial Secretary under the provisions of the Act 14th Victoria, No. 23, or exhibitions of a temporary character hereinafter specially provided for, shall be held or kept for hire or profit within the said Borough, nor shall any bowling-alley or other place of public amusement other than a place licensed as aforesaid, or a place for temporary amusement hereinafter specially provided for, be used as such, for hire or profit, within the said Borough, unless and until the same shall be duly registered as hereinafter prescribed.

Temporary license by Mayor.—Penalty for exhibiting, &c., without license.

2. It shall be lawful for the Mayor, by writing under his hand, and without charge, to permit any such exhibition as aforesaid (other than an exhibition requiring to be licensed by the Colonial Secretary under the said Act) and which shall not be held or kept for more than one week, and in like manner to allow any place within the said Borough to be used for purposes of public amusement other than entertainments requiring to be licensed as aforesaid, for not more than one week: Provided that it shall be incumbent upon such Mayor to inquire strictly as to the nature of such proposed exhibition or amusement, before granting such permission, and to refuse such permission if it shall appear that such proposed exhibition or amusement is of such a nature as to require to be licensed by the Colonial Secretary, as aforesaid, or if there shall be reasonable cause for believing that such exhibition or amusement will be likely to entail any violation of public decency, to endanger the public peace, or to be a nuisance to any inhabitant of the Borough. Every person holding or keeping any such exhibition, or using any place within the said Borough for public amusement as aforesaid, or causing or permitting such place to be so used, without such permission of such Mayor, shall forfeit and pay a sum of not less than five shillings, nor more than forty shillings for every day that such exhibition shall be so held or kept, or such place shall be so used for public amusement as aforesaid.

Public buildings, &c., to be registered.

3. Every occupier of any building or ground in which any exhibition is held or kept, or any public amusement conducted as aforesaid, shall in each year register at the office of the Council such building or ground, together with the situation and description thereof, and of the exhibition proposed to be held or kept, or the public amusement proposed to be conducted as aforesaid, in or upon such building or ground, and the name of such occupier. And every person who causes, and every occupier of any such building or land who permits, any such exhibition to be held or kept, or any public amusement to be conducted for a longer period than one week, in or on any such building or land not being registered for the purpose, or without such certificate of registration as hereinafter mentioned having been obtained for the same, shall forfeit for every such offence any sum not less than one pound, nor more than twenty pounds.

Certificates of registration, &c.

4. The Council, upon the written application of any such occupier as aforesaid, stating the particulars aforesaid, and if, upon inspection by the proper officer, the building or land shall have been found to be secure and proper for the purpose stated, and if the proposed exhibition or amusement shall not be such as to require a license from the Colonial Secretary as aforesaid, and shall not be thought likely to entail any violation of public decency, or to endanger the public peace, or to be a nuisance to any inhabitants of the said Borough, the said Council shall cause the aforesaid premises to be registered in a registry book to be kept for that purpose, and shall thereupon grant to the applicant a certificate of such registration of such premises. And the said Council may at any time and for any of the causes hereafter mentioned, suspend for a stated period the effect of or cause any such registration, and shall forthwith give notice of such suspension or cancellation to the occupier of the registered building or land; and during such suspension, or after such cancellation, such premises shall be deemed to be unregistered in respect of the purpose mentioned in the certificate of registration, and such certificate shall be of no force or virtue.

Inspection.

5. The proper officer of the Council may at all reasonable times enter into or upon and inspect any such registered building or land.

No exhibitions, &c., on Sundays, &c.

6. No such exhibition or place of public amusement as aforesaid shall be held or kept open or used for the purposes of such public amusements on Sunday, Christmas Day, or Good Friday; and every person offending against this by-law in this behalf, shall on conviction forfeit and pay a sum not exceeding five pounds, nor less than two pounds, for every such offence.

Registration fee.—Time for which registration shall be in force.

7. For every such registration as aforesaid the occupier of the building or land so registered shall pay to the Council Clerk, for the benefit of the said Borough, a fee of one pound; and every such registration, whenever the same may be made, shall be in force until the thirty-first day of December then next ensuing and no longer.

Certificate of registration to operate as license for exhibition, &c., named therein, and no other.

8. The certificate of registration aforesaid shall be regarded as a license from the Council for the holding or keeping of the exhibition or for carrying on of the public amusements therein mentioned, but for none other. Any occupier of such building or land who shall hold or keep therein or thereon any exhibition, or shall use such building or land for any public amusements other than such exhibition or amusements mentioned in such certificate or license shall, for every such offence, forfeit and pay any sum not less than ten shillings, nor more than ten pounds.

Unlawful games and exhibitions.

9. No license shall be granted as aforesaid to or for any building or land wherein or whereon any games with dice, or other games of chance for money, or any bull-baiting, dog-fighting, cockfighting, or other exhibitions or amusements opposed to public morality or involving cruelty to animals, or likely to cause any breach of the peace, are proposed to be had or carried on; and the occupier of any building or land so registered as aforesaid, who shall permit any such game of chance or exhibition or amusement as are in the section before-mentioned, to be had, held, or carried on in or upon such building shall for every such offence forfeit and pay a sum of not less than ten shillings, nor more than ten pounds.

Suspension or revocation of license.—Notice to be given and license to be allowed to shew cause.

10. The effect of any such registration as aforesaid may be suspended, or such registration may be cancelled, as the Council shall think fit, for any of the following causes, namely:—Whenever the occupier of the registered building or land, or the manager of any such exhibition or amusement as aforesaid, held, kept, conducted, or carried on in or upon such building or

ground, shall have been twice convicted of offences against these by-laws within a period of twelve months, or whenever it shall be shewn to the satisfaction of the said Council that the superintendent, director, or manager, or other person in charge of any such exhibition or amusement is a confirmed drunkard, or that such exhibition or amusement is being conducted in such a manner as to violate public decency, to endanger the public peace, or to become a nuisance to any inhabitants of the said Borough: Provided that before any such suspension or cancellation as aforesaid the occupier of such registered building or land shall have notice of the fact that the said Council is about to consider whether there shall be any such suspension or cancellation and of the causes for this proceeding, and shall be allowed to shew cause against such suspension or cancellation before the same shall be ordered.

Construction of term "occupier."—Change in occupancy.—False statement.

11. Any person who shall superintend, direct, or manage, or shall be otherwise in charge of any such exhibition or public amusement as aforesaid, in or upon any such buildings or land as aforesaid; or who shall reside in or upon any such building or land wherein or whereon any such exhibition or public amusement shall be held, kept, or carried on; or who, being the owner, lessee, or tenant of any such building or land, shall permit the same to be used for the purposes of any such exhibition or public amusement, shall be deemed the occupier of such building or land for all the purposes of these by-laws. And the said by-laws shall be held to be as applicable in every case to any number of such occupiers as to any single occupier. And every such occupier whose name shall have been so registered as aforesaid shall be deemed and taken to be, and continue to be, such occupier for all the purposes of these by-laws: Provided that in the event of any change in the occupancy of any such building or ground as aforesaid, it shall be competent for the parties concerned to notify the same, by writing under their hands, to the said Council Clerk, who shall lay such notification before the Council at its next meeting; and if after such inquiry as such Council may deem necessary, there shall seem to be no valid objection to such change of occupancy, a corresponding entry shall be made in the registry aforesaid, and a new certificate shall be issued, which shall be in force until the then next ensuing 31st day of December, and no longer. And for every such new certificate a fee of five shillings shall be paid to the said Council Clerk for the benefit of the said Borough. And any person who shall make any false statement in any such application or notice as aforesaid as to any of the facts or particulars required by these by-laws to be stated in such application or notice, shall for every such offence forfeit and pay any sum not less than one pound, nor more than twenty pounds.

PART VII.

WATER SUPPLY.

Polluting water, reservoirs, &c.

1. Whosoever shall bathe in any stream, reservoir, conduit, aqueduct, or other waterworks belonging to or under the management or control of the Council, or shall wash, cleanse, throw, or cause to enter therein, any animal, whether alive or dead, or any rubbish, filth, stuff, or thing of any kind whatsoever, or shall cause or permit to suffer to run, or to be brought therein, the water of any sink, sewer, drain, engine, or boiler, or other filthy, unwholesome, or improper water, or shall wash any clothes at any public fountain or pump, or in or at any such stream, reservoir, conduit, aqueduct, or other waterworks as aforesaid, or shall do anything whatsoever whereby any water or waterworks belonging to the said Council, or under their management or control, shall be fouled, obstructed, or damaged, shall for the first offence forfeit and pay any sum not exceeding five pounds; for a second offence any sum not less than ten shillings, nor more than five pounds; and for the third and every subsequent offence any sum not less than one pound, nor more than twenty pounds.

Willful waste of water.

2. Whosoever being supplied with water by the Council from any waterworks, fountain, or reservoir, or of or belonging to, or under the control or management of the said Council, or having access to any such waterworks, fountain, or reservoir, for the taking of water therefrom, shall wilfully or negligently suffer any water to run to waste from any pipe, pump, or conduit, from or by which he shall be so supplied, or to which he shall have such access, shall forfeit and pay for the first offence any sum not exceeding five pounds; for a second offence any sum not less than one pound, nor more than twenty pounds; and for a third and every subsequent offence any sum not less than five pounds, nor more than forty pounds.

Damming up water without consent.

3. Whosoever shall, without the consent in writing of the Council, construct or place any dam or embankment in or across any river, creek, or natural watercourse, shall forfeit and pay any sum not less than one pound, nor more than twenty pounds, and shall remove such dam or embankment within a reasonable

time after such conviction, or shall forfeit and pay any sum not less than five pounds, nor more than fifty pounds. And if after such second conviction such person shall fail to remove such dam or embankment within a further reasonable time he shall forfeit and pay a sum of not less than twenty pounds, nor more than fifty pounds; and if, within a reasonable time after a third or any further conviction, he shall still fail to remove such dam or embankment, he shall for every such offence forfeit and pay a sum of fifty pounds.

Diverting water from reservoirs of Council in certain cases.

4. In any case in which the Council shall have the exclusive right of collecting for the supply of any reservoir or waterworks belonging to the said Council, or under their management or control, the storm-water having fallen on any gathering ground, whosoever shall, by any means whatsoever, divert any such water from the course of its natural flow, so that the same shall tend to flow elsewhere than to such reservoir or waterworks, or some watercourse leading thereto, or shall flow to the same respectively in a foul state, shall forfeit and pay for the first offence any sum not less than one pound, nor more than twenty pounds; for a second offence any sum not less than two pounds, nor more than forty pounds; and for a third and every subsequent offence any sum not less than five pounds, nor more than fifty pounds.

PART VIII.

Sewerage and Drainage.

No private sewers to be made to communicate with the public sewers without notice.

1. It shall not be lawful for any person, without notice to the Council, or otherwise than according to such plans and directions as such Council may make and give, to make or branch any private drain or sewer into any of the public drains or sewers, or into any drain or sewer communicating therewith; and in case any person or persons shall make or branch any private drain or sewer into any of the said public drains or sewers, or into any drain or sewer communicating or to communicate therewith, without such notice, or otherwise than as aforesaid, every person so offending shall for every such offence forfeit and pay any sum not exceeding fifty pounds.

Proprietors of private sewers, &c., to repair and cleanse same.

2. All drains or sewers communicating with any public drain or sewer shall from time to time be repaired and cleansed under the inspection and direction of the Council, at the costs and charges of the occupiers of the houses, buildings, lands, and premises to which the said private sewers or drains shall respectively belong; and in case any person shall neglect to repair and cleanse, or cause any such private drain or sewer to be repaired and cleansed, according to the direction of the said Council, he shall forfeit and pay for every such offence any sum not exceeding five pounds.

Drains for discharge of surface-water from land.

3. Every owner or occupier of land in, adjoining to, or near any street, if such land shall be so situated that surface or storm water from or upon the same shall overflow or shall tend naturally, if not otherwise discharged, to overflow any footway of such street, shall within seven days next after the service of notice by the Council for that purpose, construct and lay from such point upon such land being near to the footway, as shall be specified in such notice by plan appended or otherwise, and higher in level than the bottom of the channel at the outer edge of the footway to the said channel, and through, under, and transversely to the footway, and keep in good condition such covered drain, or trunk as and subject to the inspection of the Council or its proper officers; and in default of compliance with any such notice within the period aforesaid, or with the provisions of this section, such owner or occupier shall forfeit any payment not exceeding five pounds. And if within seven days after such conviction such owner or occupier shall still have failed to comply with such notice, or be otherwise in default as aforesaid, he shall forfeit and pay any sum not less than one pound, nor more than ten pounds; and for every further such offence he shall forfeit and pay any sum not less than two pounds, nor more than twenty pounds. And every such owner or occupier who shall still have made default as aforesaid for more than seven days after such second or any future conviction, shall be held guilty of a further offence within the meaning of this section.

PART IX.

Public Libraries and Museums, &c.

Hours.

1. Every public library or museum belonging to or under the control or management of the Council shall be open to the public on every lawful day from six of the clock, p.m., to nine of the clock, p.m.

Visitors' book to be signed.

2. Every person who shall enter any such public library or museum shall immediately on entering the same write his or her name and address in a book to be kept for such purpose at each such library and museum, and to be called the "Visitors' Book;" and if such person shall be unable to write, then such name and address may be so written by any other person, or shall be so written by the proper officer of the Council at such library or museum, at the request of such person; and no person who shall refuse to comply with this regulation shall be permitted to enter or remain in such museum; and it shall be the duty of the officer of the Council in charge of such library or museum to enforce this by-law.

Misconduct, &c., in Library or Museum.

3. Every person who shall, being intoxicated, enter or remain in any such public library or museum, or who shall use therein any abusive, improper, or unbecoming language, or who shall by unnecessary loud talking, or any unnecessary noise or otherwise, disturb or annoy the persons using or resorting to such library or museum, or who shall without lawful excuse, but without felonious or larcenous intent, remove any property from such library or museum, shall forfeit and pay any sum not less than ten shillings, nor more than ten pounds; and every such person may be forthwith removed by any officer of the Council in charge of such library or museum.

Applicants for books, &c., to be served in due order.—Special permission for removal of books, &c.

4. Every person who at any such library shall desire to read or to refer to any book or other publication placed or deposited in such library for public use, shall have the same handed to him in his turn by the officer in charge of such library, or his assistant, and shall have the exclusive use in such library of such book or other publication for such time as by regulation made by the said Council in that behalf, as hereinafter stated, may have been prescribed. But no person shall remove any such book or other publication from such library without the permission, in writing, of the Mayor, or of two Aldermen of the said Borough; and every such permission shall specify the book or other publication to which it has reference, and the time for which the same is to be permitted to be removed from the said library. And no such permission shall be of any force, or shall be attended to, which shall in any way conflict with or be opposed to any regulation made by the said Council as aforesaid. And every such permission shall be recorded by the officer in charge of such library, and the Mayor or Aldermen granting the same shall be responsible for the return, in proper time and in good order, of the said book or other publication; and it shall be the duty of the officer of the Council in charge of such library or museum to carry out and enforce this by-law in every respect.

Rules as to use of apparatus, &c.

5. The like rule shall in every respect apply to the use of any apparatus, model, or specimen belonging to any such library or museum as aforesaid, except that in such case such apparatus, model, or specimen shall only be removed on the written permission of the Mayor and two Aldermen, or of four Aldermen without the Mayor, and then only for the purpose of preparing any lecture to be given in the said Borough, and for so long a time only as may be necessary for the preparation of such lecture.

Applications for use of books, &c., to be made to officer in charge.

6. Any person who may, at any such library or museum, desire to read or to refer to, or to use or examine any such book, publication, apparatus, model, or specimen as aforesaid, shall apply for the same to the officer of the Council in charge of such library or museum, and shall return the same to such officer after having read, referred to, used, or examined the same; and it shall be the duty of such officer to carry out and enforce this by-law in every respect.

Loan or deposit of books or apparatus, &c., on special conditions.

7. It shall be lawful for any person, with the consent of the Council, to lend to or deposit at any such library or museum any book or other publication, or any apparatus, model, or specimen for public use or inspection, subject to such special restrictions as to such use or inspection as such person may prescribe; and the officer of the Council in charge of such library or museum shall in such case hold every such book, publication, apparatus, model, or specimen in trust for the person so

lending or depositing the same, and shall carry out and enforce such restrictions as such person may have so prescribed as aforesaid.

Use of library, &c., by Society for mutual improvement, &c.

8. Any society or class for mutual improvement or instruction, or for study or experiments, may, with the consent of the Council, be formed in connection with, or may hold its meetings or carry on its studies or experiments at any such library or museum: Provided that the general free access to and use of the said library or museum by persons who are not members of such society or class be not thereby interfered with: Provided, however, that no rule made by the members of any such society or class for the management of the same shall be of any force until the same shall have been submitted to and sanctioned by the said Council, nor in any case if the same shall conflict in any way with this "Part" of these by-laws, or with any regulation made by the said Council hereunder.

Record of donations.

9. A record shall be made of every donation to each such library or museum, which book shall be opened to the inspection of all persons visiting such library or museum.

Further regulations.

10. The Council shall from time to time make such regulations as may be required for any of the following purposes:— For determining the order in which any book or other publication, or any apparatus, model, or specimen shall be handed to persons desiring to read or refer to, or to use or examine any such apparatus, model, or specimen; and the time during which each such person shall be allowed to retain the exclusive use as aforesaid of any such book or other publication, apparatus, model, or specimen; for defining the conditions on which any special permission may be given as aforesaid for the removal of any book or other publication, or of any apparatus, model, or specimen from any such public library or museum, and for prohibiting the removal of any such book, publication, apparatus, model, or specimen; for defining the conditions on which the Council will consent to the loan on deposit as aforesaid of any book or other publication, apparatus, model, or specimen, with special restrictions relative to the use or inspection of the same as aforesaid, and the carrying out or enforcement of such restrictions; for defining the conditions on which any such public library or museum may be used as aforesaid by any society or class for mutual improvement or instruction, or for study or experiments; for regulating the marking of books or other publications; for defining the mode in which the books and records of any such library or museum shall be kept, and in which the duties of any officer in charge thereof, or any assistant employed thereat, shall be carried out; for prescribing any additional precautions which may be considered necessary for the safe keeping and care of any such books, publications, apparatus, models, or specimens as aforesaid. It shall be the duty of the officer of the Council in charge of every such public library or museum to carry out and enforce this by-law and the regulations so made thereunder.

Copy of by-laws to be kept at Library, &c., for reference.

11. A copy of this "Part" of these by-laws, and copies of all regulations made thereunder as aforesaid shall be kept at every such public library or museum, and it shall be the duty of the officer of the Council in charge of such library or museum to allow visitors to the same, who may desire so to do, to refer to any such copy.

Penalty for damaging visitors' book, &c.

12. Any person who shall wilfully damage any visitors' book, catalogue, copy of by-laws, or other book or record kept at any such library or museum, for the general uses thereof, shall for every such offence forfeit and pay any sum not less than ten shillings, nor more than ten pounds.

Passed by the Municipal Council of Marrickville, this fourth day of January, in the year of our Lord one thousand eight hundred and sixty-nine.

CHARLES ST. JULIAN,
Mayor.

By order of the Council,
G. C. TOMPSON, Council Clerk.

1869.

LEGISLATIVE ASSEMBLY.

NEW SOUTH WALES.

SYDNEY BOUNDARIES AMENDMENT BILL.

(PETITION—MUNICIPALITY OF PADDINGTON.)

Ordered by the Legislative Assembly to be Printed, 12 October, 1869.

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

The humble Petition of the Municipal Council of the Borough of Paddington,—

RESPECTFULLY SHOWETH:—

That your Petitioners having heard with deep concern that a Bill is now before your Honorable House to amend the City Boundary, which if carried in its present form will seriously affect the interests of this Borough,—the portion which your Petitioners complain of is contained in Schedule A, and reads as follows:—"Thence again on the east by the centre of Dowling-street to a point where it intersects the southern boundary of Paddington thence on the north by that boundary to its intersection with the centre of Regent-street thence by the centre of Leinster-street to the centre of Gordon-street thence by the centre of Regent-street to the north side of Park Road thence by the north side of that road to the south-eastern angle of St. Matthias' Church land thence by the south-eastern and eastern boundaries of that land to the southern alignment of the South Head Old Road." Your Petitioners beg to state that the above boundary if granted will divide properties, leaving half in Paddington and half in Sydney, and will doubtless cause serious inconvenience and prove a source of litigation to both parties in collecting their respective revenues. Although the whole of the land between the boundary above described and the Park Road does not at present actually belong to the Borough of Paddington, yet arrangements have already been made with the Borough of Randwick for its annexation, with a view to obviate the difficulties above stated, which it is evident must ultimately arise.

The prayer of your humble Petitioners is that your Honorable House will not pass the Bill as it now stands, but will consent to alter it as follows, viz. :—(At the eighth line of Schedule A.) Thence again on the east by the centre of Dowling-street to the north-east side of Old Botany Road thence by that road to its intersection with the Park Road thence by the northern side of Park Road to its intersection with the South Head Old Road. This will give a permanent and well-defined boundary both to Paddington and Sydney.

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

Signed on behalf of the Council, 8/10/69.

W. TAYLOR, Mayor.

(L.S.) JESSE COWLEY, Council Clerk.

1869.

LEGISLATIVE ASSEMBLY.

NEW SOUTH WALES.

TOWN HALL.

(PETITION—CERTAIN INHABITANTS OF THE CITY OF SYDNEY AND SUBURBS.)

Ordered by the Legislative Assembly to be Printed, 29 October, 1869.

To the Honorable the Legislative Assembly of the Colony of New South Wales, in Parliament assembled.

The humble Petition of the undersigned Inhabitants of the City of Sydney and Suburbs,—

SHOWETH:—

That your Honorable House passed an Act in the late Session of Parliament entitled “The Cathedral Close Act,” granting half an acre of land to the Municipal Council of Sydney for the purpose of erecting a Town Hall.

That the Municipal Council called for designs for a Town Hall; a large number were sent in, and the premiums amounting to £350 awarded. None of those designs occupied nearly half an acre—the extent of land granted.

That the Municipal Council have since commenced building a Town Hall, occupying much more land than granted, subjecting the citizens to a penalty of one thousand pounds, and forfeiture of the land with building erected thereon.

That the plans of the new Town Hall have not been exhibited to the citizens, but from the descriptions published in the newspapers it is seen that rooms have been added that are not required, thus increasing very materially the extent of the building.

That a new Street is required from the intended Goods Station at the head of Darling Harbour to George-street; but the placing of the Town Hall in the centre of the Cathedral Close will prevent that street being carried out, and for ever stop any improvement in the adjacent thoroughfares.

That unless this Street be carried out, the means of ingress and egress from the Goods Station, Darling Harbour, would be very limited and unsatisfactory.

That the buildings required to be taken down in the formation of the proposed new street are generally of a very inferior class, with the exception of the Baptist Chapel and Scots’ Church, but which your Petitioners are led to believe would be readily given up at a fair valuation.

That the property to be purchased would be comparatively small in amount, whilst the price obtained for frontages in the new Street would be largely in excess.

That the new Street being formed from George-street to Darling Harbour could be continued across, at a small expense, to the Ultimo Estate—thus immediately connecting a very important portion of Sydney with the Public Offices, Banks, Markets, &c.

That the new Street being carried out as planned will furnish the means of bringing the Railway into the centre of the city, by a tunnel underneath, and forming a Passenger Station on the site of the present Central Police Station.

That to carry out our Railway system profitably it is highly necessary that the Passenger Station should be more centralized; and by this plan the Railway is not only brought into the heart of the city, but the whole can be completed at a moderate cost, without prejudicing private interests, or interfering with our Harbour, Streets, Parks, or Public Reserves.

Your Petitioners therefore humbly pray that your Honorable House will be pleased to take steps to restrain the Municipal Council from building on more than the half-acre of land granted, or in a position interfering with the direction of the proposed new Street; also for the promotion and prosecution of the works hereinbefore mentioned, namely, the formation of a new Street and Approach to the Darling Harbour Goods Station; also the continuation of the Railway to the site of the Central Police Office, George-street.

And your Petitioners will ever pray, &c.

Dated at Sydney, this 28th day of October, A.D. 1869.

[Here follow 617 Signatures.]

1869.

LEGISLATIVE ASSEMBLY.
NEW SOUTH WALES.

REPORT FROM THE SELECT COMMITTEE

ON THE

PRINCE ALFRED PARK ENCLOSURE BILL;

TOGETHER WITH THE

PROCEEDINGS OF THE COMMITTEE,

AND

MINUTES OF EVIDENCE.

ORDERED BY THE LEGISLATIVE ASSEMBLY TO BE PRINTED,
22 *October*, 1869.

SYDNEY : THOMAS RICHARDS, GOVERNMENT PRINTER.

1869.

1869.

EXTRACTS FROM THE VOTES AND PROCEEDINGS OF THE
LEGISLATIVE ASSEMBLY.

VOTES, No. 15. THURSDAY, 21 OCTOBER, 1869.

8. Prince Alfred Park Enclosure Bill (*“Formal” Motion*):—Mr. Driver moved, pursuant to Notice No. 1,—
- (1.) That the Prince Alfred Park Enclosure Bill be referred to a Select Committee for consideration and report, with power to send for persons and papers.
- (2.) That such Committee consist of Mr. Forster, Mr. Lord, Mr. Wilson, Mr. Farnell, Mr. Neale, Mr. R. Stewart, Mr. Oatley, Mr. W. Campbell, and the Mover.
- Question put and passed.
-

VOTES, No. 16. FRIDAY, 22 OCTOBER, 1869.

3. Prince Alfred Park Enclosure Bill:—Mr. Driver, as Chairman, brought up the Report from, and laid upon the Table the Minutes of Proceedings of, and of Evidence taken before, the Select Committee for whose consideration and report this Bill was referred on 21st October, 1869.
- Ordered to be printed.

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1869.

PRINCE ALFRED PARK ENCLOSURE BILL.

REPORT.

THE SELECT COMMITTEE of the Legislative Assembly, for whose consideration and report was referred, on the 21st October, 1869, the "*Prince Alfred Park Enclosure Bill*"—"with power to send for persons and papers"—beg leave to report to your Honorable House,—

That they have examined the witness named in the margin (whose evidence is appended hereto); and the Preamble having been satisfactorily proved to your Committee, they proceeded to consider the several Clauses of the Bill, in which it was not deemed necessary to make any Amendment.

And your Committee now beg leave to lay before your Honorable House the Bill, without Amendment.

No. 3 Committee Room,
Sydney, 22 October, 1869.

RD. DRIVER,
Chairman.

1869.

LEGISLATIVE ASSEMBLY.
NEW SOUTH WALES.

MINUTES OF EVIDENCE

TAKEN BEFORE

THE SELECT COMMITTEE

ON THE

PRINCE ALFRED PARK ENCLOSURE BILL.

FRIDAY, 22 OCTOBER, 1869.

Present:—

MR. DRIVER,
MR. FARNELL,

MR. NEALE,
MR. OATLEY.

RICHARD DRIVER, JUN., ESQ., IN THE CHAIR.

Jules Joubert, Esq., called in and examined:—

1. *Chairman.*] You are Secretary to the Agricultural Society? Yes.
2. You know the land known as Prince Alfred Park, in this city? Yes.
3. Do you believe that the erection on that land of suitable buildings "for the purpose of holding annual and other exhibitions and for like purposes of public recreation or instruction would be highly beneficial to the inhabitants of Sydney, and to all persons concerned in promoting the agricultural, pastoral, and other interests of the Colony"? I do.
4. Do you believe it possible to procure a piece of land so suitable in every respect? I think not; I do not think there is a piece of ground in the city more suitable for the purpose.
5. Nor within a convenient distance? No. It is central, near the Railway, and the city must necessarily extend in that direction.
6. As Secretary to the Agricultural Society, this subject has been under your consideration before? Yes.
7. Do you know that the land now known as Prince Alfred Park is the same piece of land as that formerly known as the Cleveland Paddock? It is part of the old Cleveland Paddock.
8. Is it the same land as that mentioned in a proclamation in the *Government Gazette* of 22nd December, 1865? It is.
9. And the same as mentioned in a proclamation of 12th October, 1869, appointing the Municipal Council of the City Trustees of the said land? Yes.
10. Both these proclamations are published in the *New South Wales Government Gazette*? Yes.
11. *Mr. Farnell.*] The erection of buildings on this Park would not interfere with it as a place of recreation for the people of Sydney? That would depend upon the extent of the buildings; but the building it is now proposed to erect upon it was, for that express purpose, limited to a certain area. Such a building would not, I believe, in any way interfere with the appropriation of the Park for public recreation. If I am right, it will only take one acre out of eighteen or twenty.
12. It would rather be an advantage to the citizens to have a building such as that erected? I think it would be an immense advantage to the city of Sydney to have a large hall of that description, beyond devoting it to the purposes of our Society. Melbourne and other cities have large halls of that kind, which are found very beneficial for the purpose of bringing amusing and instructive entertainments within reach of the million.
13. The holding of agricultural exhibitions would of itself be advantageous to the city of Sydney, would it not? Yes; and particularly as proposed now, that is, to blend industrial and fine arts exhibitions with pastoral and agricultural. I think that would tend materially to develop the ideas of the youth of the Colony.

J. Joubert,
Esq.
22 Oct., 1869.

1869.

NEW SOUTH WALES.

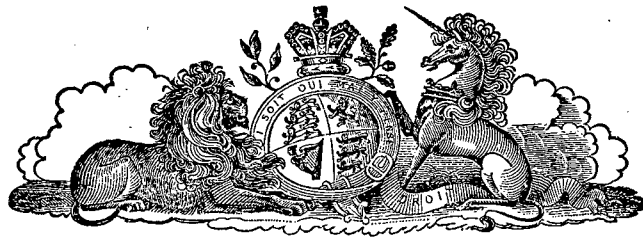
SYDNEY WATER SUPPLY.

REPORT

OF THE

COMMISSION APPOINTED TO INQUIRE INTO THE SUPPLY OF
WATER TO SYDNEY AND SUBURBS.

Presented to both Houses of Parliament, by Command.



SYDNEY: THOMAS RICHARDS, GOVERNMENT PRINTER.

1869.

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Commission.

VICTORIA, by the Grace of God, of the United Kingdom of Great Britain and Ireland
Queen, Defender of the Faith, and so forth,—

To our trusty and well-beloved—

(L.S.) JOHN SMITH, Esquire, M.D., Professor of Physics, &c., Sydney University ;
EDWARD ORPEN MORIARTY, Esquire, Civil Engineer, and Engineer-in-Chief for
Harbours and River Navigation ;
PHILIP FRANCIS ADAMS, Esquire, Deputy Surveyor General ;
FRANCIS HENRY GRUNDY, Esquire, Civil Engineer ; and
THOMAS WOORE, Esquire ;

Greeting :

KNOW ye that, in compliance with an Address from the Legislative Assembly of our Colony of New South Wales, we, reposing great trust and confidence in your zeal, industry, discretion, and integrity, do by these presents authorize and appoint you, or any three or more of you, as hereinafter mentioned, to make a diligent and full inquiry into the present provision for a supply of pure water to the City of Sydney and Suburbs, and whether any grounds exist for fears that the supply is inadequate and uncertain, and not to be relied upon in all seasons, and to institute (should it appear to you that the supply of pure water may at any time prove unequal to the wants of the inhabitants) all necessary inquiries to ascertain by what measures a reliable and plentiful supply may be best obtained : We do, by these presents, give and grant to you, or any three or more of you, at any meeting or meetings to which all of you shall have been duly summoned, full power and authority to call before you all such persons as you shall judge necessary, by whom you may be better informed of the truth in the premises, and to require the production of all such charts, maps, plans, drawings, tracings, books, papers, writings, and all other documents as you may deem expedient, and to visit and inspect the same at the offices or places where the same, or any of them, may be deposited, and to inquire of the premises by all other lawful ways or means : And our further will and pleasure is, that you, or any three or more of you, after due examination of the premises, do and shall, within the space of three months after the date of this our Commission, or sooner, if the same can reasonably be, certify to us, in the Office of our Colonial Secretary, under your, or any three or more of your hands and seals, what you shall find touching the premises : And this Commission shall continue in full force, although the proceedings thereunder shall not be continued by adjournment from time to time ; and you, or any three or more of you as aforesaid, may, from time to time, if you shall see fit, without waiting for your full and complete Report, certify your several proceedings into our said Office, as the same shall be respectively perfected : And we hereby command all Government Officers, and other persons whomsoever, within the said Colony, that they be assistant to you, and each of you, in the execution of these presents : And we appoint you, the said John Smith, to be President of this Commission, and do give you power, at your discretion, to procure such clerical or other assistance as may be absolutely necessary for enabling you duly to execute this Commission.

In testimony whereof, we have caused these our Letters to be made Patent and the Great Seal of our said Colony to be hereunto affixed.

Witness our right, trusty, and well-beloved Councillor, SIR JOHN YOUNG, Baronet, Knight Commander of our Most Honorable Order of the Bath, Knight Grand Cross of our Most Distinguished Order of St. Michael and St. George, Captain-General and Governor-in-Chief of our said Colony of New South Wales, at Government House, Sydney, aforesaid, this twenty-fourth day of September, in the year of our Lord one thousand eight hundred and sixty-seven, and in the thirty-first year of our Reign.

JOHN YOUNG.

By His Excellency's Command,

HENRY PARKES.

Entered on record by me, in Register of Patents, No. 9, pages 317 to 320 inclusive, this twenty-fourth day of September, one thousand eight hundred and sixty-seven.

HENRY HALLORAN,
Under Secretary.

By

By His Excellency the Right Honorable SOMERSET RICHARD, Earl of Belmore, a Member of Her Majesty's Most Honorable Privy Council in Ireland, Governor and Commander-in-Chief of the Colony of New South Wales, and Vice-Admiral of the same.

WHEREAS, by a Commission bearing date the twenty-fourth day of September, one thousand eight hundred and sixty-seven, Her Majesty was pleased to appoint John Smith, Esquire, M.D., Professor of Physics, &c., Sydney University,—Edward Orpen Moriarty, Esquire, Civil Engineer, and Engineer-in-Chief for Harbour and River Navigation,—Philip Francis Adams, Esquire, Deputy Surveyor General,—Francis Henry Grundy, Esquire, Civil Engineer,—and Thomas Woore, Esquire,—to make a diligent and full inquiry into the present provision for a supply of pure water to the City of Sydney and Suburbs, and whether any grounds exist for fears that the supply is inadequate and uncertain, and not to be relied upon in all seasons, and to institute (should it appear to them that the supply of pure water may, at any time, prove unequal to the wants of the inhabitants), all necessary inquiries to ascertain by what measures a reliable and plentiful supply may be best obtained: And whereas it was by the said Commission provided that the persons thereby appointed, or any three or more of them, after due examination of the premises, should, within the space of three months from the date of the said Commission, certify to Her Majesty, in the Office of the Colonial Secretary, under their or any three of their hands and seals, what they find touching the premises: And whereas, in order to render such inquiry as full and perfect as possible, it is deemed expedient to extend such period as aforesaid: Now, therefore, I, SOMERSET RICHARD, Earl of Belmore, Governor of the Colony of New South Wales, do, with the advice of the Executive Council thereof, hereby direct and appoint, that the period within which the persons appointed by Her Majesty's said Commission shall certify to Her Majesty, touching the premises, shall be extended, and it is hereby extended to the twenty-third day of June now next ensuing.

Given under my hand, at Government House, Sydney, aforesaid, this twenty-fourth day of January, in the year of our Lord one thousand eight hundred and sixty-eight, and in the thirty-first year of Her Majesty's Reign.

BELMORE.

By His Excellency's Command,

HENRY PARKES.

VICTORIA, by the Grace of God, of the United Kingdom of Great Britain and Ireland, Queen, Defender of the Faith, and so forth,—

To our trusty and well-beloved—

WILLIAM CHRISTOPHER BENNETT, Esquire, a Member of the Institute of Civil Engineers, Commissioner and Engineer of Roads;

Greeting:

WHEREAS, by our Commission, dated the twenty-fourth day of September, one thousand eight hundred and sixty-seven, we did appoint certain gentlemen therein named to make a diligent and full inquiry into the present provision for a supply of pure water to the City of Sydney and Suburbs, and whether any grounds exist for fears that the supply is inadequate and uncertain, and not to be relied upon in all seasons; and to institute (should it appear to them that the supply of pure water may at any time prove unequal to the wants of the inhabitants) all necessary inquiries to ascertain by what measures a reliable and plentiful supply may be best obtained; and whereas it has been represented to us that it is expedient to appoint an additional Member of such Commission: Now know ye, that we do hereby appoint you, the said William Christopher Bennett, to be such additional Member accordingly.

In testimony whereof, we have caused these our Letters to be made Patent, and the Seal of our Colony to be hereunto affixed.

Witness our right, trusty, and well-beloved Cousin and Councillor, SOMERSET RICHARD, Earl of Belmore, our Governor and Commander-in-Chief of our said Colony, at Government House, Sydney, this sixth day of June, one thousand eight hundred and sixty-eight, and in the thirty-first year of our Reign.

(L.S.)

BELMORE.

By His Excellency's Command,

HENRY PARKES.

Entered on record, in Register of Patents, No. 9, pages 362 and 363, this eighth day of June, one thousand eight hundred and sixty-eight.

HENRY HALLORAN,
Under Secretary.

By

By His Excellency the Right Honorable SOMERSET RICHARD, Earl of Belmore, a Member of Her Majesty's Most Honorable Privy Council in Ireland, Governor and Commander-in-Chief of the Colony of New South Wales, and Vice-Admiral of the same.

WHEREAS, by a Commission bearing date the twenty-fourth day of September, one thousand eight hundred and sixty-seven, Her Majesty was pleased to appoint John Smith, Esquire, M.D., Professor of Physics, &c., Sydney University,—Edward Orpen Moriarty, Esquire, Engineer-in-Chief for Harbour and River Navigation,—Philip Francis Adams, Esquire, Deputy Surveyor General,—Francis Henry Grundy, Esquire, Civil Engineer,—and Thomas Woore, Esquire,—to make a diligent and full inquiry into the present provision for a supply of pure water to the City of Sydney and Suburbs, and whether any grounds exist for fears that the supply is inadequate and uncertain, and not to be relied upon in all seasons, and to institute (should it appear to them that the supply of pure water may at any time prove unequal to the wants of the inhabitants) all necessary inquiries to ascertain by what measures a reliable and plentiful supply may be best obtained: And whereas it was by the said Commission provided that the persons thereby appointed, or any three or more of them, after due examination of the premises, should, within the space of three months from the date of the said Commission, certify to Her Majesty, in the Office of the Colonial Secretary, under their or any three of their hands and seals, what they find touching the premises: And whereas, in order to render such inquiry as full and perfect as possible, the period within which the persons so appointed should certify to Her Majesty was, by an instrument dated the twenty-fourth day of January, one thousand eight hundred and sixty-eight, extended to the twenty-third day of June then next ensuing: And whereas, by a Commission bearing date the sixth day of June now instant, Her Majesty did appoint William Christopher Bennett, Esquire, a Member of the Institute of Civil Engineers, Commissioner and Engineer of Roads, an additional Member of the aforesaid Commission: And whereas it has been represented that a further extension of such period is necessary to enable the said Commission to complete their labours, and submit their Final Report: Now, therefore, I, SOMERSET RICHARD, Earl of Belmore, Governor of the Colony of New South Wales, with the advice of the Executive Council thereof, do hereby direct and appoint that the period within which the persons appointed by Her Majesty's said Commissions shall certify to Her Majesty, touching the premises, shall be extended, and it is hereby extended to the twenty-third day of December now next ensuing.

Given under my hand, at Government House, Sydney, aforesaid, this twenty-fourth day of June, in the year of our Lord one thousand eight hundred and sixty-eight, and in the thirty-second year of Her Majesty's Reign.

BELMORE.

By His Excellency's Command,

HENRY PARKES.

Entered on record by me, in Register of Patents, No. 9, pages 367 to 369, this twenty-sixth day of June, one thousand eight hundred and sixty-eight.

HENRY HALLORAN,
Under Secretary.

By His Excellency the Right Honorable SOMERSET RICHARD, Earl of Belmore, a Member of Her Majesty's Most Honorable Privy Council in Ireland, Governor and Commander-in-Chief of the Colony of New South Wales, and Vice-Admiral of the same.

WHEREAS, by a Commission bearing date the twenty-fourth day of September, one thousand eight hundred and sixty-seven, Her Majesty was pleased to appoint John Smith, Esquire, M.D., Professor of Physics, &c., Sydney University,—Edward Orpen Moriarty, Esquire, Civil Engineer, and Engineer-in-Chief for Harbours and River Navigation,—Philip Francis Adams, Esquire, Deputy Surveyor General,—Francis Henry Grundy, Esquire, Civil Engineer,—and Thomas Woore, Esquire,—to make a diligent and full inquiry into the present provision for a supply of pure water to the City of Sydney and Suburbs, and whether any grounds exist for fears that the supply is inadequate and uncertain, and not to be relied upon in all seasons,—and to institute (should it appear to them that the supply of pure water may at any time prove unequal to the wants of the inhabitants) all necessary inquiries to ascertain by what measures a reliable and plentiful supply may be best obtained: And whereas it was by the said Commission provided that the persons thereby appointed, or any three or more of them, after due examination of the premises, should, within the space of three months from the date of the said Commission, certify to Her Majesty, in the Office of the Colonial Secretary, under their or any three of their hands and seals, what they shall find touching the premises: And whereas, in order to render such inquiry as full and perfect as possible, the period within which the persons so appointed should certify to Her Majesty was, by an instrument dated the twenty-fourth day of January, one thousand eight hundred and sixty-eight, extended to the

the twenty-third day of June then next ensuing: And whereas, by a Commission bearing date the sixth day of June, one thousand eight hundred and sixty-eight, Her Majesty did appoint William Christopher Bennett, Esquire, Member of the Institute of Civil Engineers, Commissioner and Engineer of Roads, an additional Member of the said Commission: And whereas, upon representation, the period within which the persons so appointed should certify to Her Majesty was, by an instrument bearing date the twenty-fourth day of June, one thousand eight hundred and sixty-eight, further extended to the twenty-third day of December then next ensuing: And whereas it has been represented that a still further extension of the said period is necessary: Now, therefore, I, SOMERSET RICHARD, Earl of Belmore, Governor of the Colony of New South Wales, do, with the advice of the Executive Council thereof, hereby direct and appoint that the period within which the persons appointed by Her Majesty's said Commissions shall certify to Her Majesty touching the premises shall be extended; and it is hereby extended to the twenty-third day of March now next ensuing.

Given under my hand, at Government House, Sydney, in the said Colony, this twenty-fourth day of December, in the year of our Lord one thousand eight hundred and sixty-eight, and in the thirty-second year of Her Majesty's Reign.

BELMORE.

By His Excellency's Command,
JOHN ROBERTSON.

By His Excellency the Right Honorable SOMERSET RICHARD, Earl of Belmore, a Member of Her Majesty's Most Honorable Privy Council in Ireland, Governor and Commander-in-Chief of the Colony of New South Wales, and Vice-Admiral of the same.

WHEREAS, by a Commission bearing date the twenty-fourth day of September, one thousand eight hundred and sixty-seven, Her Majesty was pleased to appoint John Smith, Esquire, M.D., Professor of Physics, &c., Sydney University,—Edward Orpen Moriarty, Esquire, Civil Engineer, and Engineer-in-Chief for Harbours and River Navigation,—Philip Francis Adams, Esquire, Deputy Surveyor General,—Francis Henry Grundy, Esquire, Civil Engineer,—and Thomas Woore, Esquire,—to make a diligent and full inquiry into the present provision for a supply of pure water to the City of Sydney and Suburbs, and whether any grounds exist for fears that the supply is inadequate and uncertain, and not to be relied upon in all seasons, and to institute (should it appear to them that the supply of pure water may at any time prove unequal to the wants of the inhabitants) all necessary inquiries to ascertain by what measures a reliable and plentiful supply may be best obtained: And whereas it was by the said Commission provided that the persons thereby appointed, or any three or more of them, after due examination of the premises, should, within the space of three months from the date of the said Commission, certify to Her Majesty, in the Office of the Colonial Secretary, under their or any three of their hands and seals, what they find touching the premises: And whereas, in order to render such inquiry as full and perfect as possible, the period within which the persons so appointed should certify to Her Majesty was, by an instrument dated the twenty-fourth day of January, one thousand eight hundred and sixty-eight, extended to the twenty-third day of June then next ensuing: And whereas, by a Commission bearing date the sixth day of June, one thousand eight hundred and sixty-eight, Her Majesty did appoint William Christopher Bennett, Esquire, Commissioner and Engineer of Roads, an additional Member of the said Commission: And whereas, upon representation, the period within which the persons so appointed should certify to Her Majesty was, by instruments bearing date respectively the twenty-fourth day of June, one thousand eight hundred and sixty-eight, and the twenty-fourth day of December in the same year, further extended to the twenty-third day of December, and to the twenty-third day of March, then next ensuing: And whereas it has been represented that a still further extension of the said period is necessary: Now, therefore, I, SOMERSET RICHARD, Earl of Belmore, Governor of the Colony of New South Wales, do, with the advice of the Executive Council thereof, hereby direct and appoint that the period within which the persons appointed by Her Majesty's said Commissions shall certify to Her Majesty touching the premises, shall be extended, and it is hereby extended to the twenty-third day of May now next ensuing.

Given under my hand, at Government House, Sydney, aforesaid, this twenty-fourth day of March, in the year of our Lord one thousand eight hundred and sixty-nine, and in the thirty-second year of Her Majesty's Reign.

BELMORE.

By His Excellency's Command,
JOHN ROBERTSON.

PROGRESS REPORTS OF THE SYDNEY WATER COMMISSION.

THE SYDNEY WATER COMMISSION to THE COLONIAL SECRETARY.

Sydney, 23 December, 1867.

SIR,

In accordance with the terms of the Commission by which we were appointed to inquire into the supply of water to Sydney and Suburbs, and which Commission expires to-morrow, the 24th instant, we have the honor to submit the following Report of Progress :—

We have prosecuted this inquiry with all the care and diligence we could bestow, and which its great importance demands. We have held fifteen meetings in our office, for the taking of evidence and for other business, and have besides spent thirteen days in field work, personally examining the present source of water supply, and various other districts where a future supply might possibly be derived. We have thus inspected the junction of the Nepean and Warragamba, and latterly we have made an extended examination of the country drained by the eastern tributaries of George's River and the Nepean, and by the Port Hacking River. Much work of this kind, however, remains to be done. We think that other portions of the Nepean ought to be examined, and also the Grose, the Couridjah Lagoons, and other places; and it may likewise be necessary to obtain various surveys and sections before a decision can be arrived at.

We have taken the evidence of fourteen witnesses, and have procured a variety of maps, plans, reports, returns of population, of rainfall, and of drainage areas of rivers, and have put in hand analyses of waters of more or less promise; all which information will be important when we come to form a judgment on the whole question.

At this stage of the inquiry, we can only recommend that the Commission be renewed for a further period; and as so much remains to be done, both in the office and in the field, before a Final Report can be drawn up, we would respectfully suggest that the extension of time may be for six months.

We enclose a statement of the expenditure of the Commission up to the present time.

We have, &c.,

J. SMITH, M.D.,

President of the Commission.

E. O. MORIARTY, M.I.C.E.

P. F. ADAMS.

FRANCIS H. GRUNDY.

THOMAS WOORE.

THE SYDNEY WATER COMMISSION to THE COLONIAL SECRETARY.

Sydney, 20 June, 1868.

SIR,

As the extended Commission of Inquiry into the supply of Water to Sydney and Suburbs expires on the 23rd instant, we have now the honor to make the following Report of Progress :—

Since the renewal of the Commission on January 24th, we have held seventeen meetings in our office, for the purpose of taking the evidence, and for other business; and we have besides spent seven days in examining the present and suggested future sources of supply.

Deputations of the Commissioners have spent ten days more in visiting points to which it was not thought necessary to take the whole Commission. We have thus examined the Cataract and Cordeaux Rivers, and the upper parts of the Nepean, also the Grose, the Wollondilly in Burragorang, George's River, the Colo, Wheeny Creek, and the Couridjah Lagoons.

We have caused a section to be made (under Mr. Woore's superintendence) of the country between the Warragamba and Rope's Creek, connecting with Mr. Woore's section from the latter point to Ashfield; and we have at present a section in progress from the Cataract River at Broughton's Pass, along the dividing ridge between the waters of George's River and the Nepean. We have also obtained a survey of the drainage area of the Couridjah Lagoons, and a cursory examination of the whole course of the Cataract River.

Analyses of all the waters examined by the Commission are now nearly completed at the University. From the amount of work remaining to be done a considerable time must elapse before we can be prepared with the Final Report, and we therefore respectfully crave a further extension of the Commission, say for six months.

We enclose a statement of the expenditure of the Commission, by which it will be seen that it exceeds by 16s. 5d. the amount of £400 placed to our credit in the Bank of New South Wales.

We have, &c.,

J. SMITH, M.D.,

President of the Commission.

E. O. MORIARTY, M.I.C.E.

FRANCIS H. GRUNDY.

THOMAS WOORE.

THE SYDNEY WATER COMMISSION to THE COLONIAL SECRETARY.

Sydney, 19 December, 1868.

SIR,

On behalf of the Commissioners appointed to inquire into the supply of water to Sydney and Suburbs, we have the honor to submit this our Third Report of Progress.

Since our last Report (under date June 20th, 1868), we have carried on the survey and section of the country from the Cordeaux and Cataract Rivers down to Sydney. The scheme of bringing water by gravitation from these rivers appeared, on examination, to be so promising, that we decided on having the survey and section executed with all attainable minuteness and accuracy. The plan that has been kept in view in this work is to intercept the waters of the Cordeaux and Upper Nepean at their junction at "Pheasant's Nest," and bring them by a tunnel into the Cataract River, at "Broughton's Pass." The combined waters would then be brought down, partly by tunnel and partly by open conduit, along the dividing ridge between the Nepean and George's River, into a large storage reservoir, to be constructed near "Bull's Hill." From thence the water would be brought to Sydney by conduit or pipes, as might be found most expedient. A great part of the line is through a rugged and difficult country, which has rendered the survey tedious; and we regret that it has not been possible to get this work done in time to allow of a Final Report being prepared before the expiry of our present Commission, on the 23rd instant. Besides this main work, we have caused a minute examination to be made of the Botany Swamps, in order to ascertain how the present supply could be increased, and at what expense. In both cases the field work is nearly completed; but the reduction and consideration of the results will still occupy much time.

In addition to the work now in progress, we are desirous of examining the Winge-carribee Swamps, and the ridge separating them from the highest tributaries of the Nepean, in order to ascertain if the waters of the former could be thrown into the latter, and at what expense.

We have, therefore, the honor to recommend that the Commission be again renewed, say for a period of three months.

We have, &c.,

J. SMITH,

President of the Commission.

E. O. MORIARTY.

P. F. ADAMS.

WILLIAM C. BENNETT.

THE SYDNEY WATER COMMISSION *to* THE COLONIAL SECRETARY.

20 March, 1869.

SIR,

We, the undersigned, on behalf of the Commissioners appointed to inquire into the Supply of Water to Sydney and Suburbs, have the honor to make this, our Fourth Report of Progress.

Since the date of our last Report (19 December, 1868), we have carried on with diligence the works therein specified, but have not been able to complete them so as to report finally before the expiry of our present Commission on the 23rd instant.

We, therefore, respectfully request that a further extension of the Commission may be granted for two months.

We have, &c.,

J. SMITH,

President of the Commission.

P. F. ADAMS.

FRANCIS H. GRUNDY.

WILLIAM C. BENNETT.

WATER SUPPLY OF SYDNEY AND ITS SUBURBS.

REPORT.

To His Excellency the Right Honorable SOMERSET RICHARD, Earl of Belmore, Governor and Commander-in-Chief of the Colony of New South Wales.

May it please your Excellency,—

We, the undersigned Commissioners appointed to inquire into the condition and prospects of the Water Supply of Sydney and Suburbs, have the honor to submit to your Excellency this our Final Report.

To qualify ourselves for forming a just judgment on this highly important question, we have used every available means (consistently with a due regard to economy) for obtaining accurate information regarding the present source of water supply, and the possible future sources. To this end we have examined a number of gentlemen who have given attention to the subject, and whose opinions seemed worthy of record. We have also visited the various districts that presented claims to consideration, in order that, by personal inspection, we might be better fitted for weighing their relative merits. We have further perused a mass of documentary matter, partly giving the results of former inquiries into the Water Supply of Sydney, and partly descriptive of works undertaken in other countries for the supply of large cities. In addition, we have sent out parties to make surveys and sections, and to institute examinations of certain districts with more detail and exactitude than could be accomplished during our own visits. Finally, we have held numerous meetings for collecting and deliberating on evidence, for directing operations in the field, and for the discussion of the many features of the general question as they successively arose. We now proceed to summarize the information we have collected, and the conclusions we have arrived at, under the following heads :—

1. The population to be supplied with water.
2. The condition and prospects of the present supply.
3. New sources of supply.

I.—POPULATION TO BE SUPPLIED.

No Census having been taken since 1861, any statement of the population of Sydney and Suburbs can be no more than a rough approximation. The following table (made up in round numbers) may be accepted as representing with sufficient accuracy the number and distribution of the inhabitants at the present time :—

The City	64,000
Suburbs :—	
Balmain	6,000
Glebe	5,500
Newtown	6,300
Redfern and Botany ...	11,000
Paddington	10,000
Concord	3,600
St. George	8,400
St. Leonards	5,200
	— 56,000
Total	— 120,000

It is not essential that the whole of this population should immediately share in one general supply; indeed, for many years to come, the houses in several of the outlying districts will probably continue to be so dispersed that they can be more readily supplied by means of wells, tanks, or public fountains; and when, in course of time, the population becomes denser, these districts might then be brought within the ramifications of the central supply. While, however, we do not consider it essential that the outlying districts should now be supplied from one source with Sydney, we shall be able to show, in the sequel, that an abundance of water can be procured for all.

Supposing then that the present population demanding a general supply is 120,000, it becomes of importance to consider the probable increase in future years. Here we are at once met with the impossibility of assuming a rate of increase on which any reliance can be placed. In 1826 the population of Sydney was put down at 10,000, in 1836 at 20,000, so that it had doubled in the short term of ten years. In twelve or thirteen years more it had doubled again; but in consequence of the attractive force of gold the next doubling was effected in six or seven years. After that the rate fell; and although thirteen years have elapsed since the population reached about 80,000, we have as yet made it only half as much more. For the last few years the rate has been again increasing, and at present it is over four per cent. per annum. An illustration of the difficulty of establishing correct data is found in the Report on Water Supply of 1852, where a calculation is given which would make the present population of the Colony about 1,000,000, and the population of Sydney 173,000; while the actual number is about 470,000 in the former case, and 120,000 in the latter. But to show that such calculations are not trustworthy, the same Report quotes the erroneous results of Sir William Petty, who, in 1682, estimated that by 1840 London would contain over 10,000,000 of inhabitants!

It

It is not to be expected that in a new country like this the increase of population will follow any regular law. Vicissitudes that cannot be foreseen may at any time increase or diminish the rate. At Sydney, for example, a general revival of trade, or the successful establishment of new industries, or the discovery of rich gold fields to which Sydney would be the nearest port, might bring an influx of population much beyond the present rate; while, on the other hand, similar attractions arising at neighbouring ports, coupled with a succession of bad seasons and depression of trade here, might disperse the population, and greatly reduce the rate of increase for many years to come. Instead, therefore, of attempting to lay down a rule which would enable us to say that in a given number of years there will be a given population to be supplied with water, it will be safer to assume a maximum number which any new scheme to be undertaken at present ought to be capable of supplying; and when the time comes, be it soon or late, that that maximum shall be exceeded, then the question must be taken up afresh, and the new wants met by new undertakings. And it should not be to the discredit of any scheme that may now be advanced that it is not capable of supplying a distant and unlimited posterity, if such a result could be obtained only by such an outlay as would press unduly on the present generation. Besides, there are obvious reasons why it might be more expedient to supply a great city from several sources, than entirely from a single source, even should that be practicable.

To close then this part of the subject, we consider that our duty will be sufficiently discharged if we can show how a population of (say) a quarter of a million can be liberally supplied. The quantity of water requisite for this purpose we put down at twelve million gallons per day, being at the rate of 48 gallons for each person. It may be objected that in a comparatively hot and dry climate like this, such a supply would not be sufficient for all purposes—domestic manufacturing, street-watering, &c.,—and we admit that a larger supply for the above estimated population would be desirable; but until that limit is reached the supply per head would be very liberal, and when that limit is exceeded an extension of the scheme would have to be entered on. And we have further to observe that while we put down twelve million gallons per day as the minimum to be demanded of any scheme now to be propounded, we trust to show that a considerably larger quantity will be available when needed. We consider, indeed, that any scheme involving a large outlay of money should not merely be adequate to furnish at once the above-named minimum, but should be capable of expansion to at least double that amount, to keep pace with a possible rapid increase of population.

If the rate of consumption in Sydney should go on increasing as of late, our adopted minimum would be reached in seven or eight years, but the rapid increase must be due more to the extension of the area supplied than to increase of population. From Mr. Bell's evidence it appears that only about 80,000 people shared in the supply

in

in 1867, but the network of piping has since then been extended, and a larger area brought within its influence. It is not to be expected that consumption will go on increasing so fast after the present population is fairly supplied, and after due provision shall have been made for manufactures. According to our estimate, that would require about 2,000 million gallons per annum, which the existing supply falls considerably short of; but after that amount is reached the consumption will then advance more nearly in the ratio of the population. This ratio, however, cannot be predicted.

The following table shows the amount pumped from Botany in each year since 1859. To these numbers may be added 100,000,000 gallons, as representing the supply through the tunnel in each year.

				Gallons.
1860	...	...	...	326,008,080
1861	...	...	...	384,000,000
1862	...	...	...	618,344,882
1863	...	...	...	614,510,568
1864	...	...	...	657,267,552
1865	...	...	...	875,060,504
1866	...	...	...	958,649,221
1867	...	...	...	955,436,976
1868	...	...	...	1,222,540,272
1869, to 30th June	...	...	...	667,841,424

Much difference of opinion exists as to what constitutes a sufficient water supply for a large city; but, from a comparison of a number of authorities, coupled with the experience of Sydney itself, we feel warranted in stating that anything above forty gallons per head daily would be accounted a fair proportion. London and Paris are each supplied with about thirty gallons per head daily. Newcastle, Aberdeen, and several other towns in Great Britain, have about the same proportion. The manufacturing towns of Lancashire and Yorkshire range from sixteen to twenty-one gallons—about one-third of this being for manufactures; Glasgow has about fifty gallons; Edinburgh, forty. It has been ascertained in London that less than six gallons per head is the average daily domestic consumption of the best conditioned districts where the supply is unlimited, and that in many cases three times as much runs to waste. At Preston, careful observations for many years proved that ten or eleven gallons were sufficient for domestic use, and a like result has followed some limited observations made by us in Sydney. In Rankine's "Manual of Civil Engineering," the following estimate is made for water supply of towns:—

Domestic purposes	...	...	...	...	galls.	10
Street watering, fires, &c.	...	...	...	...		3
Manufactures and waste	...	...	...	...		7
Non-manufacturing towns, per head		20
Additional in manufacturing towns...		10
Total		30

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It must be observed that what is put down as *waste* generally serves a useful purpose in flushing drains, and this is so important to public health that it may well be recognized as a distinct function of Water Supply.

Although our commission limits us to an inquiry into the supply of Sydney and Suburbs, we have not been unmindful of the great desirability of obtaining such a plentiful command of water as would permit of its free use in irrigation, not only in the immediate neighbourhood of Sydney, but also over some considerable portion of the County of Cumberland. We feel convinced that this question of irrigation ought no longer to be neglected. Our comparatively dry climate, coupled with the very unequal and uncertain distribution of rainfall, point imperatively to the necessity of making provision for storing up the superabundance of rain that occasionally falls, that it may afterwards be dispensed to the thirsty soil as required, and thus secure fertility and plenty in all seasons. No one can read of the magnificent results obtained in India by means of irrigation without being impressed with the belief that here also a mine of prosperity and wealth remains to be opened. We are told that the Jumna Canals saved, during the great famine year 1837-8, crops to the value of nearly two millions sterling, of which about one-tenth was paid to Government as rent, while the remainder supported in comfort, during a period of devastating famine, the inhabitants of nearly 500 villages. It is estimated that the Grand Ganges Canal will save from injury by droughts crops to the value of more than $7\frac{1}{2}$ millions sterling. It will protect from risk of famine a tract of eleven million acres, inhabited by $6\frac{1}{2}$ millions of people; and when all the projected works for irrigation between the Ganges and the Sutlej are completed, crops to the value of not less than ten millions will be placed beyond the contingencies of season, supporting about twelve million souls, and yielding about £3,000,000 annually to the public revenue.

It is true that the configuration of the surface is far more favourable for irrigation in India than here, and the rivers being fed by lofty snow-covered mountains are more to be depended on; but still much might be done with even our inferior capabilities; and, in working out a scheme for supplying Sydney with water, we have endeavoured to secure a sufficient abundance for the initiation at least of this great experiment.

II.—THE CONDITION AND PROSPECTS OF THE SUPPLY FROM BOTANY.

The matters engaging the attention of the Commission were so numerous that it became necessary to make a division of labour among the members. One of our number (Mr. Bennett) was accordingly detailed to make a full examination of the present Water Supply of Sydney, in order to ascertain definitely its utmost capabilities, and how far it might be extended and improved. Mr. Bennett having executed

the task assigned to him presented a report to his fellow Commissioners, together with plans and sections, all of which will be found in the Appendix; and referring to these for detailed facts and reasoning, and to the appended evidence of various witnesses conversant with the locality, we here present a summary of results.

The area which supplies Sydney at present is barely seven square miles in extent. A small portion of the drainage—(that, namely, from the upper part of Lachlan Swamp)—flows by gravitation through the tunnel to Hyde Park, whence it is distributed to the lower parts of Woolloomooloo, and to a portion of the City along Darling Harbour. The remainder of the drainage collects into a stream—called the Lachlan or Botany Stream—which is intercepted before falling into Botany Bay, and pumped to Sydney. The pumping engines supply from three to four million gallons per day, and this is supplemented by about 300,000 gallons from the tunnel.

There is evidence that the Lachlan and Botany Swamps are becoming drier and less retentive. For this several reasons may be assigned, such as the trampling of cattle, and the partial destruction of the thick scrub that once covered the ground; but chiefly the cutting of drains through the swamps to increase the supply of water in droughts. There can be little doubt that this operation has rendered portions of the swamps permanently dry. In consequence of the increasing consolidation of the surface, heavy rains run off at once to the sea, instead of being, as formerly, absorbed by the spongy ground, and keeping up a full stream for weeks after. But though the retentive character of these swamps has greatly diminished, it must be allowed that they still have such an amount of this power as may well excite surprise. The equable flow of the stream, even in continued dry weather, has often raised a doubt as to whether all the water could come from the visible drainage area, or whether it might not be derived from a distance and appear in the form of springs. The levels, however, of the surrounding country, and its geological structure, render this supposition exceedingly improbable, and we have no reason to look for more water in the Lachlan stream than the rain falling on its visible catchment area can supply. The fact seems to be that the valley of this stream has once been a deep gorge, like many existing at the present time around Port Jackson and Middle Harbour, and that it has got filled up with drift sand, proved in some places to a depth of 60 or 70 feet. Mr. Pearce says in his evidence that in 1852 he witnessed borings in the Lachlan Swamp, and, at upwards of 60 feet, they came upon logs of timber in the sand; and the inference he drew was that “an old creek had been filled up by the drifting of the sands and the washing of soil from the hills.” As the Lachlan Swamp is about 110 feet above the sea, and the stream has a gradual slope of about 5 miles to Botany, we have here an immense body of sand to get saturated with water in time of rain, and to give out this water slowly by percolation at lower levels. In our investigations we have found no similar locality with an equal power of conserving

conserving water. When we visited the extensive swamps at the head of the Cataract River, in December 1867, we found them delivering less than half the water delivered at the same time at Botany, although the drainage area was more than double the extent; and in December, 1868, the Warragamba, with its drainage area of more than 3,000 square miles, was delivering no more water than is usually supplied to Sydney from the Botany stream.

In regard to quality, this water is unexceptionable. It is soft and pure, its action on lead is not excessive, and it is not greatly liable to discolouration or contamination with floating impurity even after heavy rain. Complaints are no doubt often heard in Sydney that the water is coloured and deposits a sediment, but this can generally be traced to the state of the pipes, and will be less liable to occur as the old piping gets replaced by new having a protective varnish inside. The City Engineer has stated in his evidence that "all the piping laid during the last four or five years has been coated with Dr. Angus Smith's patent process, and keeps perfectly clean." Specimens of the water drawn at different times and places have been subjected to analysis, the details of which will be found in the Appendix. From the mean of ten trials we may state the total solid matter dissolved per gallon at $5\frac{1}{4}$ grains, of which the saline and earthy matter makes 4 grains, leaving $1\frac{1}{4}$ for organic or vegetable matter. Of the inorganic matter, common salt makes up about 3 grains, while the remaining grain consists of compounds of lime and magnesia, with a little silica, and traces of iron and phosphate of lime. The mean hardness is only three-fourths of a degree.

It is clear then that the Lachlan and Botany Swamps are still valuable as sources of supply, although their retentiveness is not so great as in former times, and the purity of the water is liable to deterioration from increasing buildings on the drainage area.

But we have yet to consider the important element of *quantity*. No accurate observations have been made for a sufficient length of time on the actual delivery of the Botany stream, and we have therefore no means of determining its capabilities in this respect except by ascertaining the total rainfall on the area, and assuming, from data furnished by other countries, and from the limited observations here, (as detailed in Mr. Bennett's report) what proportion is likely to run off by the stream, and so be capable of being utilized.

Now, in regard to rainfall, we are compelled to take it as recorded at the Sydney Observatory, a gauge having been established at Botany only last year; but during sixteen months of simultaneous observation the agreement is so close between the two places ($59\frac{1}{2}$ at the Observatory against 57 at Botany) that we cannot be far wrong in assuming that the Sydney rainfall is, on the whole, identical with the Botany; and besides, as the distance from the Observatory to Lachlan Swamp is only 3 miles, and to the pumping works at Botany (where the gauge is kept) a little over 5 miles, and the difference in levels not being great, there cannot be much difference in the rainfall over such a limited area.

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In the Appendix will be found a summary of the rainfall at Sydney for $29\frac{1}{4}$ years, furnished to us by the Government Astronomer, together with a return of daily rainfall at the Observatory for $11\frac{1}{2}$ years, and a similar return from Botany for 16 months. The average for $29\frac{1}{4}$ years is 49·591 inches, the extremes being 82·81 in 1860, and 21·49 in 1849. But, in estimating the capabilities of the swamps, it would clearly be unsafe to take this average, or indeed anything higher than the *minimum* that has been known to fall in any one year. This, in the table, is $21\frac{1}{2}$ inches. Mr. Bennett has taken as the basis of his calculations the sixteen months from November, 1848, to February, 1850, inclusive—during which only 28 inches of rain fell—as his standard dry period. But although this is the minimum found in authentic records, there is reason to believe that Sydney has gone through periods still drier. It is unfortunate that no record of the rainfall of 1839 has been discovered; for, judging by newspaper and other reports, there must have been considerably less than in 1849. In the *Sydney Gazette* of 10th March, 1825, it is stated that only about 19 inches fell in 1824, and yet it is probable that even less fell in 1839. We might be justified, then, in assuming 18 inches as about the least quantity of rain that has fallen in Sydney in any one year. Now what proportion of this could be made available? Here we are left very much to guess-work. In the appended reports of Mr. Bennett and Mr. Moriarty this question is discussed; and, from the data there collected, it is evident that we could not safely assume more than one-third of the rainfall of average years as capable of interception and use, and in dry years this would almost certainly prove an over-estimate. The proportion available must depend greatly on the manner in which the rain falls. It is quite conceivable that if 18 inches were equally distributed over a year, so that the weekly average should be constant, it would be entirely consumed by vegetation and evaporation, leaving not a drop to run off by the stream.

But supposing 6 inches of rain could be utilized, that amount over the present drainage area would be only 600 million gallons, being a supply of no more than $11\frac{1}{2}$ million gallons per week; and even if the present area were enlarged by nearly two square miles (as Mr. Bennett shows to be practicable), the supply would be under 15 million gallons per week, or only about half the present supply; so that to maintain the present rate in such a dry year as 1839, from the enlarged area, there ought to be storage reservoirs provided for about 800 million gallons, and these reservoirs ought to be full at the beginning of the year. Mr. Bennett shows, in his report, how storage can be provided for 665 million gallons at a cost of about £122,000, or, including compensation for land, £170,000; but as these reservoirs would expose 300 acres of surface, he calculates that nearly half their contents would be lost by evaporation.

If one-third the *average* rainfall over the present area could be preserved (say 16 inches), it would suffice to keep up the present rate of supply of about 30 million gallons per week, and no more. The same proportion over the extended area would raise the supply to near

40 million gallons per week, which may be taken as the utmost average capacity of the catchment area, and which could not be maintained in dry years. The extended area could, therefore, do no more than supply the present population in average years; it could not keep up the same rate in dry periods, and could not overtake the wants of a larger population.

It must now be clear that, to maintain the above-named average, it would be necessary to provide a much greater storage for the interception of storm waters than at present exists. The sand of the district acts as a storage reservoir, and goes a great way to produce an equable flow of the stream; but we have shown that this power is diminishing, and experience has proved that it is altogether insufficient. But the sand of the catchment area, which is so valuable in absorbing and keeping back storm waters, renders it extremely difficult to form artificial reservoirs of large capacity, while the overwhelming rains that occasionally fall would be a continual source of danger and expense in maintaining these reservoirs. And after all, with the most ample storage that can be suggested, it is only a question of time (a brief time probably), when the utmost capabilities of the swamps will be exhausted, and Sydney compelled to draw from other sources.

Mr. Bennett shows in detail how the Botany supply could be improved, supposing it should be determined to maintain it for some years to come. For example—the drainage area should be enlarged by the construction of a dam at Long Swamp, connecting this with the engine-pond by means of a pipe. Then a dam should be constructed at Lachlan Swamp, and a pumping-engine established there to raise the water to Paddington and Waverley. These two dams would give storage for 523 million gallons. The Paddington reservoir (extended) and the Waverley would store 13 million gallons; and Mr. Bennett recommends, in addition, a reservoir on Strawberry Hills to contain 29 million gallons. All these works might be executed for the sum already stated, viz., £170,000, including compensation for land; but in comparing this with the cost of any new scheme Mr. Bennett points out that it is necessary to add the capitalized expense of pumping, and the value of the land that would be available for sale if the Botany scheme were given up. After going fully into details he arrives at the conclusion that, “in contrasting a hypothetical supply of 6 million gallons, daily, from Botany, with an equal supply from any other source, the cost must be reckoned at £413,359, independent of any credit to be given for the 30-inch main, the engines, and engine-house”; and that “the safe supply to be depended on in the standard dry period would be but an average of $3\frac{1}{4}$ million gallons, and the cost of securing this would amount to £299,401,” made up as follows:—

First cost of works	£136,442	
Land to be resumed... ..	47,209	
Land available for sale if another supply be adopted	25,750	
Capitalized cost of pumping	90,000	
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Total	£299,401	The

The City Engineer proposes to increase the dams on the Lachlan stream to the number of thirteen, which he estimates would give storage for nearly 500 million gallons,—to construct a reservoir on the site of the old cemetery reserve capable of holding 850 million gallons,—to enlarge the present reservoirs at Crown-street and Paddington so as to make them contain 16 million gallons,—to construct an open reservoir at Waverley (5 million), a covered reservoir at Newtown (6 million), and at Hyde Park (20 million); giving a total storage of nearly 1,400 million gallons, at a cost of about £195,000.

With regard to the dams on the course of the stream, it is doubtful if they would ever be sufficiently retentive for the exigencies of a prolonged drought, and they would expose so large a surface in proportion to depth that evaporation would doubtless cause great loss. Besides, it seems impossible to secure the dams (except, perhaps, the highest on the stream) against the risk of destruction by floods, at anything like a reasonable expense. It is not enough that they withstand ordinary heavy rains,—that they might be made to do,—but they must be capable of resisting the heaviest rain-storms that have been known in Sydney. When the lower dams were carried away in February last year, 6 inches of rain fell in one day, and 9 inches in two days, but rains of much greater violence are recorded. On April 29th, 1841, the gauge at South Head showed 20·12 inches within twenty-four hours; and on October 15th, 1844, 20·41 inches in the same time, and of this, 5·4 fell in two hours. On each of these occasions, as much rain fell on the catchment of the Botany stream as would have more than sufficed to fill all the proposed dams four times over, and as would have supplied Sydney, at the present rate, for a year and a half. It is scarcely conceivable that dams similar to those at present on the stream could withstand such rains. We cannot, therefore, recommend that any more of these dams should be constructed; or even that those carried away last year should be restored. The dam proposed by Mr. Bennett at the Lachlan Swamp would be of quite a different character, and would provide for the escape of the heaviest recorded rainfall.

In connection with these extreme examples of rainfall, it may be interesting to note here a few other cases of heavy rain recorded since 1840, as these will show further what must be provided for in attempting to save storm waters.

A fall of $2\frac{1}{2}$ inches in one day is not very infrequent, and this would give, on the present catchment, about 250 million gallons, or two months' supply to Sydney at the present rate. It was shown indeed by Mr. Jevons, in his essay on the climate of Australia, that 20 per cent. of the rain at Sydney falls in quantities of more than 2 inches per day. In three days of May, 1840, 10 inches fell; in four days of February, 1843, 11·6; on August 13th of same year,

year, 5·54; on June 21st, 1846, 4 inches; on January 5th, 1848, 5 inches; on March 9th of same year, 8·7 inches. In the very dry year of 1849, as much as 2·64 fell in one day (May 30th). In nine days ending April 6th, 1855, 17 inches fell, and on one of these days (April 2nd); 5·6, with no less than 2 inches in one hour. In three days of May in same year, 6·7 inches; in two days of November, 1856, 8 inches; on May 26th, 1858, 6 inches; in four days of April, 1860, 16·8; August 2nd of same year, 5·3. In April, 1861, 24½ inches fell, of which 12½ fell in two days; in June, 1864, 16 inches, of which 6½ fell in two days. In March, 1867, 12 inches, of which 6½ fell in two days. In April of same year, 17½ inches. In February, 1868, 15·3 inches, of which, as already stated, 9 inches fell in two days, and 6 inches in one day. In the present year, 4½ inches fell on March 19th, and 8·7 in three days of May.

With regard to Mr. Bell's proposal of a large storage reservoir on the site of the old cemetery reserve, Mr. Bennett has pointed out serious engineering difficulties and other objections to its construction; and we have to add that it would be of no avail for the preservation of storm waters, which after all is the chief point to be aimed at. Also, the present engines would be incapable of filling this reservoir in addition to their daily duty of supplying Sydney, even if enough water could be intercepted at Botany for this purpose.

Mr. Bell's proposed reservoir at Hyde Park would be very useful for preserving the surplus overflow of the tunnel, but would be rather too expensive in relation to its capacity; and as the bottom would be only about 85 feet above the sea, its power of supplying Sydney at an efficient pressure would be very limited.

Instead of enlarging the Crown-street Reservoir and constructing one at Newtown, according to Mr. Bell's scheme, it might be preferable to adopt the Strawberry Hills Reservoir proposed by Mr. Bennett, which would give greater storage at a higher level than Crown-street, and at probably no greater expense. The enlargement of Paddington Reservoir, and the construction of one at Waverley, are common to both schemes.

The question of evaporation is an important one in calculations for open reservoirs, but it is in a very unsettled state. Experiments on a small scale, and under artificial conditions, throw little light on the rate of evaporation on the large scale in nature. The mean result at the Observatory for 9½ years makes the annual evaporation about equal to the average annual rainfall; the extremes running from 77 inches in 1862, with a rainfall of 24 inches, to 29 inches in 1867, with a rainfall of 60 inches. On natural surfaces of water the rate of evaporation will depend greatly on the amount of shelter; for if wind be not permitted to blow freely over the surface, the stratum of air immediately over the water will become saturated or nearly so, and hinder further evaporation. It is also thought that the rate of evaporation

ration is affected by depth, and that shallow water dries up faster than deep. It is doubtful if this be a clearly established fact, but it is likely enough to be true, in consequence of the greater heating effect which it is reasonable to suppose the sun may exert in shallow water. There can be little doubt, however, that the chief cause of rapid evaporation is the free circulation of dry air. At the Yan Yean Reservoir in Victoria the evaporation is believed not to exceed two feet per annum. In India and other tropical countries the rate generally allowed is from six to eight feet per annum. The rate assumed by Mr. Bennett for Sydney is four feet, and is probably as near an approximation as our present knowledge will justify.

To sum up this discussion of the Botany scheme,—we have come, after mature consideration, to the conclusion that it can barely be made adequate to the existing wants of Sydney, and cannot keep pace with the demands of an increasing population; that it should therefore be abandoned for another scheme which we will describe in the sequel; and that no more money should be spent in its improvement. If, however, in opposition to this view, it should be determined to adhere to the present scheme for some years to come (say ten or twelve), we are of opinion that the following works should be carried out as described and recommended by Mr. Bennett, namely,—Reservoir at Long Swamp, with pipe to Botany; Reservoir at Lachlan Swamp, with engine to pump to Paddington and Waverley; Reservoir at Waverley, and enlargement of Paddington Reservoir. The question as between a reservoir at Strawberry Hills and one at Newtown (with the enlargement of Crown-street) might be deferred, as we do not think that the Botany supply will be capable of overtaking Newtown. The question of a pipe through the tunnel might also be deferred. The total first cost of these improvements (including compensation for land) would be about £130,000.

In the event of the Botany scheme being adhered to, it might be worth trying the experiment of a dam on Cook's River, a little way above the present road, to intercept the drainage (including Woollen Creek) of about 24 square miles. If this dam were successful in forming a basin of fresh water, a supplemental supply could thus be obtained for Newtown and the suburbs in that direction. The water would not stand high in quality, as may be seen by the analysis of Cook's River at Canterbury, and of Woollen Creek; but if the sea-water were completely swept out by floods and permanently excluded, the impounded water would be fit for use, although not equal to that from Botany. It is probable also that the cost of this supplementary supply would not be beyond the means of the neighbouring suburbs; but as we do not recommend the retention of the Botany scheme we have not thought it necessary to work out the details of this subsidiary project.

III.—NEW SOURCES OF SUPPLY.

We shall here pass briefly in review the various new sources that have been suggested as possible to be had recourse to in supplying Sydney, dwelling finally with somewhat greater detail on the particular scheme that seems to us most worthy of adoption. In one of the appended maps the principal river basins to be referred to will be found clearly defined.

1.—*The Grose.*

We got much valuable information about this river from Edwin Barton, Esq., who made a survey of the valley a few years ago for railway purposes; and we followed up his evidence by an inspection of the upper part of the river, and of the place suggested by him (Q. 1,128) as a favourable site for an impounding reservoir.

The Grose drains 268 square miles of the Blue Mountain Range—a sterile, broken country that can never be to any extent inhabited. The highest source is at Darling's Causeway, about 3,500 feet above the sea; but it rapidly falls into a deep gorge, having cut through the sandstone and upper beds of the coal measures, until in 10 or 12 miles it is no more than 1,100 feet above the sea, and at its junction with the Nepean it is probably not 20 feet above high-water mark. The water is of excellent quality, being, in fact, one of the purest examined by the Commission. In the specimen collected, May 9, 1868, the dissolved solid matter was only 3·8 grains per gallon, and this contained no more than three-fourths of a grain of organic matter, with less than seven-tenths of a degree of hardness. Left in contact with lead for 24 hours, the amount of that metal dissolved was scarcely appreciable.

In some respects this river is unexceptionable as a source of supply. Its basin is of ample extent, and so difficult of access that the unsurpassed purity of its water is never likely to be polluted by the accompaniments of human industry. But there are serious drawbacks. The river falls so low occasionally in times of drought that it would be necessary to throw a dam across it at some convenient point, so as to preserve a store of water for equalizing the supply. The point recommended by Mr. Barton for such a dam is about 12 miles from the source, and a little below the junction of a large tributary coming from the south-west, at the head of which is the fall known as "Govett's Leap." At this junction the valley widens considerably, and forms an extensive alluvial flat covered with large blue-gum timber. A dam at the point indicated, of about 60 feet in greatest height, and about 700 feet long, would probably cover 400 acres with water at an average depth of 25 feet. This would contain 2,700 million gallons. We found however that the place was not well fitted for the construction of a masonry dam such as would be required, as its base would rest and its ends abut on the coal measures, made up of strata of different qualities and degrees of coherence, which might not prove to be impervious under a great pressure

pressure of water. But another very serious objection to the Grose scheme lies in the expense that would attend the conveyance of the water to Sydney. The intervening country is not suited for an open conduit, and if iron pipes were used it would be advisable to allow a fall of at least 5 feet to the mile, in order to secure a sufficient velocity; for with a less fall the pipes would require to be of greater diameter in order to deliver an equal amount of water with less velocity, and being of greater diameter they would have to be at the same time thicker in substance, so that the expense would be much increased. To obtain the necessary head of water, we should have to go back to a point about 15 miles from the mouth of the Grose, or about 50 miles from Sydney. Here the river is 425 feet above the sea, but its drainage area is reduced one-half. If instead of crossing the Nepean directly at the junction of the Grose, the pipes were made to trend a few miles to the southward, advantage might then be taken of the railway bridge for crossing, but the whole length of the line would be increased to about 55 miles. Mr. Bennett has supplied us with a rough estimate of the expense of this scheme, which will be found in the Appendix; and from that it appears that one line of piping, to convey 12 million gallons per day, would cost £895,000; and if laid in two lines, each capable of conveying 6 million gallons, the cost for each would be £652,500. To this would have to be added £150,000 for dams on the Grose and works at the Sydney end, making the cost of supplying 12 million gallons per day in one pipe, £1,045,000, and in two pipes, £1,455,000. This great expense, added to other objections, is fatal to the scheme.

2.—*Burralow and Wheeny.*

In connection with the Grose we have given some attention to Burralow Creek, which falls into it from the north about 6 miles above its junction with the Nepean. Burralow drains 16 square miles of sandstone country at the back of the Tabarag Ridge. A number of small tributaries converge into a swampy valley in which the stream for about 2 miles has very little fall. If the narrow outlet of this valley (which is about 960 feet above the sea) were closed by an embankment of 50 or 60 feet in height, it is probable that about a square mile could be covered with water, and if this had an average depth of 18 feet it would contain upwards of 3,000 million gallons, which quantity would be supplied by 15 inches of rainfall over the drainage area. The water is of admirable quality, being nearly as pure as the Grose; but the expense of conveying it to Sydney would be as great as in the case of the Grose; and this, coupled with the limited catchment, rendered it unnecessary to make a more minute examination of Burralow.

Wheeny.—Passing northwards from Burralow, we come upon the basin of Wheeny Creek, which drains 29 square miles of country before cutting its way through the Tabarag Ridge to join the Colo. Here again we have excellent water—a shade purer even than that of the Grose—and at an effective altitude, being 720 feet above the sea
at

at the Tabarag Gap ; but there is no such extensive valley for storage as in the case of Burrellow, and the difficulty and consequent expense of conveying the water to Sydney would be much the same. The country drained by these two streams is thickly wooded, and contains numerous patches of swampy ground—conditions highly favourable to the preservation of water ; and we have reason to believe that Burrellow and Wheeny, though draining comparatively small areas, never stop running even in the driest seasons.

A few miles below the Tabarag Gap, Wheeny is joined by Little Wheeny, which drains a portion of the Kurrajong, and increases the catchment basin to 46 square miles ; but the altitude is then so low (probably not more than 60 feet above the sea) that no use could be made of the combined water for our present purpose.

3.—*The Colo.*

This river requires only a passing notice. Its catchment area (exclusive of Wheeny, which falls into it near its termination) is 1,575 square miles. As the surface drained by it is mostly sandstone the water is of great purity, being very similar to the Grose, but here again the want of altitude compels us to set it aside. At the junction of Wheeny it is very little if anything above high-water mark, and at the crossing of the Comleroy Road it is only a few feet higher. Like all the rivers in the sandstone formation it runs at the bottom of a deep gorge, and we should have to go back a long way into an impracticable country before reaching such an elevation as would render it possible to supply Sydney by gravitation.

4.—*Couridjah Lagoons.*

These lagoons lie near to the southern line of railway, a few miles south of Picton, and at an altitude of 1,000 feet above the sea. The water is remarkably free from mineral matter, there being barely 2 grains per gallon, with no appreciable hardness, but the organic matter is 1·8 per gallon, and communicates a perceptible taste. The drainage area is of very limited extent, not more probably than 2 or 3 square miles, and when the Commissioners visited the lagoons in March, 1868, the actual water surface was about 140 acres. The usual outlet is towards the west, and is said to discharge into the Nattai ; but when the level rises in rainy weather the water is said to discharge also towards the north into Cedar Creek, and thence by Stonequarry Creek to the Nepean. The catchment area is too small for this locality to be thought of as a source of supply for Sydney ; but it might be turned to good account as a compensatory reservoir for the Nepean. If the water surface were raised 30 feet by embankments at each outlet the storage capacity would be upwards of 1,000 million gallons, and this might be of utility in maintaining the flow of the Nepean in times of drought. The water could also be used for irrigation in the neighbourhood of Picton.

5.—*George's River.*

It has been proposed by the Hon. Thomas Holt, M.L.C., to throw a dam across the estuary of this river, near its confluence with Botany Bay; and it is argued that if this were done the salt water would soon be swept out by floods, and the estuary as far up as Liverpool could thus be converted into a lake of fresh water. The entire area drained by the river is 375 square miles—an amount of surface capable of affording more than 15 million gallons per day if only one inch of rain per annum were impounded from the whole area. The supply would be abundant in quantity, but doubtful as to quality. For in the first place, it might take a very long time before the salt were entirely washed away; and secondly, supposing this were accomplished, it would probably still be found that the water stored up would be of indifferent purity. The tributaries that come from the seaward side of the river drain a purely sandstone country, and no doubt furnish excellent water; but those from the landward side drain a country covered in great part by the deposits of clays and shales termed by the Rev. W. B. Clarke the Wianamatta beds, and these we find to have the effect of contaminating water with common salt, and with compounds of lime, magnesia, and iron. The water of the Woronora (the largest seaward branch) is pure and soft, containing only 6.1 grains of solid matter per gallon, and with a hardness of only 1.3. The water from George's River below the junction of Toggerai is also pure, there being the same proportion of solid matter, with slightly less hardness; but a specimen taken about 3 miles above Liverpool showed the influence of Bunbury Curran Creek, which drains the Wianamatta deposits of the Campbelltown valley. This specimen contained 26.2 grains of solid matter per gallon, with a large proportion of organic matter and 8° of hardness. A sample drawn from the dam at Liverpool gave 15 grains of solid matter, of which about $2\frac{1}{2}$ was organic.

The effect of the Wianamatta beds on the quality of water collected upon them is well seen in the case of South Creek, which drains a district entirely covered by these beds. The water of South Creek contained 38.7 grains of dissolved solid matter; of which about 25 grains was common salt, and the hardness 9°. "Now that you are looking for water," says the Rev. W. B. Clarke (Q. 1089), "I should like you to avoid shales."

Besides the objection drawn from the fact that the landward tributaries of George's River come from Wianamatta deposits, it must also be noticed that these same tributaries, and partly the river itself, drain a country which is to a large extent settled and cultivated; and such drainage ought always to be avoided as a source of water supply.

Another objection that we have to the George's River scheme is that the water would have to be pumped to Sydney as at present, and we think that every effort should be made to procure a supply by gravitation.

gravitation. In this we follow the example set us by numerous towns in Europe and America, where of late years pumping schemes have been abandoned, and much expense incurred in order to obtain a continuous influx of water by its own gravity.

But the weakest feature in this scheme is the dam across the estuary. If this were made thoroughly sound and efficient by masonry its cost would be too great, and if of loose material, as proposed by Mr. Holt, we doubt if it could be made to answer the purpose intended; at all events we cannot recommend such a work.

A fuller discussion of this scheme will be found in papers given in the Appendix, consisting of letters and evidence by Mr. Holt, evidence by Mr. A. K. Smith, and observations by Mr. Moriarty, together with illustrative plans and sections.

6.—*Tributaries of George's River.*

If George's River as a whole must be set aside, it remains a question whether the pure water of the seaward tributaries might not be made use of. At first we were favourably impressed by the claims of the Woronora, and we therefore made a careful examination of it. This river rises in swampy flats of no great extent behind the Illawarra range, at a height of about 1,200 feet above the sea; but like all other rivers flowing over sandstone, it speedily cuts its way down and runs in the bottom of a deep rocky gorge, several hundred feet below the level of the neighbouring country. At the time of our visit (in a moderately dry period) the river was delivering not more than half a million gallons per day, so that the district cannot be very retentive of water. The drainage area of the Woronora is 48 square miles, which might be sufficient if a storage reservoir could be formed of great capacity, but we found no good site for such a reservoir, and this, coupled with the fact that to get a sufficient height for gravitation we should have to go a long way back, and thus diminish the catchment, made us set this river aside.

We examined also the higher part of George's River. The chief source rises in Madden's Plains, behind the Bulli Mountain, a portion of an extensive tract of swampy country, over 1,200 feet above the sea. It soon drops like the Woronora into deep gorges, and below the junction of Toggerai (about two miles from Campbelltown), it is only 200 feet above the sea. Although the drainage of 69 square miles passes this point we found the delivery to be under 2,000,000 gallons per day, the period however being rather dry. The water is of excellent quality, but the altitude is not sufficient, and the locality is not well adapted for a storage reservoir of adequate capacity. Further, the water would have to be brought all the way to Sydney in pipes, a distance of about 35 miles, and the expense of piping to carry 12,000,000 gallons per day would be considerably over half a million sterling.

7.—*The Warragamba.*

This river is formed by the junction of the Cox and Wollondilly in Burraborang, and after a short course of 12 or 15 miles, through a deep and narrow gorge of sandstone, it joins the Nepean about 12 miles above Penrith. It drains an immense tract of country, estimated at no less than 3,247 square miles. A considerable portion of this area is populated and under cultivation. The geological formation of the upper part of the Wollondilly comprises trap, granite, and schistose rocks, with occasional patches of limestone. The upper part of the Cox lies partly in the coal measures. Both rivers (as well as the Warragamba) run for a large portion of their course through sandstone. In regard to quality of water the Cox was found to be remarkably pure, the dissolved solid matter being no more than 3·7 grains per gallon, with 1°·4 of hardness. The Wollondilly near Goulburn was found to contain 12·4 grains of dissolved matter, with 8° of hardness, the hardening matter in this case being mostly carbonates of lime and magnesia. In the appended table of water analyses will be found particulars of three affluents of the Wollondilly, namely,—Mulwarree, Paddy's River, and Wingecarribee. These waters are of fair quality, but the Mulwarree and Wingecarribee contain rather too much iron and organic matter. The samples, however, were not in very good condition, being apparently affected by recent freshes; and the same remark applies to the sample of the Wollondilly near Goulburn. The combined effect of all the tributaries is seen in the composition of the Warragamba, which gave 6·8 grains of solid matter, containing a little over 1 grain of common salt, and 1½ of organic matter, with 4° of hardness. Although the hardness is greater than in many of the rivers examined it is still very moderate, and the water would rank as sufficiently pure and soft for a town supply. With regard to action on lead, the Warragamba water is satisfactory, as it dissolves less than Botany water under similar conditions.

A project for supplying Sydney with water from the Warragamba was laid before the Government by Thomas Woore, Esq., in 1866, and before the Water Commission as soon as it was constituted. His scheme consists in damming the river near its junction with the Nepean, and thus raising the water high enough to supply Sydney by gravitation, after being conveyed thither in an open canal. In the Appendix will be found various papers by Mr. Woore on this scheme, together with remarks thereon by the other Commissioners. The main objections to this scheme lie in the nature of the dam that would have to be constructed. To supply merely the low service reservoir at Crown-street, the dam could scarcely be less than 200 feet high, and might have to be more, unless a sufficiently capacious weir were provided

provided for the free escape of flood waters. Mr. Grundy calculates that the dam would require to be 235 feet in height, made up as follows :—

	Feet.
Height of Crown-street Reservoir	136
Loss of level by gradient	80
Outlet below surface	20
Increase for floods	40
	276
Less height of river-bed above sea-level ...	41
	235

His estimate of the cost of such a dam, constructed on the plan described by Mr. Woore, is £1,301,000, which, with contingencies, would be raised to nearly two millions. If an efficient weir could be formed the dam might be reduced a little in height, but the weir would be a very expensive work. It may be objected that in this estimate there is an unnecessary height of dam above the outlet; but it must be kept in view that owing to the great pressure of water there would certainly be considerable leakage, and also that in seasons of drought the Warragamba delivers very little water. In December, 1868 (a moderately dry period), we had the river gauged, and it was found to be delivering no more than $3\frac{1}{2}$ million gallons per day. To provide against leakage and droughts it is clear that a large storage capacity ought to be provided.

The highest successful dam of which we find any record is one recently constructed on the Furens, an affluent of the Loire in France. It is about 165 feet in height. It is built of a compact stone (mica-slate)—rubble masonry without regular bedding; and the stream was turned aside while the work was in progress. The water is found to ooze through the dam in consequence of the great pressure. The whole drainage area above the dam is less than 10 square miles, and the average annual rainfall less than 40 inches.

In the case of the Warragamba, the height of the dam would require to be greater than on the Furens; the stone is less compact, the river cannot be turned aside while the work progresses, and destructive floods are liable to pour down at any time with little warning. Should the dam be carried away by one of these floods (and it may be safely presumed that it could not be made absolutely secure without such an outlay as the Colony could not face), an immense body of water, 200 feet high, and dammed back more than 20 miles, would be suddenly let loose to carry destruction down the valley of the Hawkesbury.

One of the highest dams ever attempted was on the Guadarrama, in Spain. It was to have been 305 feet in height, but on reaching 188 feet the works began to give way, and were stopped. A dam on the Lorca, in Spain, was built 164 feet high; it stood for 17 years, and then gave way, causing great devastation.

Mr.

Mr. Bennett has supplied us with drawings and calculations of a masonry dam of similar proportions to those recently constructed in France, and of the height suggested by Mr. Woore (170 feet), stating at the same time that he could not advise the building of such a dam. Its cost, with valves and tunnels, he estimates at £428,000 ; approximate cost of waste channel and weir, £150,000 ; suspension aqueduct for crossing the Nepean, £50,000 ; making in all, with contingencies, £650,000.

Supposing that a dam were successfully constructed, and the water raised to a sufficient height, it would then be found that the expense of conveying it to Sydney would be very great. The line, if carried direct, would cut at right angles South Creek, Rope's Creek, and other tributaries of the Hawkesbury—a course very unfavourable for an open aqueduct—while if carried round southwards, so as to head these streams, its length would be greatly increased, thereby necessitating an increase of height in the dam. The expense of iron piping to convey the requisite amount of water from the Warragamba to Sydney would be considerably over half a million sterling.

8.—*The Nepean.*

The Warragamba being given up as a gravitation scheme, we have now to consider whether it would be advisable to raise water from it to a sufficient height to supply Sydney by pumping. If a pumping scheme were to be established, it would be expedient to erect the engines as near to the Railway at Penrith as possible, in order that coal might be supplied economically. We should here have the combined waters of the Nepean and Warragamba to draw from, and the long reach of deep water from the Warragamba to Penrith would afford sufficient storage in droughts without damming the river. The water is of fair quality, the sample examined giving 10 grains of solid matter per gallon, in which common salt amounted to about 4 grains, and the hardness 3·4. Its action on lead was about the same as that of the Warragamba. The sample was dirty-looking, and almost opaque from diffused clay ; and, as the river seems to keep clay in suspension for some time after freshes, the water might require to be filtered.

Mr. Moriarty has supplied calculations of the cost of such a pumping scheme (given in Appendix), by which it will be seen that to pour eight million gallons per day into the Crown-street Reservoir, and four millions into the Paddington, would involve a total cost for plant of £920,364, and an annual expenditure of £26,328. Instead, however, of deriving the whole supply from the Nepean, Mr. Moriarty shows the cost of an alternative scheme in which the Crown-street Reservoir might be supplied with six million gallons daily from that river, while the Paddington high service might be kept up by the engines at Botany. The first cost of plant for this modification would be £452,080, and the annual working expenses £14,764. As the whole water from Botany would be pumped to a higher level than at present, the annual expenses there would be increased, and are put down by Mr.

Moriarty

Moriarty at £7,039, making the total annual expense of pumping £21,803. This sum represents a capital of about £440,000, which added to the first cost gives about £900,000 as the total cost of supplying Sydney with about 10 million gallons per day,—6 million from Nepean, and 4 from Botany. But to keep up an average of 4 millions from Botany would require additional works for storage, as explained in the previous section. Our conclusion therefore is, that neither by gravitation nor by pumping can Sydney be economically supplied from the Warragamba or the Lower Nepean.

9.—*The Upper Nepean.*

We have now, in the last place, to give the outlines of a scheme which seems to us on the whole to be superior to all others examined, and which therefore we have agreed to recommend,—the scheme, namely, of supplying Sydney by gravitation from the higher affluents of the Nepean. This scheme obviously possesses the leading qualities that are at the present day so eagerly sought for in all great projects for water supply throughout the civilized world. The catchment area selected is ample, being 354 square miles in extent, or fifty times greater than the surface relied upon at present. It is entirely a sandstone country, of a barren intractable nature, and if not turned to account as a gathering ground for water, it is never likely to be of much use for anything else. It is true that a few adventurous “free-selectors” have made their way to the swampy grounds at the sources of the Cordeaux and Cataract Rivers, but they can find little reward for their labour in these localities, and would probably be glad to be bought out. But even if they remain, their operations could make no sensible difference on the purity of the waters. The unoccupied land, however, should be immediately reserved.

The drainage of this selected area has the purity of all sandstone waters, and in that respect leaves nothing to be desired. In the appended table of analyses will be found the particulars of seven samples taken at different times from the three rivers that drain the district; and from these it will be seen that the mean amount of dissolved solid matter is only five grains per gallon. The volatile matter shows a mean of 1.4, but in these waters there is a small proportion of earthy chlorides, and the loss on ignition will therefore be slightly greater than the organic matter. It will probably be very near the truth if we state the mean amount of fixed salts to be $3\frac{3}{4}$ grains, leaving $1\frac{1}{4}$ for organic matter. The mean hardness is 0.84. Common salt makes up about $2\frac{1}{2}$ grains of the fixed salts. The composition of these waters is therefore much the same as that of Botany water, there being a shade more hardness in the former, but slightly less common salt; and the action on lead is also less.

The rivers that drain the selected district take their rise mostly in swampy flats between 1,200 and 1,600 feet above the sea, but they drop their altitude rapidly, and at the confluence of the Cordeaux with the Nepean, at the point known as “Pheasant’s Nest,” where we

propose to make the first interception of the waters, the height is 430 feet. At the confluence of the Cataract with the Nepean the height is not more than 220 feet above the sea, but a little higher up the Cataract (at Broughton's Pass) we gain an altitude of 420 feet. In Mr. Moriarty's report, hereto appended, the character of the district and its advantages as a gathering ground are so fully described that it is unnecessary to dwell more upon them in this place; suffice it to say that in regard to extent of surface, purity of water, freedom from sources of contamination, want of value in the land for other purposes, and altitude above the sea, we have all that can be desired—the one drawback being distance from Sydney (63 miles measured along the proposed conduit), which, though not important in an engineering point of view, will necessarily be a source of great expense; but we cannot find equally advantageous ground at any nearer distance.

When we visited the higher portions of the district in December, 1867, and the lower portions in February, 1868, we obtained numerous barometric altitudes, which, coupled with those previously obtained from the Rev. W. B. Clarke, and with Mr. Shone's railway sections, satisfied us that water could be obtained at a sufficient height for gravitating to Sydney, and that the best points to intercept the water were at Pheasant's Nest and Broughton's Pass. Within a very few miles of these points the rivers drop 200 feet, and are then too low for our purpose. It is this that prevents the Bargo being included in our selected area.

The possibility of drawing off the head waters of the Nepean at a sufficient level, and bringing them out by tunnels on the ridge near Appin, being demonstrated, it was speedily apparent that the key to the scheme lay in the nature of the country between Appin and Prospect,—whether it would permit of the water being brought down at a proper slope without piping or heavy engineering works, and whether a reservoir could be formed of large capacity for storage; for it was evident from the general nature of rivers in this country (proved afterwards by direct gauging), that however plentiful the total drainage of the district might be, the discharge would frequently, in dry periods, fall below the measure of our requirements. At first we considered the propriety of forming dams on the rivers themselves, and we examined a portion of their channels with that view; but although we found several points tolerably well fitted for dams of considerable capacity, we ultimately decided not to recommend the construction of any of these for the present. The heavy floods to which all our rivers are subject would render such dams unduly expensive; and we considered that it would be more economical as well as in other respects preferable to construct one large reservoir apart from the rivers, and subject to no floods, instead of several dams of smaller capacity in the river beds.

To determine therefore the practicability of the scheme, we detailed Mr. Grundy (by a resolution of 25th March, 1868) to superintend a survey of the ridge dividing the waters of the Nepean from those of
George's

George's River, from Sugarloaf Hill to Prospect, and thence to the head of Duck Creek. This survey was commenced early in April, and from time to time Mr. Grundy brought up reports of its progress. By a resolution of the Commission on 11th July, Mr. Moriarty and Mr. Grundy were requested "to undertake the responsibility of working out the details of the scheme for bringing water from the Cataract and Cordeaux Rivers," at the same time that Mr. Bennett was requested to undertake a similar responsibility in regard to the improvement of the Botany scheme. Thereupon Mr. Moriarty sent out surveying parties to the upper end of the line, from Pheasant's Nest to Sugarloaf, and to the lower end from Prospect to Sydney. At the next meeting of the Commission (July 21st), after hearing a favourable progress report from Mr. Grundy, it was resolved that Mr. Moriarty, Mr. Bennett, and Mr. Grundy should be deputed to examine the proposed line of aqueduct from the Cordeaux and Cataract Rivers to Sydney.

The broken and intricate nature of the dividing range from Sugarloaf to Prospect, the close bush which in many places greatly impeded observation, and the work involved in the discovery of suitable reservoirs, made the progress of the survey more difficult and tedious than was at first anticipated; and it was not till August 22nd that Mr. Grundy was able to report that, having completed a practicable line to Prospect, he had found good sites for reservoirs in that neighbourhood. Of these reservoirs (described in Mr. Grundy's general report hereto appended) the Commission adopted the one near Bull's Hill, as presenting on the whole the greatest advantages.

On October 15 (see Abstract of Proceedings) Mr. Moriarty and Mr. Bennett brought up their report on the line of aqueduct proposed by Mr. Grundy, from Sugarloaf to Bull's Hill, speaking very favourably of it, approving of certain proposed deviations, and suggesting others, which were afterwards carried out. They also reported that they had made provision for gauging the rivers at Pheasant's Nest and Broughton's Pass.

On February 19th of the present year, Mr. Moriarty reported to the Commission that on examining the section from Prospect to Sydney, it appeared to him that the larger or more northerly reservoir ought to be adopted, and accordingly he proceeded to design the works between Prospect and Sydney, adapting them to that view of the case. The total capacity of the larger reservoir he estimated at 10,635 million gallons, but as he proposed to draw off only the upper 25 feet of water its available capacity would be reduced to 7,110 million gallons.

After the gauging of the rivers had been continued for about five months Mr. Grundy made an examination of the results, with the view of ascertaining if sufficient water would pass down the proposed aqueduct to give the required supply, and if the storage capacity of the proposed reservoir would be adequate to the demands upon it in dry seasons. Taking the ratio between rainfall at Sydney and flow of rivers as established during the period of gauging to hold good at other
other

other periods, rejecting all rainfall under $1\frac{1}{2}$ -inch, and drawing nothing from the rivers while their delivery was under 10 million gallons per day, he yet found that the means provided would have been ample for the ends proposed throughout the last twenty-eight years, and that the store of 7,000 million gallons would never have been reduced below 5,000 million in the driest recorded period. These calculations (which are given in the Appendix) seemed to put the sufficiency of the supply beyond doubt. Mr. Moriarty, at a later period, examined this question afresh after the gauges had been recorded for a year, and his results are fully detailed in his report and appended tables. He shows that over one-third of the total rainfall (assuming that to be the same as at Sydney) passed down the rivers in the course of the year, and that about one-sixth of the discharge, or one-sixteenth of the rainfall, could have been received into the reservoir,—the numbers being,—rain at Sydney, 44.32 inches; water due to rainfall on catchment of 354 square miles, 227,280 million gallons; measured discharge of rivers, 87,688 million; received into reservoir, 14,438 million. The reservoir could thus have been filled twice over in the course of the year, equivalent to a supply to Sydney of 40 million gallons per day. The tables show a remarkable difference between the proportion of rain to discharge in summer and winter. If we take the six hot and dry months from October to March (inclusive), we find the Sydney rainfall to be 18.22 inches, equivalent to 93,435 million gallons on 354 square miles: but the measured discharge was only 5,490 millions, or 1-17th; and the quantity that could have been taken into the reservoir 3,679, or barely 1-25th of the rainfall.* But even this small proportion is equivalent to a supply of 20 million gallons a day. Pass to the remaining $5\frac{1}{2}$ months of the gauging period and the tables show a very different result. The rainfall is $24\frac{1}{4}$ inches, equivalent to 124,307 million gallons on the catchment; the estimated discharge of the rivers 80,826, being nearly two-thirds of the rainfall; and the quantity that could have been stored 10,387, or 1-12th of the rainfall, equivalent to a supply of 60 million gallons a day for the period in question, and enough to give 28 million gallons a day throughout the whole year, even if nothing whatever had been drawn from the rivers during the rest of the year. But these calculations assume that all the water is intercepted up to 80 million gallons per day, so that for several months none would be allowed to pass down the rivers. This, no doubt, would be strongly objected to by residents lower down; for although the Bargo and other tributaries are left to feed the Nepean, it is understood that in dry seasons the affluents we propose to intercept are those most to be depended on. We would therefore recommend that the intercepting weirs be so constructed as to allow any quantity up to 10 million gallons to pass down, and that none be drawn away by the tunnels until the discharge exceeds this quantity. Of course all above 80 million gallons (the extreme capacity of the tunnels) must pass down.

Applying

* Mr. Moriarty's results will be found to differ from these, by reason of his taking the five and a half months ending with February to represent the dry season, instead of six months ending with March, as above.

Applying this correction to the tables—that is to say, assuming that we only intercept quantities above 10 and under 80 million gallons—we still find that the quantity impounded would have been far beyond our requirements. And to test the capabilities of the scheme to the utmost, let us suppose further that we withdraw daily not 12 million gallons which we have adopted as the minimum, but 30 million. Starting with a full reservoir of 7,000 million gallons on 1st October, 1868, we should find its condition, monthly, to be as follows:—

				Mil. galls.
	Full reservoir on 1st October	...	...	7,000
In October	{	Added ...	... +	289
		Withdrawn ...	... -	930
		—	—	641
	Reservoir on 1st November	...	...	6,359
In November	{	...	+ 875	
		...	- 900	
		—	—	25
	Reservoir on 1st December	...	...	6,334
In December	{	...	+ 0	
		...	- 930	
		—	—	930
	Reservoir on 1st January	...	...	5,404
In January	{	...	+ 0	
		...	- 930	
		—	—	930
	Reservoir on 1st February	...	...	4,474
In February	{	...	+ 1,287	
		...	- 840	
		—	+	447
	Reservoir on 1st March	...	...	4,921
In March	{	...	+ 45	
		...	- 930	
		—	—	885
	Reservoir on 1st April	...	...	4,036
In April	{	...	+ 1,868	
		...	- 900	
		—	+	968
	Reservoir on 1st May	...	...	5,004
In May	{	...	+ 2,197	
		...	- 930	
		—	+	1,267
	Reservoir on 1st June	...	...	6,271
In June	{	...	+ 2,046	
		...	- 900	
		—	+	1,146
	Reservoir full 1st July	...	...	7,000 + 417*
In July	{	...	+ 1,804	
		...	- 930	
		—	+	874
	Reservoir full 1st August	...	...	7,000 + 874*
In August	{	...	+ 1,055	
		...	- 930	
		—	+	125
	Reservoir full 1st September	...	...	7,000 + 125*
To 16th September	{	...	+ 515	
		...	- 480	
		—	+	35
	Reservoir full 16th September	...	...	7,000 + 35*
	Total overflow at waste weir...			1,451*
	* Overflow at reservoir.			Supposing

Supposing not a drop more water entered the reservoir for seven months it would go on supplying 30 million gallons daily for that time, with an allowance over and above of 1,000 million for evaporation—certainly a superabundant allowance. In ordinary seasons the rain falling on the reservoir basin would probably balance the evaporation, but in very dry seasons there would no doubt be loss through this cause.

By taking only quantities above 10 and under 80 million gallons, we find that in the above-noted period of $11\frac{1}{2}$ months we could have impounded in the reservoir a total of 12,000 million gallons, or 1-18th of the rainfall; but in the first six months (the dry period) we should have had only 2,496, or 1-37th of the rainfall. In a former part of this report we have stated it as probable that in 1839 not more than 18 inches fell. If 1-18th of that quantity were impounded, it would be equivalent to a supply of 14 million gallons per day; and even if we take the low summer proportion of 1-37th (which would probably be nearer the truth in a time of great drought), we should still have over 6 million gallons per day in aid of the store in the reservoir. But indeed the reservoir would supply 12 million gallons a day for a year and a half, without any addition whatever, and with a good margin for loss by evaporation. In fine, we have given this question of quantity the most anxious consideration; and although there are elements of uncertainty in the calculations which cannot at this stage be eliminated, we see no room to entertain any doubt whatever that the scheme we recommend will provide a most ample and unfailing supply of water.

For a description of the line of aqueduct and proposed works we refer to the reports of Mr. Moriarty and Mr. Grundy, and to the accompanying book of plans prepared under their superintendence. It will be seen that the combined waters of the Cordeaux and Nepean, at Pheasant's Nest, are to be obstructed by a weir 10 feet high, and diverted into the Cataract River by a tunnel $4\frac{1}{2}$ miles long. A similar weir on the Cataract will raise the water 10 feet, and turn it into another tunnel about $1\frac{3}{4}$ mile in length. The water now emerges near Appin on the west side of the range dividing the Nepean from George's River, and is carried along this ridge by a succession of canals, tunnels, and raised aqueducts. At Sugarloaf Hill it crosses to the east side of the range, and from some point near this Campbelltown could readily be supplied with water at no great expense. The conduit passes under the Main South Road and over the railway, and about a mile further on it crosses again to the west side of the range, along which it continues to Cecil Park, when it once more passes to the east side by a long tunnel. Before reaching this point it has dropped a good deal of its altitude through the falling away of the range near Mount Cordeaux. It will be seen by the section that between the 25th and 28th mile from the beginning of the conduit it is lowered about 70 feet by a series of weirs. About the 38th mile we come to the site of the first reservoir recommended by Mr. Grundy. It is near Bull's Hill, on one of the heads of Prospect Creek. An embankment, 96 feet in greatest height, and containing $2\frac{1}{4}$ million cubic yards of earthwork, would

would here form a reservoir with a water surface of 535 acres, 260 feet above the sea.' Mr. Grundy proposes to make the outlet 200 feet above the sea, and thus obtain available storage for 4,636 million gallons, but he calculates that in such seasons as have been experienced within the last 28 years the water surface would never have been lowered below 245 feet. He would bring the water to Sydney in two pipes, each 36 inches in diameter, one to supply the Crown-street low service, and the other the Paddington high service; and he thinks it would be possible to form a smaller reservoir, partly within the large one, which would give a maximum head of 280 feet, and enable him to supply, under favourable circumstances, the highest parts of Paddington and Woollahra.

Two miles further on we come to the site of the reservoir at Prospect adopted by Mr. Moriarty. At this place (on another head of Prospect Creek) an embankment, 80 feet in greatest height, a mile and a quarter long, and containing two million cubic yards of earthwork, would form a lake covering two square miles, at a maximum level of 195 feet above the sea. Mr. Moriarty proposes to draw off the water at 170 feet, which would make the available storage about 7,000 million gallons. This large storage is not considered absolutely necessary, but it is desirable to bring the water as near to Sydney as possible in an open channel, and the country is not favourable to the construction of a canal at a higher level. Leaving the reservoir then at a height of 170 feet, Mr. Moriarty proposes to bring the water in a canal for $4\frac{1}{2}$ miles, then as the country begins to drop to substitute for one mile and a quarter an iron aqueduct raised on iron piers, and to cross the deep depression of Duck Creek by two syphon-pipes each 2 miles and 55 chains in length. Where the aqueduct changes to the syphon, near the crossing of the road from Parramatta to Liverpool, there would be a small balance reservoir, from which Parramatta (distant 3 or 4 miles) might be very efficiently supplied by gravitation—the reservoir being 170 feet above the sea. This service could be effected for about £4,000. Another mile of canal brings the water to a point within 10 miles of the Crown-street reservoir, and from thence it must be carried entirely in pipes. The pipes would first discharge into a distributing reservoir placed on the high ground above Petersham, whence the neighbouring suburbs would be supplied from a head of water varying from 150 to 164 feet. The present Crown-street Reservoir would be filled from the Petersham, or a new reservoir might be constructed at a higher level on Strawberry Hills, as proposed by Mr. Bennett. This could also be filled from Petersham, and would have the advantage of bringing more of Sydney within the reach of the gravitation supply.

Mr. Moriarty indicates a method of supplying the higher parts of Sydney by means of a small reservoir on the top of Prospect Hill, filled partly from the conduit before reaching the large reservoir, and partly by pumps worked by a turbine in the outlet tower of the reservoir; but as it would be much cheaper to supply the higher levels by pumping from Crown-street, he recommends that this latter plan be adopted. One, or if necessary two, of the engines might be removed from Botany for this purpose.

Having

Having brought the water down to the neighbourhood of Prospect, we have thus two methods of dealing with it to consider, and the choice between them has been attended with much difficulty. First, we have Mr. Grundy's high-level scheme, by which the water would be impounded at a maximum height of 260 feet in his large reservoir, with a possible additional height of twenty feet by means of a small reservoir higher up—the water to be brought all the way to Sydney (twenty-one miles) in pipes. The Paddington Reservoir could thus be filled by gravitation, with the possibility of attaining a still greater height (though at greater expense) if the 280 feet reservoir were found practicable. Then we have Mr. Moriarty's low-level scheme, where a larger body of water is impounded at a maximum height of 195 feet, and brought to Sydney by eight miles of open conduit and thirteen miles of pipes, distributing from Petersham with a minimum head of 150 feet. Crown-street Reservoir, or one at Strawberry Hills, could be filled by gravitation, while the higher levels would be supplied by pumping from Crown-street. To supply the highest parts of Paddington and Woollahra would require a reservoir about 270 feet above the sea; and the highest parts of Waverley could not be supplied with less than 350 feet of head; but it is doubtful if the population to be served at that height would warrant the expense. The estimates of both schemes have been carefully made up by Mr. Moriarty and Mr. Grundy, and afterwards revised by these gentlemen in conjunction with Mr. Bennett, and the expense of each comes out as follows:—

High-level Scheme.

Works from Pheasant's Nest to Bull's Hill,	
37½ miles	241,890
Bull's Hill Reservoir	224,708
Two lines of 36-in. pipe to Sydney	550,248*
Distributing Reservoirs	10,000
Supervision and Contingencies... ..	20,000
	£1,046,846

Low-level Scheme.

Pheasant's Nest to Bull's Hill	241,890
To Prospect, including Reservoir	192,286
Prospect to Sydney, 21 miles	280,853
Provision for High Service	10,000
Supervision and Contingencies... ..	20,000
	745,029
Capitalized cost of pumping from Crown-street	45,000
	£790,029

After

*In the estimates for piping, the cost is taken at £12 a ton laid, while Mr. Grundy and Mr. Bennett think that £11 should be sufficient, and that is the rate adopted by Mr. Grundy in his report. It is considered safer to adopt here the higher price.

After prolonged deliberation we have agreed to recommend the low service scheme for adoption, and it is therefore unnecessary to recapitulate the arguments advanced by Mr. Grundy in favour of the high service, but they were such as to require our anxious consideration, and we have given up the gravitation high service with great reluctance. Among the reasons that have led to our decision are the following:—1. Either scheme is very costly, but the low service is the less costly of the two by about £250,000. 2. The latter can supply the highest levels that may be thought desirable, while we have no assurance that the former can supply with certainty anything higher than the Paddington Reservoir. 3. The Prospect Reservoir has much greater capacity than the Bull's Hill, with less height and cubic contents of bank. 4. Iron piping buried in the ground is not free from doubt on the score of durability, and therefore has not that character of permanency that great works of this kind ought to possess. It is known that cast-iron laid in ground containing common salt corrodes with some rapidity. Mr. Russel Aitken, in his Report on the Bombay Waterworks last year, says—"In a country which has a soil impregnated to such an extent with salt as is the case here, cast-iron is not by any means indestructible. I have seen cast-iron pipes laid down in Bombay which have been corroded away (from the outside) in about five or six years"; and he proposes a steel main supported on masonry pillars, which, he believes, would not only be cheaper but "would outlive a main of cast-iron buried in the ground in the usual manner." Now we know that much of the shale and clay in which the pipes from Bull's Hill would have to be laid is impregnated with salt, and we therefore count it very desirable to use as little iron piping as possible. We could not recommend a steel main in air unless it had first stood the test of experience on a sufficient scale somewhere else. 5. By the low-level scheme a much larger body of water than is at present needed would be brought within ten miles of Sydney; so that the future extension of the supply could be effected at much less cost than if a fresh line of pipes had to be laid all the way from the reservoir. 6. Not only can a larger body of water be brought down at much less expense by a canal than by pipes, but we consider that the continued exposure of the water in an open channel is highly desirable. We expect that for some years after the formation of the reservoir, the water will be somewhat unpleasant to the eye by reason of fine clay derived from the reservoir on first being filled. This can scarcely be remedied by filtration, the particles being so fine, but the evil tends to a natural cure, as has been experienced at the Yan Yean and other places. We believe, however, that if instead of draining off the water in pipes we allow it to flow gently along a canal with turfed sides we shall bring into play much of the self-purifying power so notably possessed by natural running streams; and after settling to some extent in the three reservoirs on the line, the water will be delivered in Sydney unexceptionable to the eye as well as to taste and smell. 7. The adoption of the low-level scheme at present will not preclude the future addition of the high-level

also, if that should come to be thought preferable to pumping from Crown-street. A comparatively small reservoir might be constructed somewhere on the line to give a head of 280 feet, as suggested by Mr. Grundy, and a pipe brought direct from thence to Sydney. It would be an expensive work, but the future development of Sydney might render it desirable and pecuniarily attainable.

We have now discharged the duty laid upon us by the Commission under which we have acted. We have made "diligent and full inquiry into the present provision for a supply of pure water to the City of Sydney and Suburbs"; we have found that "the supply is inadequate and uncertain, and not to be relied upon in all seasons"; we have instituted "all necessary inquiries to ascertain by what measures a reliable and plentiful supply may be best obtained"; and the result of our inquiries is that we recommend the "Upper Nepean Scheme" as best fulfilling the desired conditions. We do not profess that this scheme as now presented is fully worked out in every point, and incapable of further improvement. On the contrary, we are sensible that if we could devote longer time to it we could in all probability suggest modifications that would amend and cheapen it; but so much time has already been spent over this investigation that we deem it inexpedient to hold back our Report longer. If it should be imagined that the inquiry has been unnecessarily protracted, it ought in justice to be considered that each member of the Commission has had other urgent duties to attend to, and that this work has entailed much labour and thought. We may be permitted to say that we have been actuated by a single and earnest desire to arrive at the best possible solution of the question, and that we have diligently and conscientiously pursued this end. We now invite the closest scrutiny of our results, sensible that if our scheme be in the main the best attainable, it will be improved by passing through the ordeal of enlightened criticism; while if any better scheme still lies undiscovered, this same criticism will, we trust, bring it to light.

It scarcely falls within our province to discuss the question of ways and means, but we may simply point out that costly as the work recommended will be, there is every reason to expect that it may be made productive, and entail no permanent burden on the Country. To the estimate already given of the low-level scheme let us add £10,000 for further contingencies, and take its cost in round numbers as £800,000. To this add £100,000 for the improvement and extension of the service in the City and Suburbs, and for the construction of public baths and fountains. The interest on £900,000 at 5 per cent is £45,000; add £10,000 a year for maintenance, and we get £55,000 as the annual charge. Now it will be seen by returns from the Municipalities, given in the Appendix, that the estimated annual rental of property in the City and Suburbs in 1867 was £977,501, and by this time, considering how rapidly houses have multiplied of late, it is doubtless over a million sterling; and a rate of one shilling in the pound on a rental of £1,100,000 will furnish the amount required. Such a water
rate

rate could not be considered extravagant; it is about the average rate in England, and in some towns it is higher. It is unfortunate that there is already a debt of £280,000 on account of water supply. But even this can be borne; for considering that new manufactures requiring water will likely spring up, and that other places besides those enumerated in the list of municipalities may purchase a share in the new supply,—and further, that some revenue may be looked for on account of irrigation,—it is not unreasonable to suppose that the annual proceeds of the water rate will be sufficient to meet the total annual charge.

Such is the scheme that we have the honor to lay before your Excellency, and to commend to the favourable consideration of the Government,—a scheme imperfect it may be in its details, but in its general features the best we believe that the nature of the country admits of, and which, if carried out, will make Sydney the best watered of Australian cities, as it is at present the worst; and will minister to the health, comfort, and prosperity of its inhabitants to distant times.

We have the honor to subscribe ourselves,

Your Excellency's faithful Servants,

J. SMITH, M.D.,

President of the Commission.

E. O. MORIARTY, M.A., M. Inst. C.E.,

Engineer-in-Chief for Harbours and Rivers.

P. F. ADAMS,

Surveyor General.

FRANCIS H. GRUNDY, C.E.

WILLIAM C. BENNETT, M. Inst. C.E.,

Commissioner and Engineer for Roads.

WATER SUPPLY OF SYDNEY AND ITS SUBURBS.

ABSTRACT OF PROCEEDINGS.

MONDAY, 30 SEPTEMBER, 1867.

PRESENT :—

Professor Smith, M.D., President.

E. O. Moriarty, Esq.

P. F. Adams, Esq.

F. H. Grundy, Esq.

T. Woore, Esq.

Commission read.

Mr. George E. Faithfull appointed Secretary.

Resolved,—

1. That the Government be requested to place a sum of money (say £100) to the credit of the Commission, in the Bank of New South Wales, towards defraying preliminary expenses.

2. That the Secretary be instructed to procure copies of any former Reports and Surveys affecting the present Water Supply of Sydney, and any Reports that can be procured relative to Water Supply in other Countries.

3. That an official communication be addressed to His Worship the Mayor of Sydney, acquainting him with the appointment of this Commission, and expressing a hope that the Commissioners will receive his co-operation and assistance in this investigation, in which the citizens are so deeply interested.

8 OCTOBER, 1867.

PRESENT :—

Professor Smith, M.D., President.

E. O. Moriarty, Esq.

F. H. Grundy, Esq.

P. F. Adams, Esq.

Letter read from the Right Worshipful the Mayor of Sydney, signifying his willingness to give any assistance that might be required.

The Secretary was directed to communicate with the Mayor, with the view of ascertaining if it would be convenient for him to accompany the Commission on a visit to the Waterworks, Botany, on the 15th instant, and to ascertain if he would grant permission to the City Engineer to accompany the Commissioners.

The Commissioners directed that an analysis of the water at present supplied to the inhabitants of Sydney be procured.

The following plans were laid before the Commission :—

Sydney Common. Sketch of Sydney Common.

Diagram of Government Quarries.

Two Trigonometrical Surveys of Water Reserves.

Plan of Works on the Water Reserves.

Section shewing Mouth of the Tunnel.

Two Longitudinal Sections shewing difference of level between the Sill of the Tunnel in the Water Reserve at Lachlan Swamp and Botany Bay.

A Longitudinal Section of the Tunnel.

Sketch illustrative of Commissioners' Report on Alienation of Lands in and near the Basin of Water Supply for Sydney and Suburbs.

Survey of the South-eastern Suburbs of the City of Sydney.

Plan shewing the various Localities and Works referred to in the Report of the Special Water Committee of the Municipal Council.

The Secretary was directed to procure from the Government Astronomer a statement of the amount of rain that has fallen at Sydney and South Head for each year, since 1852 (inclusive), and the amount of evaporation as far back as it has been observed; also, to procure information as to the population of Sydney and Suburbs, in the form of a table, shewing the numbers at quinquennial periods, as far back as accurate records go.

15 OCTOBER, 1867.

PRESENT :—

Professor Smith, M.D., President.

E. O. Moriarty, Esq.	|	P. F. Adams, Esq.
		F. H. Grundy, Esq.

The Commissioners proceeded to the Lachlan Swamp, being joined on the way by the Mayor of Sydney and the City Engineer. The party examined the arrangements for supplying the Tunnel with water, and Professor Smith collected samples of the water for analysis. They then proceeded down the course of the stream towards Botany, inspecting on their way the dams that are being constructed by the City Engineer, and the sites of projected additional dams. They finally inspected the pumping machinery, and Professor Smith collected samples of water at the engine-house, for analysis.

22 OCTOBER, 1867.

PRESENT :—

Professor Smith, M.D., President.

E. O. Moriarty, Esq.	|	F. H. Grundy, Esq.
P. F. Adams, Esq.		T. Woore, Esq.

His Worship the Mayor was examined regarding the present supply of water to Sydney.

The following table of the estimated Population of the City and Suburbs was produced :—

Estimated Population at middle of Year.			
Year.	Sydney.	Suburbs.	Total.
1857	54,100	30,180	84,280
1858	54,695	31,790	86,485
1859	55,298	33,510	88,808
1860	55,910	35,345	91,255
1861	56,532	37,300	93,832
1862	57,151	39,575	96,726
1863	57,997	40,106	98,103
1864	60,299	41,698	101,997
1865	62,841	43,456	106,297
1866	65,580	45,350	110,930

A report from Mr. Smalley was read, giving the rainfall and evaporation registered at South Head and Sydney, during the period 1852 to 1867, October [14th, inclusive. (*See Appendix.*)

The Secretary was directed to write to the Government to procure for the Commission, through the Colonial Agent, in London, copies of any recent reports, plans, &c., on the supply of water to the metropolis or other large towns, on the gravitation system, and to transmit the same, or as much information as can be obtained, by the return mail; also, to write to the Chairmen of the Municipalities of the Suburbs, inviting their attention to the inquiry, and to request that they will be good enough to inform the Commissioners how their Municipalities are supplied with water, and whether they consider the supply sufficient, and if not, what suggestions they can offer towards improving it; also, to write to the Registrar General, requesting that he would further favour them with a statement of the population of each separate Suburb for the year 1866; also, to write to the Government Astronomer, to procure further information as regards the rainfall of each month in 1854 and 1862, and inquire if he possesses any record of the rainfall of 1838, 1839, 1840; also, if he can, without much trouble, give the Commissioners information as to the greatest number of days without rain, or with only a very trifling amount, in any of the recent comparatively dry years.

26 OCTOBER, 1867.

PRESENT :—

Professor Smith, M.D., President.

E. O. Moriarty, Esq.	|	P. F. Adams, Esq.
F. H. Grundy, Esq.		T. Woore, Esq.

The President and Mr. Grundy intimated that they had written to procure information respecting the gravitation supply at Glasgow, Manchester, and Aberdeen.

A letter from the Registrar General was read, giving an estimate of the population of each separate Suburb, on the 31st of December last.

A report from Mr. Smalley was laid on the table, shewing the rainfall for each month in 1840, 1854, and 1862, and stating that he had no record of the rainfall of 1838 or 39.

The

The Secretary was directed to write to the Colonial Secretary, requesting that he would supply the Commission with the documents transmitted to the Board appointed to inquire into the Water Supply of Sydney in 1852.

The Secretary was directed to procure the details of the borings of the Botany Swamps.

The City Engineer was then examined respecting the supply of water from Botany.

30 OCTOBER, 1867.

PRESENT :—

Professor Smith, M.D., President.

E. O. Moriarty, Esq.
F. H. Grundy, Esq.

P. F. Adams, Esq.
T. Woore, Esq.

A pamphlet on the Water Supply of Sydney, from Mr. G. A. Mansfield, was laid on the table.

The Commission directed that an analysis of the waters of the Warragamba and Nepean, near the junction, should be obtained.

The Secretary was directed to write to the Mayor for a return shewing the occasions when delivery of water to the city has been restricted, in any way, by reason of existing or anticipated deficiency.

Mr. E. Lord was examined respecting the Botany Swamps.

The Commission examined maps and plans, and deliberated on their future proceedings.

2 NOVEMBER, 1867.

PRESENT :—

Professor Smith, M.D., President.

E. O. Moriarty, Esq.
F. H. Grundy, Esq.

P. F. Adams, Esq.
T. Woore, Esq.

Various letters read.

The Secretary was directed to write to the Mayor requesting him to supply the Commission with copies of any Reports and Evidence on the Water Supply of Sydney, consequent on inquiries instituted by the City Council.

Mr. Alderman Woods and Mr. Pearce were examined.

5 NOVEMBER, 1867.

PRESENT :—

Professor Smith, M.D., President.

E. O. Moriarty, Esq.
F. H. Grundy, Esq.

P. F. Adams, Esq.
T. Woore, Esq.

A letter was read from Mr. Woore on the state of the Botany Swamps in 1829 and 1834, as compared with the present time. (*See Appendix.*)

Mr. Grundy reported having collected specimens of water from George's River. The specimens were ordered to be analysed.

The President laid the following plans upon the table :—

Sketch shewing the Water Reserve and the country between Sydney and Botany.

Plan shewing the various localities and works referred to in the Report of the Special Water Committee, on the subject of procuring a permanent supply of water to the City of Sydney in 1852.

Map of the City of Sydney, shewing the water-pipes, &c.

The Commission deliberated on the minimum quantity of water that ought to be supplied per head of the population, and on the general question of the best available source of supply.

Mr. G. A. Mansfield was examined.

13 *NOVEMBER*, 1867.

PRESENT :—

Professor Smith, M.D., President.

E. O. Moriarty, Esq.	|	P. F. Adams, Esq.
F. H. Grundy, Esq.	|	T. Woore, Esq.

Mr. Woore reported that he had collected specimens of water from the Warragamba and Nepean, and had handed them over to Professor Smith, for analysis.

The Commissioners then proceeded to the Botany Swamps, meeting Mr. Pearce at St. Jude's Well. The party proceeded down the stream that runs through Bird's Gully, as far as the new Bunnerong Road.

Returning by Waverley, they inspected several drains running towards the Lachlan Reserve.

A specimen of water was collected at the tunnel mouth, for further analysis.

16 *NOVEMBER*, 1867.

PRESENT :—

Professor Smith, M.D., President.

E. O. Moriarty, Esq.	|	P. F. Adams, Esq.
F. H. Grundy, Esq.	|	T. Woore, Esq.

Letters read from the Municipalities of St. Leonards, Redfern, and Cook.

Mr. Alderman Murphy was examined respecting the Botany Swamps.

Mr. J. H. Atkinson was examined respecting George's River and the Botany Swamps.

Mr. J. B. Carroll was examined respecting George's River.

20 *NOVEMBER*, 1867.

PRESENT :—

Professor Smith, M.D., President.

E. O. Moriarty, Esq.	|	P. F. Adams, Esq.
F. H. Grundy, Esq.	|	T. Woore, Esq.

Documents from the Colonial Secretary, applied for by the Commission, laid on the table.

Letters read from the Waterloo and Paddington Municipalities.

Mr. G. Hill was examined regarding the Botany Swamps.

23 *NOVEMBER*, 1867.

PRESENT :—

Professor Smith, M.D., President.

E. O. Moriarty, Esq.	|	P. F. Adams, Esq.
F. H. Grundy, Esq.	|	T. Woore, Esq.

A report from Mr. Smalley was laid on the table, giving the rainfall of each month, and the number of rainy days, from the year 1840 to 1867 inclusive.

The Secretary intimated that he had received a specimen of water from the Woronora Creek, from Mr. J. B. Carroll, and had handed it over to Professor Smith, for analysis.

Extracts of a letter were read from Sir W. Macarthur to Mr. Woore, stating his recollections of severe droughts in this Colony; and Mr. Woore was requested to obtain from Sir W. Macarthur permission to append this information to the Report of the Commission.

The Secretary was directed to visit the dam at North Rocks, Parramatta, with a view of determining the rate of evaporation.

The Commission deliberated on their future line of inquiry, and determined to visit the junction of the Warragamba and Nepean, on Wednesday, 4th of December.

Mr. W. Speer was examined.

27 NOVEMBER, 1867.

PRESENT :—

Professor Smith, M.D., President.

E. O. Moriarty, Esq.	|	P. F. Adams, Esq.
F. H. Grundy, Esq.	|	T. Woore, Esq.

Letter read from the Glebe Municipality.

The Secretary reported having visited the dam at North Rocks, Parramatta. He found that a considerable quantity of water was leaking from the reservoir, and none running in. The Commission therefore considered that it was not practicable to ascertain the amount of evaporation.

Mr. Woore submitted a plan and trial section, together with a description of an aqueduct to supply Sydney, Windsor, and Parramatta, with water, and to irrigate the northern part of the County of Cumberland.

Mr. Buckland was examined respecting the Botany Swamps.

3 DECEMBER, 1867.

PRESENT :—

Professor Smith, M.D., President.

E. O. Moriarty, Esq.	|	P. F. Adams, Esq.
F. H. Grundy, Esq.	|	T. Woore, Esq.

Letter read from the Randwick Municipality.

Letter read from Mr. R. B. Dawson to Mr. Adams, respecting the borings of the Lachlan Swamps in 1852, and stating that they reached 36, 41, and 60 feet respectively, and that the bottom of the swamps was not reached in any case; the borers being prevented from going deeper, by grounding on timber buried in the swamp, and by the pressure of the sand.

J. Lucas, Esq., M.L.A., and the Rev. W. B. Clarke, were examined.

5 DECEMBER, 1867.

PRESENT :—

Professor Smith, M.D., President.

E. O. Moriarty, Esq.	|	P. F. Adams, Esq.
F. H. Grundy, Esq.	|	T. Woore, Esq.

The Commissioners met according to appointment on Tuesday, the 3rd instant, at 5 p.m., and proceeded by rail to Penrith. Next day they went by water to the junction of the Nepean and Warragamba, and examined the site of the dam proposed by Mr. Woore, and the line of the proposed aqueduct, as far as to a point near Winbourne, in the Valley of Mulgoa. They also took the necessary observations to determine the cross section of the gorge at the site of Mr. Woore's proposed dam.

Barometric readings were obtained during the day, with the view of determining altitudes.

This day the Commissioners proceeded along the railway line as far as the Weatherboard, in order to test the indications of the barometers by means of the higher levels of the line, so that the same instruments might be used with confidence in determining levels about the sources of the Cataract and Woronora Rivers.

The Commission resolved that a section of the country should be made to connect Mr. Woore's last levelled point, on the right bank of South Creek, with the water level of the Nepean, along a line to be pointed out by Mr. Woore; and also, that the commencement of Mr. Woore's levelled line at Ashfield should be connected with the railway levels.

6 DECEMBER, 1867.

PRESENT :—

Professor Smith, M.D., President.

E. O. Moriarty, Esq.	|	P. F. Adams, Esq.
F. H. Grundy, Esq.	|	T. Woore, Esq.

Letter read from the Newtown Municipality; also, from the Town Clerk's Office, referring to a letter of date 4th of November, applying for certain information in connection with the water supply to the city, and stating that the Mayor would be most happy to furnish all the information in his power with regard to the matter of inquiry; but that, with the exception of the yearly reports of the Municipal Council, submitted to Parliament, and such documents as have already been laid before the Commission by the City Engineer, there are no printed papers or reports in that department containing matter at all likely to assist the Commissioners in their inquiry.

The Minister for Works transmitted to the Commission a description of the Waterworks at New York, from Mr. Sheldon.

The Secretary was directed to obtain from the Government Astronomer the index errors of the barometers used by the Commissioners in determining altitudes.

The Secretary was directed to write to the Colonial Secretary, stating that the Commissioners, having examined the junction of the Warragamba and Nepean Rivers, with the view to judge of the practicability of supplying the city with water from that source—find that it is not possible to arrive at any definite conclusion without a section extending from thence to the Railway at South Creek, and requesting that the Surveyor General might be moved to cause the services of a surveyor to be placed at their disposal for that purpose.

The Secretary was directed to obtain from the Colonial Secretary authority for the printing of the evidence taken before the Commission.

The Commission resolved to proceed, on Wednesday, December 11th, to examine the country about the heads of the Woronora, Cataract, and Cordeaux Rivers, and Port Hacking Creek, and deliberated on the arrangements necessary for carrying out this inspection.

9 DECEMBER, 1867.

PRESENT :—

Professor Smith, M.D., President.

E. O. Moriarty, Esq.

P. F. Adams, Esq.

F. H. Grundy, Esq.

T. Woore, Esq.

Letter read from the Marrickville Municipality.

The Commissioners deliberated on their mode of procedure at the Woronora, &c.

20 DECEMBER, 1867.

PRESENT :—

Professor Smith, M.D., President.

E. O. Moriarty, Esq.

P. F. Adams, Esq.

F. H. Grundy, Esq.

T. Woore, Esq.

The Commissioners met at the office, according to appointment, at 10:30 a.m., on Wednesday, the 11th December, and proceeded, by Cook's River and George's River, to Bottle Forest, where they camped for the night.

Barometric observations were obtained during the journey, for the determination of altitudes.

The next morning they proceeded westward down the Bottle Forest Creek to its junction with the Woronora River, and then followed the river to its confluence with the tide, returning from this point by the Old Wollongong Road.

The Woronora, just above the junction of Bottle Forest Creek, was estimated to deliver 160 gallons per minute, and the Bottle Forest Creek about two-thirds of that quantity.

Barometric readings were taken during the day, and the corresponding altitudes estimated.

The next day the Commissioners proceeded towards the heads of the Woronora and Port Hacking River, and camped on a dividing ridge between these waters.

The next day (Saturday) the Commissioners proceeded towards the head of the Cataract River, examining on their way the sources of Port Hacking and O'Hare's Creeks and the Woronora, and camped that night at the head of the Cataract River.

Barometric readings were taken as usual.

On Monday the Commissioners divided into two parties, one of which proceeded to the sources of O'Hare's Creek, and examined this creek down until it breaks from the tableland into a deep gorge, giving particular attention to places suitable for the construction of dams, and returned by Darke's Forest Road and across the head swamps of the Cataract River; the other party examined carefully the north-eastern tributaries of the Cataract River, going round all the swamps and creeks to the north of the road from Appin to Wollongong. The barometric readings were taken during the day, by both parties, for determining altitudes.

The next day (Tuesday) the Commissioners proceeded towards Appin, examining on their way the country draining into George's River on the one hand, and into the Cataract River on the other, and camped on King's Falls Creek, near Appin.

On Wednesday the Commissioners sent back the camp and equipments to Sydney, and proceeded themselves southward across the Cataract River, by Broughton's Pass, and thence along the dividing range between the Cataract and Cordeaux Rivers, examining the tributaries on either hand, arriving in the evening at Wollongong, where they obtained barometric observations at the sea level, and returned to Sydney yesterday (Thursday) by way of Appin and Campbelltown, verifying certain of the altitudes previously obtained.

23 *DECEMBER*, 1867.

PRESENT :—

Professor Smith, M.D., President.

E. O. Moriarty, Esq.	|	P. F. Adams, Esq.
F. H. Grundy, Esq.	|	T. Woore, Esq.

Various letters read.

The Secretary was instructed to write to the Mayor, stating that the Commission terminates on the 24th instant, but that, pending its reappointment and the resumption of the inquiry, His Worship would advance its object, by requesting the City Engineer to give facilities to any Member of the present Commission for observing the condition of the swamps and dams, and the working of the engines at Botany, especially during the continuance of the present drought.

The President read a Draft Progress Report, which was adopted, and ordered to be transmitted to the Colonial Secretary, together with a statement of the expenditure of the Commission up to the present time.

8 *FEBRUARY*, 1868.

PRESENT :—

Professor Smith, M.D., President.

E. O. Moriarty, Esq.	|	P. F. Adams, Esq.
F. H. Grundy, Esq.	|	

The instrument, under the Great Seal of the Colony, reappointing the Commission to 23rd June, 1868, was read.

Mr. George E. Faithfull was reappointed Secretary to the Commission.

A letter was read from the Town Clerk's Office, transmitting, for the consideration of the Commission, a copy of a communication received from Mr. Campbell Mitchell, of Stamwell, Appin, upon the subject of obtaining a supply of water for Sydney from the Woronora River.

The Secretary was directed to acknowledge the same, with thanks, and to state that the Commission had examined the Woronora fully, before the receipt of the communication.

Mr. Moriarty presented a specimen of water which he had collected from the engine-pond at Botany, in December. The specimen was handed over to Professor Smith, for analysis.

Other letters read.

11 *FEBRUARY*, 1868.

PRESENT :—

Professor Smith, M.D., President.

E. O. Moriarty, Esq.	|	P. F. Adams, Esq.
F. H. Grundy, Esq.	|	

Plan of the Couridjah Lagoons, in the County of Camden, was laid upon the table.

Mr. E. Barton was examined respecting the capabilities of the Grose, the Warra-gamba, the Colo, and other rivers.

15 *FEBRUARY*, 1868.

PRESENT :—

Professor Smith, M.D., President.

E. O. Moriarty, Esq.	|	P. F. Adams, Esq.
F. H. Grundy, Esq.	|	T. Woore, Esq.

The Secretary was instructed to obtain, from the Railway Department, the cross sections taken by Mr. Barton in the Valley of the Grose, at the junction of Barton's Creek, and the cross sections taken between the distances of 48 and 51 miles from Parramatta, by the western trial line, in the Valley of the Grose; also, the section taken along Bell's line.

Mr. E. Flood was examined respecting the Botany stream.

20 FEBRUARY, 1868.

PRESENT :—

Professor Smith, M.D., President.

E. O. Moriarty, Esq.	|	P. F. Adams, Esq.
F. H. Grundy, Esq.	|	T. Woore, Esq.

A letter was read from the Colonial Secretary, accompanying the following Reports, &c. :—

Description of the Manchester Waterworks.
 Description of the Glasgow Waterworks.
 Metropolis Water Supply.
 Future Water Supply of London,
 Constant Water Supply for London.
 Water Supply of the City of Paris.
 Water Supply of Bombay.
 Government Waterworks in Trafalgar-square.
 President's Address. Institution of Engineers in Scotland.
 Supply of Water to Liverpool.

Mr. Grundy laid on the table the following Reports :—

Report on the Leeds Waterworks.
 Report on the Dublin Waterworks.
 Report on the Supply of Water to Bombay.
 Series of articles on the Water Supply of London.

The President laid on the table two Reports on the Aberdeen Waterworks, together with Specification of Works.

Mr. Woore laid on the table a plan and section of his proposed Aqueduct from South Creek to Sydney, on a larger scale than the one formerly presented. Also, a plan and section of his proposed Railway Line, adjoining the Couridjah Lagoons.

The Secretary produced various plans and sections of the Valley of the Grose, obtained from the Railway Department.

The Commissioners examined the various plans and reports before them, and deliberated on their future proceedings.

It was resolved to visit the Botany Dams, on Saturday, 22nd instant, and to meet at the office, for that purpose, at 9 a.m.

22 FEBRUARY, 1868.

PRESENT :—

Professor Smith, M.D., President.

E. O. Moriarty, Esq.	|	P. F. Adams, Esq.
F. H. Grundy, Esq.	|	T. Woore, Esq.

The Commissioners, in accordance with the resolution adopted at last meeting, proceeded to the Botany Waterworks. Being joined there by the City Engineer, they proceeded up the stream, and examined the six dams, with the view of observing the effects of the recent heavy rain and floods.

27 FEBRUARY, 1868.

PRESENT :—

Professor Smith, M.D., President.

E. O. Moriarty, Esq.	|	P. F. Adams, Esq.
F. H. Grundy, Esq.	|	T. Woore, Esq.

Mr. Licensed Surveyor Wyndham's section from the Warragamba to South Creek, along a line pointed out by Mr. Woore, was laid on the table, and Mr. Wyndham attended to give such explanation as might be required.

Mr. Licensed Surveyor Pitt attended to give information to assist the Commissioners in their proposed visit to the Grose.

The Commissioners then proceeded by railway to Douglass Park Station, and thence to Nepean Towers.

Feb. 28.—The Commissioners went by water up the Nepean River, to above the junction of Allen's Creek; from thence down the river, as far as the junction of the Cataract, and then up this river for some distance.

Specimens of water were collected from both rivers, for the purpose of analysis.

The Commissioners then visited Broughton's Pass, on the Cataract River, with the view of determining the altitude of that point in the river, as compared with its mouth.

Feb. 29.—The Commissioners examined the country towards the Cordeaux, and the junction of the Cordeaux and Nepean, known as the Pheasant's Nest; and, lastly, the course of the Nepean from the Cataract River down to Menangle.

Barometric readings were obtained to determine altitudes.

5 MARCH, 1868.

PRESENT :—

Professor Smith, M.D., President.

E. O. Moriarty, Esq.	|	P. F. Adams, Esq.
F. H. Grundy, Esq.	|	T. Woore, Esq.

Resolved,—That the Commissioners do now record their high appreciation of the valuable co-operation and assistance which they received from R. L. Jenkins, Esq., of Nepean Towers, on the occasion of their recent examination of the Nepean, Cataract, and Cordeaux Rivers, and desire that their cordial thanks for such assistance, and for the facilities he so liberally afforded them for acquiring a knowledge of the capabilities of the district, in regard to the Water Supply of Sydney, be communicated to Mr. Jenkins by the President.

The Commissioners also record their thanks to Mr. J. B. Carroll, for the zealous services he rendered them on the occasion of their visit to the Woronora, and their opinion that some substantial recognition of such services should be presented to Mr. Carroll. [The Commissioners afterwards presented an Aneroid Barometer (at their own cost) to Mr. Carroll.]

Mr. Du Faur attended to give information to the Commissioners respecting the best mode of access to the upper parts of the Warragamba, and its junction with the Cox.

Resolved,—That the Commissioners should examine the Couridjah Lagoons, on Saturday, 7th instant.

7 MARCH, 1868.

PRESENT :—

Professor Smith, M.D., President.

P. F. Adams, Esq.	|	F. H. Grundy, Esq.
	|	T. Woore, Esq.

The Commissioners met at the Railway Station, at 9 a.m., and proceeded to the Couridjah Lagoons, beyond Picton. They examined the extent of these lagoons, and of their drainage area, and collected a specimen of the water for analysis.

10 MARCH, 1868.

PRESENT :—

Professor Smith, M.D., President.

E. O. Moriarty, Esq.	|	P. F. Adams, Esq.
F. H. Grundy, Esq.	|	T. Woore, Esq.

The Commissioners examined Mr. Surveyor Wyndham's section from the Warragamba to Rope's Creek, and entered on a lengthened discussion of the comparative advantages of the various schemes that have come under their notice. They also determined to visit, as early as circumstances will permit, the upper and lower parts of the Grose, together with the Wheeny Creek and the Colo.

The Secretary was instructed to plot Mr. Woore's trial section from Ashfield to Rope's Creek, and Mr. Wyndham's continuation to the Warragamba, on a scale of 10 chains to the inch horizontal, and 100 feet to the inch vertical.

The Secretary was further instructed to apply to the Commissioner of Railways, for any trial surveys and sections made for railway purposes, by the late Mr. Surveyor Berry, in the County of Cumberland.

17 MARCH, 1868.

PRESENT :—

Professor Smith, M.D., President.

E. O. Moriarty, Esq.	|	P. F. Adams, Esq.
F. H. Grundy, Esq.	|	T. Wood, Esq.

A letter was read from Mr. R. L. Jenkins, of Nepean Towers, acknowledging the communication of the Commissioners, and thanking them for the same, further stating that he should be glad to be of further use in forwarding the very important object confided to the Commission.

The Secretary reported that Mr. Bell was unable to attend in consequence of a previous engagement.

It was resolved that three Commissioners, namely, the President, Mr. Woore, and Mr. Grundy, should be deputed to visit Burragorang, with the view of determining the level of the Wollondilly at that place, and the level of the junction of the Cox with the Wollondilly.

The

The President reported that, in company with Mr. Grundy, he had examined the ridge by Newtown, Enmore, and Petersham, with the view of determining altitudes on it, and the possibility of forming there a large distributing reservoir.

The discussion on Mr. Woore's scheme having been resumed, Mr. Woore laid before the Commission a proposition for an amended section of his line. (*See Appendix.*)

The President read a letter that he had received from Mr. Woore on the same subject. (*See Appendix.*)

Discussion ensued, and the further consideration of it deferred till next meeting.

25 MARCH, 1868.

PRESENT:—

Professor Smith, M.D., President.

E. O. Moriarty, Esq.

P. F. Adams, Esq.

F. H. Grundy, Esq.

T. Woore, Esq.

Letter read from Mr. Wyndham, on the subject of examining the head of the Grose.

Letter read from Benjamin Carver, stating that he had been up the Grose and inspected it; that the road is in a very bad state, a good many landslips having fallen into the track and blocked it up; and that there is a great deal of scrub.

The City Engineer was examined respecting the present supply of water to Sydney.

Mr. Grundy reported that he had not gone to Burragorang, in accordance with the former minute, considering that two Members of the Commission were sufficient for the duty required, and that unnecessary expense would be saved by his not going.

The President and Mr. Woore reported that, in accordance with the resolution adopted at last meeting, they had proceeded to Burragorang, carrying with them one of Newman's Mountain Barometers, obtained from the Survey Department, and also a trustworthy Aneroid Barometer. With these instruments they obtained careful readings, on three days, at three points on the Wollondilly, namely,—at the junction of the Cox; at the junction of the Nattai, 10 miles higher up; and at a point about 2 miles below the Nattai. Readings were also obtained at Picton, on going and returning. These have been compared with readings taken at the Sydney Observatory, and the results give about 170 feet as the altitude above the sea of the junction of the Cox, and 240 feet as the altitude of the junction of the Nattai. The Commissioners interrogated several residents in Burragorang, and learned that within the last thirty-five years the Wollondilly had been known several times to stop running, but that the Cox had never been known to stop. They learned also that the course of the Warragamba, down to the still reach where it joins the Nepean, presents a series of falls and rapids, with little still water.

The consideration of Mr. Woore's memo. having been resumed, it was moved by Mr. Moriarty, seconded by Mr. Adams, and carried:—

That, under the circumstances referred to in Mr. Woore's memorandum, it is resolved that, in order to expedite the proceedings of the Commission, it is considered advisable that any Member having any project or scheme to propose, shall do so by letter, setting forth in detail, as far as possible, the particulars of such scheme; and that all question of remuneration for suggestions as to the best means of obtaining a supply of water for the city be left for the consideration of the Government—the Commissioners being of opinion that it is not their province to fix the remuneration for any proposal, however valuable it may be.

Moved by Mr. Moriarty, and carried:—

That Mr. Grundy be detailed to make a section, in continuation of that of the late Mr. Shone, from Appin, along the crest of the ridge dividing the waters of George's River from those of the Nepean and its tributaries—such section to be continued to about the head of Duck Creek.

The Secretary produced the combined sections of Mr. Woore and Mr. Surveyor Wyndham, plotted, as directed, to the scale of 10 chains to the inch horizontal, 100 feet to the inch vertical.

The Secretary was instructed to write to the Commissioner for Railways, requesting that he would permit Mr. Quodling, Resident Engineer on No. 4 Contract of the Western Railway, to give assistance to the Commissioners on their visit to the head of the Grose, without, however, interfering with his proper duties.

31 MARCH, 1868.

PRESENT:—

Professor Smith, M.D., President.

E. O. Moriarty, Esq.

P. F. Adams, Esq.

F. H. Grundy, Esq.

T. Woore, Esq.

Mr. Woore read a statement in reference to supplying Sydney with water from the Warragamba, accompanied by illustrative drawings. (*See Appendix.*)

Discussion ensued.

It

It was then moved by Mr. Moriarty, seconded by Mr. Adams, and carried :—

That Mr. Woore's statements be printed, for the use of the Commissioners, and that he be asked to afford such verbal explanations of his scheme as may be required by the Commissioners, at an early meeting; such explanations to be taken down by the shorthand writer in the ordinary way, and be attached to the other evidence.

Mr. Woore stated that, in the papers before the Commission, he had given all the information that he possessed, and that he was unable to give more till an amended section be made, but he will give evidence if the Commissioners desire it.

The Commissioners determined to visit the head of the Grose next week, starting on Tuesday morning, the 7th of April.

16 APRIL, 1868.

PRESENT :—

Professor Smith, M.D., President.

E. O. Moriarty, Esq.

F. H. Grundy, Esq.

T. Woore, Esq.

The following letter to the President was read :—

Edgecliffe House,
1 April, 1868.

Dear Dr. Smith,

Having given all the information I can in the drawings and papers I have read to the Water Commission, on my Warragamba scheme, and during the discussion that took place upon them, I must decline appearing before it as an ordinary witness; at the same time, should the Commission have any questions to put to me that will further illustrate the subject, if they will do so in writing, I should very gladly attend to their wishes.

Remaining

Yours very faithfully,

THOMAS WOORE.

The Secretary was instructed to apply to the Colonial Secretary for a further advance of £200 towards defraying the expenses of the Commission.

The President reported that he and Mr. Adams, together with the Secretary, had attended at the Railway Station, at 6.45 a.m. on 7th April, as agreed on at last meeting, and no other Commissioners appearing, they thought it advisable to proceed in the character of a deputation from the Commission, to examine the upper part of the Grose. On arriving at One-tree Hill, they had an interview with Mr. Quodling, who kindly undertook to make various arrangements necessary for carrying out their programme. On the 8th, 9th, and 10th of April they examined the Grose to a point about half a mile below the junction of Govett's Leap Creek. On descending the valley to a level of about 800 feet below the Railway (and therefore, about 2,600 feet above the sea), they passed from the Sydney sandstone formation to the coal measures, through which they continued to descend to a further depth, probably, of 1,500 feet. Along the whole distance examined, the sandstone rose like a precipitous wall above the talus formed by the coal measures. Notwithstanding the preponderance of coal measures, the water appeared to be excellent; but this will not seem extraordinary when it is considered that the gathering ground is of sandstone formation, and that the water falls rapidly over protruding portions of the softer strata, with scarcely any percolation. The only suitable position for a storage reservoir is a little below the junction of Govett's Leap Creek with the River, where the valley narrows again after opening out into an extensive alluvial flat; and the observations taken lead to the conclusion that any dam capable of throwing back a sheet of water to the extent of 400 acres must be from 60 to 70 feet high, and from 600 to 700 feet long. The capabilities of the rock for resisting pressure of water appeared to be very low, and not adapted to building purposes, although a supply to any extent, probably, could be obtained by sliding down stones quarried from the sandstone formation, some 1,500 feet above it.

Moved by the President, and carried :—

That the thanks of the Commission be tendered to Henry Quodling, Esquire, Resident Engineer on No. 4 Contract of the Western Railway, for the valuable assistance afforded by him to the Members of the Commission visiting the Grose, by which their examination of the upper part of that river was so much facilitated.

(2.) That a copy of this Resolution be transmitted to Mr. Quodling by the Secretary.

Mr. Woore submitted the following resolution :—

That in order to obtain data from which an estimate of the cost of bringing water from the Warragamba River into Sydney may be calculated, an amended section of that line be gone into without delay.

The consideration of this resolution was deferred till next meeting.

18 APRIL, 1868.

PRESENT :—

Professor Smith, M.D., President.

E. O. Moriarty, Esq.	|	P. F. Adams, Esq.
		T. Woore, Esq.

Discussion on Mr. Woore's resolution was resumed.

A letter was read from Mr. Grundy to the President, on the subject of Mr. Woore's scheme. (*See Appendix.*)

Moved by Mr. Moriarty, seconded by Mr. Adams, and carried :—

That before further expense be incurred in regard to Mr. Woore's scheme, printed copies of the various statements read by him to the Commission be supplied to the Members, with the view of eliciting written opinions thereupon.

Moved by Mr. Woore, seconded by Mr. Adams, and carried :—

That the letter from Mr. Grundy, just read, be printed, and supplied to the Members.

Resolved.—That the Secretary be instructed to examine the Cataract River, from the junction of the Loddon to Broughton's Pass, with the view of determining eligible sites for forming dams along the bed of the river, and the approximate dimensions of such dams.

5 MAY, 1868.

PRESENT :—

Professor Smith, M.D., President.

E. O. Moriarty, Esq.	|	P. F. Adams, Esq.
F. H. Grundy, Esq.		T. Woore, Esq.

The Secretary read a report of his examination of the Cataract River, made in accordance with instructions received from the Commission, at the meeting held April 18th, in order to determine suitable sites for dams.

Discussion on Mr. Woore's scheme of deriving water from the Warragamba was resumed.

A decision on Mr. Woore's motion of April 16th was deferred till a future meeting.

A memo. from Mr. Adams was read, conveying an opinion adverse to the proposed dam.

A letter from Mr. Adams to the President was read, stating that, owing to the pressure of business in his department, he wished to be relieved from regular attendance at the meetings of the Commission, and recommending that the services of Mr. W. C. Bennett should be obtained in his place.

It was resolved that a copy of this letter should be transmitted to the Colonial Secretary, with a recommendation that Mr. Bennett should be added to the Commission.

The Secretary was instructed to procure specimens of water from the mouth of the Grose River, and from South Creek, near the Railway Crossing.

The Commissioners determined to visit, on Tuesday, 12th instant, the sites of storage reservoirs proposed by Mr. Bell, City Engineer.

Mr. Woore reported that he had obtained specimens of water from Wollondilly, Mulwarree Ponds, Paddy's River, and Wingecarribee—all of which were handed over to Professor Smith for analysis.

May 12th.—The Commissioners, in company with the City Engineer, proceeded to examine the sites of certain of the reservoirs proposed by that gentleman;—first, a large natural basin on the ground formerly set apart as a cemetery, near the south end of Bourke-street; thence to Paddington; and lastly, to the highest ground at Waverley.

19 MAY, 1868.

PRESENT :—

Professor Smith, M.D., President.

E. O. Moriarty, Esq.	|	P. F. Adams, Esq.
F. H. Grundy, Esq.		T. Woore, Esq.

Mr. Moriarty handed in a memorandum on Mr. Woore's Warragamba scheme, which was ordered to be printed, and distributed among the Commissioners.

Discussion on this scheme was resumed, and again adjourned till a future meeting.

Mr. Woore then submitted a resolution bearing on the construction of dams, the consideration of which was postponed till next meeting.

The Commissioners, with the exception of Mr. Adams, then proceeded to Richmond by railway, on the way to Wheeny Creek and the Colo.

May

57

May 20th.—The Commissioners proceeded to the junction of the two Wheenys, about fourteen miles from Richmond, and followed the main stream about two miles up.

A specimen of water was collected below the junction, for analysis.

From the barometric readings at the junction of the two Wheenys, it appears that that point is 50 or 60 feet above the level of the sea.

Thursday, May 21st.—Mr. Moriarty and Mr. Grundy having returned to Sydney, Mr. Woore went to the summit of the Tabarag ridge, to view the drainage area of the Wheeny Creek, while the President and Secretary went along the Comleroy Road towards Wheeny and Colo.

A specimen of water was collected from the latter river, for analysis.

29 *MAY*, 1863.

PRESENT:—

Professor Smith, M.D., President.

E. O. Moriarty, Esq.	|	F. H. Grundy, Esq.
		T. Woore, Esq.

A report from Mr. Grundy, on the progress of the trial section from Broughton's Pass towards Sydney, was read.

Mr. Moriarty's memorandum on Mr. Woore's scheme was read, and discussion thereupon resumed in connection with Mr. Woore's resolution submitted on the 16th April.

This resolution being then put, was negatived.

Mr. Woore's resolution relating to the construction of dams, submitted at last meeting (19th May), was then put and negatived. (*For the resolution, see Appendix.*)

It was then moved by Mr. Woore, and carried, that the resolution now negatived be printed, and appended to the other papers connected with this subject.

11 *JUNE*, 1863.

PRESENT:—

Professor Smith, M.D., President.

E. O. Moriarty, Esq.	|	P. F. Adams, Esq.
F. H. Grundy, Esq.		T. Woore, Esq.
		W. C. Bennett, Esq.

A letter was read from the Principal Under Secretary, intimating that His Excellency the Governor, with the advice of the Executive Council, had been pleased to appoint William Christopher Bennett, C.E., Commissioner and Engineer of Roads, to be an additional Member of the Commission—Mr. Bennett's Commission, under the Great Seal of the Colony, accompanying the same.

The President reported that he and Mr. Grundy had visited George's River, near Campbelltown. By aneroid observations, they made the river below the junction of Toggerai Creek to be 200 feet above the sea. The flow was gauged at a favourable point, and made to be about one and three-quarter million gallons per day. A specimen of water was collected for analysis.

The Secretary reported that he had visited South Creek, as directed, and obtained a specimen of its water for analysis. Had gauged the stream, and found the discharge to be at the rate of 575,000 gallons per day.

The President read a memorandum conveying his opinion of Mr. Woore's scheme of deriving water from the Warragamba.

Mr. Woore read a letter addressed to the President, commenting on the written opinions of the other Members of the Commission on his scheme. (*See Appendix.*)

18 *JUNE*, 1863.

PRESENT:—

Professor Smith, M.D., President.

E. O. Moriarty, Esq.	|	F. H. Grundy, Esq.
T. Woore, Esq.		W. C. Bennett, Esq.

The President laid before the Commission a tabular statement of the composition of twenty-eight specimens of water from the present source of supply, and from the various suggested sources that have been examined by the Commissioners.

Mr. Moriarty read a memorandum referring to the construction of the Parramatta Dam alluded to in Mr. Woore's letter of June 8th. (*See Appendix.*)

Mr. Grundy submitted a plan and section, together with a written description of his survey along the dividing ridge between the waters of the Nepean and George's River, so far as it has been completed.

As the Commission will expire on the 23rd instant, the President brought up a Progress Report, which was adopted and signed, for transmission to the Colonial Secretary.

11 JULY, 1868.

PRESENT:—

Professor Smith, M.D., President.
 E. O. Moriarty, Esq. | P. F. Adams, Esq.
 W. C. Bennett, Esq.

A letter from the Colonial Secretary was read, accompanying a renewed Commission, extending the inquiry into the Water Supply of Sydney to the 23rd December.

A letter from Mr. Woore to the President was read, requesting to be allowed coach fare and free railway pass from Pomeroy, to attend meetings of the Commission.

The Secretary was directed to forward this letter to the Colonial Secretary, and to state that the Commissioners considered Mr. Woore's request to be reasonable.

The Secretary was directed to write to the Colonial Secretary, requesting him to apply to the Government of Victoria for information respecting the Yan Yan Reservoir, and also to the Government of Bombay, for similar information respecting the Water-works there.

The future proceedings of the Commission were then discussed, and it was resolved that Mr. Moriarty and Mr. Grundy be requested to undertake the responsibility of working out the details of the scheme for bringing water from the Cataract and Cordeaux Rivers, and Mr. Bennett to undertake a similar responsibility in regard to the improvement and extension of the present supply from the Botany Swamps.

21 JULY, 1868.

PRESENT:—

Professor Smith, M.D., President.
 E. O. Moriarty, Esq. | P. F. Adams, Esq.
 F. H. Grundy, Esq. | W. C. Bennett, Esq.

A letter was read from the Colonial Secretary, acknowledging the receipt of a letter from the Commission, of date July 11th, enclosing one addressed to the President of the Commission, by Mr. Woore, requesting that he might be provided with a railway pass, and that his coach hire might be paid; and stating that the Colonial Secretary does not consider that he would be justified in making any additional recommendation to the Executive Council on the subject mentioned.

Mr. Grundy read a report on the progress of his survey of the Dividing Ridge from Sugarloaf to Prospect, and submitted plans and sections of portions of the same.

Discussion on the Cataract scheme being resumed, it was resolved that Mr. Moriarty and Mr. Bennett be deputed to examine, along with Mr. Grundy, the proposed line of aqueduct from the Cordeaux and Cataract Rivers to Prospect.

22 AUGUST, 1868.

PRESENT:—

Professor Smith, M.D., President.
 P. F. Adams, Esq. | F. H. Grundy, Esq.
 W. C. Bennett, Esq.

Two letters from the Colonial Secretary read.

Mr. Grundy laid before the Commission a map of the results of his surveys of the range south of Prospect, shewing two localities which he considered favourable for the construction of storage reservoirs. By a rough estimate of their capacity, he stated that the more northerly of the two would contain, when full, 30,000 million gallons of water, the surface being 230 feet above high-water level at Sydney; it would require embankments to the extent of 150 chains, rising at one point to a height of 105 feet. The more southerly of the two he estimated would contain 5,000 million gallons, the surface being 250 feet above high-water level at Sydney; it would require 120 chains of embankment; the greatest height would be 90 feet to water level, but one-third of the embankment would be only 9 feet high, the average height of the remainder being 50 feet. Mr. Grundy desired to take the opinion of the Commission as to the adoption of one or both of these reservoirs. He said that perhaps it might be considered advisable to make a more minute examination of each of them, with the contours and cross sections necessary to arrive at a more correct estimate of their capabilities; but if one only were to be adopted, he recommended the southern one as, on the whole, more advantageous. Mr. Grundy reported that clay was abundant in the locality. Discussion ensued upon the relative merits of the two, and also whether it might be better to go further south on the range. Mr. Grundy having stated that there was no other locality upon the range so suitable for extensive reservoirs, and that he had given particular attention to this question throughout his examination of the range, the southern reservoir was adopted, and Mr. Grundy was requested to carry contour lines round it, at the heights of 250 and 200 feet above sea level, and to make such cross sections as he found necessary, in order to obtain a closer approximation to its cost and capabilities.

15 OCTOBER, 1868.

PRESENT:—

Professor Smith, M.D., President.

E. O. Moriarty, Esq.

F. H. Grundy, Esq.

T. Woore, Esq.

W. C. Bennett, Esq.

A letter was read from the Colonial Secretary, accompanying a letter from Captain Mayne, and a book descriptive of the Brooklyn Waterworks; also, a letter from the Colonial Secretary, enclosing answers to the queries of the Commissioners on the subject of the Melbourne Water Supply.

The President laid on the table a pamphlet on the "Design and Construction of Storage Reservoirs"; also, further drawings of the Aberdeen Waterworks.

The President reported that he had visited Buralow Swamp, and determined its altitude, by a good aneroid, to be 960 feet above the sea. It affords facilities for the construction of a reservoir of great capacity. He also visited the Wheeny Creek, above the "Gap," and found its altitude to be 720 feet above the sea. From both places he collected specimens of water for analysis.

The following report was read from Mr. Moriarty and Mr. Bennett, on the results of their inspection of the site of the proposed reservoir near Prospect, and of the proposed conduit as far as Sugarloaf:—

"Having examined the site for the proposed reservoir at Prospect, and gone over the line selected in detail by Mr. Grundy for the aqueduct from Menangle, we are of opinion that, with reference to the former, it would be judicious to slightly alter the position of the embankment so that the central ridge would divide it into two dams, thereby forming two distinct reservoirs. This alteration would also decrease the length of the embankment and the quantity of earthwork, and without increasing the height of the dam, will permit of the water being retained in the reservoir at a level 10 feet higher than would have been the case had the dam been constructed as proposed at first, thereby approximating to the height originally suggested by Mr. Grundy.

"With reference to the aqueduct, we think it probable that the line may be improved and shortened by taking the eastern side of the range from about the 22nd mile to where it enters the reservoir; and we would suggest that the country should be examined with that view.

"The fall economized by thus shortening the conduit, together with that obtained by lowering the reservoir 20 feet, we would suggest should be divided as may be found desirable, between the reservoir and Carne's Hill Toll-bar, affording facilities for crossing the depressions in the range, if required, with syphons. To effect this, it will be necessary to slightly change the position of the conduit to lower ground.

"The western side of the range, south of Mr. Chisholm's, should be examined, in order to ascertain the possibility of taking the line of aqueduct in that direction instead of along the eastern side, where the ground is steep, broken, and liable to slip.

"We would also express our concurrence with the manner in which the line has been selected and laid out, and our approval of the site chosen for the reservoir, which adds so much to the value of the project.

"E. O. MORIARTY.

"WILLIAM C. BENNETT."

Messrs. Moriarty and Bennett also gave a verbal report of their examination of Pheasant's Nest and Broughton's Pass, and of the country between the latter point and Sugarloaf. They also reported having made provision for the accurate gauging of the three rivers—Nepean, Cordeaux, and Cataract. Mr. Grundy produced a finished plan of the adopted reservoir, showing the amount of embankments required for the heights of 250 and 260 feet respectively; also, contour plans at 260, 250, 225, and 200 feet. A letter from Mr. Grundy to the President was read, enclosing a statement of his expenditure on account of his survey, and reporting progress. Several trial shafts have been sunk along the line of proposed embankment, and the material generally was found to be very favourable. Mr. Grundy had obtained evidence, from residents in the district, that the waterholes in the creek never dry up nor turn brackish. Mr. Grundy reported, also, that he had followed and blazed the highest line from under Prospect to the head of Duck River. The scrub is very dense, and required three men to clear it sufficiently for blazing; it is a well defined-ridge; the blazed line terminates about $\frac{1}{4}$ to $\frac{1}{2}$ a mile above the head of Duck River.

The Secretary was instructed to write to the Mayor of Sydney, for information as to the assessed annual value of city property, the number of houses on which water rates are charged, distinguishing those in the City from those in the Suburbs, the gross amount of water rates for 1867, and the total amount of charges on account of water supply for the same period. Also, to write to the Mayors of the Suburban Municipalities, for information as to the assessed annual value of property in each Municipality, and the number of houses on which rates are levied. Also, to write to the Registrar General, for the population of Sydney and Suburbs (separately) at the end of 1867 and middle of 1868. Also, to write to the Surveyor General, requesting him to cause a map to be compiled of as much of the Colony as would embrace the various possible sources of water examined by the Commissioners.

The Secretary was instructed to write to the Colonial Secretary, transmitting a statement of expenditure up to the present time, and requesting that a further sum of £1,000 be placed to the credit of the Commission in the Bank of New South Wales.

21 *NOVEMBER*, 1868.

PRESENT:—

Professor Smith, M.D., President.

E. O. Moriarty, Esq.	|	F. H. Grundy, Esq.
		W. C. Bennett, Esq.

Letters from the following Municipalities were read, in reply to questions from the Commission:—Randwick, Marrickville, St. Leonards, Glebe, Balmain, Redfern, Camperdown, Cook, Waverley, Newtown, Paddington, and Sydney.

A letter was read from the Lands Department, suggesting a transfer from Sir T. H. Mitchell's map, for the purposes of the Commission.

Mr. Moriarty produced a progress plan of the line of conduit from Broughton's Pass towards Sugarloaf, and a section of the dividing ridge from Prospect to Sydney, together with calculations of the earthwork in the embankments of the storage reservoirs, and of the capacity of the reservoirs at different heights.

Mr. Grundy produced a plan and section of the amendments suggested in the report from Messrs. Moriarty and Bennett.

Mr. Bennett reported the progress of his work at the Botany Swamps, and produced plans and sections.

Discussion ensued on the required capacity of the conduits to and from the storage reservoirs, near Prospect, and it was agreed that the higher canal should be capable of delivering not less than 60 million gallons per day into the reservoir, and that the lower canal should be capable of delivering not less than 20 million gallons a day into a distributing reservoir near Ashfield.

17 *DECEMBER*, 1868.

PRESENT:—

Professor Smith, M.D., President.

E. O. Moriarty, Esq.	|	P. F. Adams, Esq.
F. H. Grundy, Esq.	|	W. C. Bennett, Esq.

Reports relative to the water supply of New York and Boston, laid on the table.

Mr. Moriarty reported that the survey and section from Pheasant's Nest to Sugarloaf was completed, and laid on the table the field plans of that portion. He also laid on the table the plan and section of the line from Prospect to Sydney; also, sketches of iron aqueducts proposed by him for certain portions of the line, and sections of open conduits. Mr. Moriarty also reported the results of gauging the Cataract and the combined waters of the Nepean and Cordeaux, by which it appeared that the daily discharge for the week ending December 12 averaged about $5\frac{1}{2}$ million gallons.

Mr. Grundy reported that his field work was completed, and his camp brought to Sydney. Mr. Bennett produced plans and sections connected with the Botany Swamps, and calculations of the overflow of water at the engine pond. It was resolved that a letter be written to the Mayor, informing him that the Commissioners are desirous of ascertaining, by actual observation, how many gallons of water the engines at Botany are capable of sending into the Crown-street reservoir in a given time, and requesting him to be good enough to issue such instructions to those in charge of the engines and reservoir as will facilitate these observations which E. O. Moriarty, Esq., and W. C. Bennett, Esq., have been deputed by the Commissioners to make.

As the present Commission will expire on the 23rd instant, the President brought up a Progress Report (being the third) which was adopted, and ordered to be transmitted to the Colonial Secretary.

The Secretary was instructed to furnish the Colonial Secretary with a statement of the expenditure and liabilities of the Commission up to the present date, and to request that a further sum of £600 be placed to the credit of the Commission in the Bank of New South Wales.

19 *FEBRUARY*, 1869.

PRESENT:—

Professor Smith, M.D., President.

E. O. Moriarty, Esq.	|	P. F. Adams, Esq.
F. H. Grundy, Esq.	|	W. C. Bennett, Esq.

Various letters read.

Messrs. Moriarty and Bennett reported that they had visited the Botany Swamps on February 1st, before the breaking up of the drought. The stream supplying the tunnel was delivering about 5,000 gallons per day; men were employed opening drains through the swamps; the dams were empty.

Mr. Bennett reported that he had visited the swamps three days later. The water was running into the engine pond at the rate of about $3\frac{1}{2}$ million gallons daily, in consequence of the opening of drains to allow the water to flow.

Mr.

Mr. Moriarty reported that his surveys were complete, the plans and sections were being photographed; also, that he had prepared designs of the principal aqueducts. He further reported that, on examining the section from Prospect to Sydney, it appeared to him that the site of the larger reservoir at Prospect (the more northerly of the two submitted by Mr. Grundy at the meeting of 22nd August, 1868) ought to be adopted. The water surface would be about 1,200 acres, at a height of 195 feet above sea level; and if the water were drawn off at 24 feet below the surface, it would be capable of yielding 5,000 million gallons. From the reservoir the water would be carried in an open conduit about 5 miles, and by an iron aqueduct for 3 miles further. It would deliver the water 170 feet above sea level, at the high ground at the head of Duck Creek, about 11 miles from Sydney. There will be piping from thence to Sydney.

Mr. Grundy reported that his plans were in progress, and one sheet in the hands of the photographer.

The President laid on the table the results of the analysis of ten more specimens of water. The gaugings of the River Nepean and Cataract, from the 11th to the 20th of February, were laid on the table.

The Secretary was instructed to write to the Town Clerk, requesting a return of water pumped up to Sydney in 1868, and in each week of 1869 up to this date; also, quoting questions 1434 and 1435 of the evidence given by the City Engineer, to request returns of the gross water revenue and expenditure for each of the last three years.

6 MARCH, 1869.

PRESENT:—

Professor Smith, M.D., President.

E. O. Moriarty, Esq.
F. H. Grundy, Esq.

P. F. Adams, Esq.
W. C. Bennett, Esq.

A letter was read from the Town Clerk, of date February 26th, in answer to a letter from the Commission, of date February 17th, respecting the arrangement which Messrs. Moriarty and Bennett desired should be made, to enable them to ascertain the quantity of water pumped into Sydney in a given time, and informing them that instructions had been given to have the supply of water to the city shut off from the reservoir, on Tuesday, March 2nd, between the hours of 9 p.m. and 12.

Also, another letter of same date, transmitting a statement shewing the Revenue and Expenditure of the Municipal Council on account of the Water Supply to the City and Suburbs, for the years 1866, 67, and 68.

Also, a letter from the Town Clerk, of date February 26th, transmitting a return shewing the quantity of water pumped up from Botany during the year 1868, and for each week of the present year up to the 20th January; from which it appeared that the quantity pumped during the year 1868 was 1,222,540,272 gallons:—

Week ending 2 January, 1869	.....	30,081,024	gallons.
9	”	.....	28,799,120
16	”	.....	31,495,680
23	”	.....	30,611,200
30	”	.....	30,064,752
6 February,	”	.....	29,774,736
13	”	.....	27,590,400
20	”	.....	24,935,472

The results of the gaugings at the Rivers Nepean and Cataract, showing a discharge, on the 7th of March, of 11,009,464 gallons, were laid on the table.

Mr. Moriarty gave a rough estimate of the probable cost of conduit, &c., along the portion of the line surveyed under his directions; also, an accurate estimate of the quantity of water that could be contained in the Prospect Reservoir; from which it appeared that, by the construction of a dam, 80 feet at the highest point, a reservoir would be formed, capable of containing 7,450 million gallons.

The Secretary was instructed to write to the Colonial Secretary, requesting a further advance of £600 towards defraying the expenses of the Commission to the 23rd of March.

20 MARCH, 1869.

PRESENT:—

Professor Smith, M.D., President.

P. F. Adams, Esq.

F. H. Grundy, Esq.

W. C. Bennett, Esq.

Mr. Adams produced a plan (in course of compilation at the Surveyor General's Office) shewing the various possible sources of water supply under consideration by the Commissioners.

It

It was resolved that a section should be made of George's River, near Koggerah, in order to determine the expense of damming the river; and also, a section between George's River and Woollli Creek.

As the Commission expires on the 23rd instant, the President brought up a Fourth Progress Report, which was adopted, and ordered to be transmitted to the Colonial Secretary.

22 APRIL, 1869.

PRESENT :—

Professor Smith, M.D., President.

E. O. Moriarty, Esq.
F. H. Grundy, Esq.

P. F. Adams, Esq.
W. C. Bennett, Esq.

A letter was read from the Colonial Secretary, accompanying a renewed Commission extending the inquiry into the Water Supply of Sydney till 23rd May, 1869.

The following letter was read from Mr. Woore to the President :—

Pomeroy, 25 March, 1869.

My dear Dr. Smith,

I find, by a lithograph map of Cumberland, on which Mr. Adams has marked the line of duct the Commission recommend, and sent to me, that it is exactly the same as that I laid before the Minister of Works, on the 6th November, 1866, and again placed at the disposal of the Commission, the 27th November, 1867; it should therefore, in justice, be shewn on the map that accompanies the Report, as originally surveyed and proposed by me. May I request you will see to this.

Yours truly,

THOMAS WOORE.

The Secretary was instructed to compare the plans and sections of the two lines indicated, in order to ascertain to what extent they coincide.

Three letters from Mr. Holt to the President were read, on the subject of George's River as a source of supply. (*See Appendix.*)

Lithographed plans of a part of the line from Pheasant's Nest, surveyed under the direction of Messrs. Moriarty and Grundy, were laid on the table.

Mr. Bennett produced a section of a masonry dam such as would be required for the gorge of the Warragamba, on the same principle that dams of a similar height have lately been constructed in France; also, a plan shewing the present source of supply, and proposed improvements.

Mr. Moriarty laid on the table a plan and cross sections of George's River, at Tom Ugly's and Kangaroo Points, together with a plan and section between Saltpan and Woollli Creeks; also, cross sections proposed by him for the line of conduit from Pheasant's Nest to Sydney.

Mr. Adams laid on the table a plan shewing the various sources of supply examined by the Commission.

6 MAY, 1869.

PRESENT :—

Professor Smith, M.D., President.

E. O. Moriarty, Esq.
F. H. Grundy, Esq.

P. F. Adams, Esq.
T. Woore, Esq.

W. C. Bennett, Esq.

The Secretary produced a plan and section shewing the relation between the line of aqueduct from Prospect to Sydney, surveyed by the Water Commission, and that submitted by Mr. Woore. It was resolved that Mr. Woore's line should be shewn, along with that of the Commission, on the map being prepared by the Surveyor General.

A section on the line from Pheasant's Nest to Sydney, on a scale of 2 miles to the inch horizontal, and 200 feet to the inch vertical, was laid on the table.

A letter from Mr. Holt to the President was read, on the subject of damming George's River, and supplying Sydney from thence.

Mr.

Mr. Grundy read a paper on the water available for storage from the Nepean and Cataract, calculated from the gaugings that have been taken since October, 1868.

A discussion ensued on the storage reservoir at Prospect, and on the means of supplying the higher levels of Sydney and Suburbs; and it was considered advisable to have a second reservoir of smaller capacity, and at a higher level, with a separate pipe to Sydney, capable of delivering water into Sydney at a height of about 225 feet.

22 *MAY*, 1869.

PRESENT :—

Professor Smith, M.D., President.

E. O. Moriarty, Esq.

P. F. Adams, Esq.

F. H. Grundy, Esq.

W. C. Bennett, Esq.

Discussion resumed on the means of supplying the high levels of Sydney with water.

The President was requested to make arrangements for taking the Rev. W. B. Clarke, along with a deputation of the Commissioners, to inspect the geological deposits on the sites of the proposed reservoirs.

The Secretary was instructed to write to the Town Clerk, requesting that he will furnish the Commission with a return of the rainfall on the Botany Swamps, as determined by the gauge recently established there by the City Engineer.

The Secretary was instructed to furnish an abstract of the expenditure of the Commission up to date, and to apply for a further advance of £208 towards defraying the expenses of the Commission.

As the Commission expires to-morrow, the question of a further extension was discussed; but as the Commissioners have no new work in contemplation, and as the Final Report is in progress, it was considered unadvisable to ask the Government for a renewed Commission.

MINUTES OF EVIDENCE

TAKEN BEFORE

THE COMMISSION

APPOINTED TO INQUIRE INTO THE

WATER SUPPLY OF SYDNEY AND ITS SUBURBS.

TUESDAY, 22 OCTOBER, 1867.

Present :—

PROFESSOR SMITH, M.D.,	MR. PHILIP FRANCIS ADAMS,
MR. EDWARD ORPEN MORIARTY,	MR. FRANCIS HENRY GRUNDY,
MR. THOMAS WOORE.	

PROFESSOR SMITH, M.D., IN THE CHAIR.

Charles Moore, Esq., Mayor of Sydney, called in and examined :—

1. *President.*] In your capacity as Mayor, I suppose you have given a good deal of attention to the water supply of Sydney? Yes. C. Moore,
Esq.
2. We must, of course, expect information with regard to the details from the City Engineer, but I wish to ask you whether it is your opinion that the present supply is sufficient for the present inhabitants? When the dams in course of construction are completed, I think the supply will be amply sufficient. It will be adequate, I dare say, for twenty-five or thirty years to come. 22 Oct., 1867.
3. You think that, without the dams, the Botany stream is not sufficient? I think it would not be sufficient.
4. During your tenure of office, have there been in the city any complaints of the scarcity of water? I cannot say that there have been any complaints of the scarcity of water, unless they were during last February, when the weather was very dry, and we were obliged to shorten the supply.
5. You have had to put the city on short allowance? Yes.
6. Has that been done to such an extent, do you think, as seriously to inconvenience the inhabitants? No, it was done more particularly for the purpose of avoiding the supply at night. We shut it off from 6 at night till 6 in the morning. More water is always wasted during the night than during the day-time. It is allowed to run for the purpose of flushing closets and places of that kind. We always found that there was more waste at night, and consequently, during that dry time, we shut off the water at night.
7. During the day you think there was a plentiful supply? I think there was plenty of water in the day-time.
8. And that at night a great deal was wasted? No doubt; we were under the impression at the time that a great deal was wasted during the nights.
9. The complaints then, I suppose, were chiefly in regard to the probability of delay in the case of fires at night? The complaints were chiefly in regard to fires.
10. What arrangements did you make in regard to fires when the water was shut off at night? We had turncocks stationed at the reservoirs for the purpose of turning on the water in case of fires.
11. Do you think that by such an arrangement the water could be turned on with sufficient promptitude to meet such cases? I think so.
12. And do you think that plan resulted in a great saving of water? I think it effected a great saving of water. I believe the expenses were almost one-third less than usual.
13. But this shutting off of the water was not done to effect an economy of money: the object, as I understand you, was to economize the water? The object was to economize the water. It was not a question of money at all.
14. Have you any idea what is the principal cause of the waste of water during the night? I have heard that many of the large institutions, the banks for instance, keep the water running all night for the purpose of flushing closets and other places. They are under special rates, and they are not very saving of the water.
15. Are they simply rated, or do they pay by meter? They are rated at so much per year.

- C. Moore, Esq.
22 Oct., 1867.
16. Would not the general introduction of water meters be a great source of economy in regard to the use of water? I have no faith in water meters, because I do not believe that, as a general rule, they act well. It all depends upon the force of the water how a water meter will act. But Mr. Bell will be able to give you more full information upon this subject.
17. That would be a practical objection to the present water meters; but supposing you had a simple apparatus to measure accurately the water consumed, would not that be a great source of economy? No doubt it would; but I believe the force of water in a water meter would act very differently in some places to what it would in others.
18. Have you given any consideration to other schemes of water supply besides the present? I have heard and thought of many schemes, but at present I do not see anything better than the present dams for husbanding the water.
19. Still, if the matter had to be entered on anew, do you think the Botany stream would be the best source for a supply of water to the city? I think so. I firmly believe it would be the best.
20. Even if the matter were to be commenced anew? Even if it were to be commenced anew.
21. It is during your tenure of office, I think, that the dams have been constructed? I think they were begun after I came into office.
22. I believe no dam has yet been thoroughly tried? No. They will be finished, I hope, during the present year, and tried.
23. Your opinion is, then, that if it should turn out that these dams are not effectual, the Botany stream will not be sufficient to supply the inhabitants—You see, the dams are an experiment: supposing they turn out to be inefficient, do you think some other scheme must be tried? The Botany stream (*i.e.*, its volume) will not be affected in any way by the dams. If the present dams do not turn out sufficient to check the current, some other scheme must be adopted, such as pumping the water into Sydney, and storing it there, instead of letting it run into the sea as at present.
24. What I want to gather is this: Whether, in your opinion, the sufficiency of the present water supply depends upon the efficiency of these dams? Last year we had what I call a fair supply without the dams, and this year, when the dams are finished, we expect a better supply—a supply sufficient for years to come.
25. I think that last year was rather rainy—that there was more than the average rainfall? I did not pay any attention to that. A large amount of water runs to waste now, in consequence of there being no adequate means of keeping it back.
26. Supposing that provision for a supply had to be commenced anew, do you think it would be better to expend a larger sum in order to get a supply by gravitation; or have you sufficient confidence in pumping arrangements for the supply of a large city? I have sufficient confidence in the present arrangement to think it will be sufficient for the next twenty-five or thirty years.
27. But you would not like to look further forward than that? No; our city increases every year, and with an increase in population we must have a greater supply.
28. And do you think that the Botany stream is not capable of providing for the wants of the city to a distant future? I do not think it is capable of providing for the wants of the city for more than twenty or twenty-five years—I candidly confess it; but it will do for twenty-five years.
29. *Mr. Moore.*] That is, supposing these dams which you are now making are water-tight? We do not expect them to be water-tight, but we expect them to keep back water to a certain extent. Some water must go through.
30. Then your opinion depends upon how much they will retain—If they do not retain any large quantity, there will not be sufficient water to supply the city for twenty-five years? Not if they do not retain as much as we expect them to do; but if they do, the supply will be sufficient.
31. Then it rests, as Dr. Smith said in a question he put to you a short time ago, upon the efficiency of the dams? No doubt of it.
32. *Mr. Adams.*] Has not the water been stopped on several occasions from watering the streets? That was only during the month of February, I think, and for only a short time.
33. Did that take place in consequence of a scarcity of water? Yes; there was water, but we had no means of keeping it back.
34. *Mr. Moriarty.*] I would like to ask your Worship what is the present population of the city—about? I cannot give you any idea.
35. In estimating that the supply will be sufficient for the next twenty-five years, have you formed any estimate of the probable ratio of increase of the inhabitants? I have come to the conclusion, taking into consideration the increased population, that with these dams there will be an ample supply of water for the next twenty-five years.
36. But have you based that upon any numerical results? No, I have not gone into figures at all.
37. Have you estimated any allowance per head on the increase? No, I have not gone into detail at all.
38. I think you said that the water was shut off—particularly during the nights—some time this year? Yes.
39. Do you not think that the night supply is almost as necessary as the day supply? No doubt it is in cases of fire; but we find that there is a much larger amount of water wasted during the night than there is during the day.
40. In a town of the importance of Sydney, and in a climate like this, are you not of opinion that water should be freely wasted? No doubt about it.

41. That you should have as much water as you can freely use or waste? There is no doubt about it.
42. Do you not think that the night flushing of closets is absolutely essential to the preservation of the health of the people who reside in the houses? No doubt.
43. And you think it is a practice which ought to be encouraged? I do.
44. Then the night supply should be kept on if possible? No doubt.
45. For about how long was the night supply shut off from the city? I think not more than about five or six weeks: that is all.
46. About what time of the year was that? About February, if I recollect rightly. Then it was shut off principally in consequence of excavating a dam. We were obliged to keep the water lower. The weather too was dry. Both circumstances occurred together. We were sinking the dam for the purpose of taking out some matter which had remained there for some time.
47. Has it ever come to your knowledge of late years that the supply of water to the city has been short, or that it has been complained of? I am not aware that it has.
48. Never before this last year? Never before last year.
49. You never heard complaints in consequence of the water being cut off from watering the streets? In some streets the hydrants are not laid on, and therefore they could not be watered. Unless the parties petitioned, the water could not be laid on.
50. But when hydrants are laid down in such streets as George-street, has it ever occurred that the water has been shut off? Not to my knowledge, until about February last.
51. Have you ever heard complaints as to the quality of the water in dry seasons? Never.
52. *Mr. Grundy.*] I think you stated that the arrangement made by which the water cut off at night could be readily turned on in case of fire, was considered sufficient? Yes.
53. Is it not a fact that, on one or more occasions, fire-engines had to wait a considerable period for a supply of water? I am not aware that such has been the case.
54. It was so stated, at any rate? It might have been so stated, but many things are stated which are not facts.
55. How do you know whether that was a fact or not? I do not know. I do not think it was.
56. It is an extremely important thing, in case of fire, that water should be obtained without delay—Much damage would be done if a supply were not forthcoming for ten minutes or a quarter of an hour? No doubt; but the turncocks are there, and the water can be turned on at once. Inquiries have been made, and it has been almost always found that the water has been ready almost as soon as the fire brigades were ready to use it.
57. Almost—not always? In one instance there was a delay, but it was found to arise out of a dispute as to whether the Volunteer Company or another should first attach their hose.
58. You do not think there was any loss sustained in consequence of want of water? I am sure there was not.
59. *Mr. Woore.*] How do you ascertain that there is greater waste during the night than during the day? We can tell from the amount pumped in from Botany. We have a return sent in weekly of the amount supplied.
60. You know the amount pumped up? Yes.
61. But that would not give you the amount of waste, would it? Of course it would not.
62. You pump it into reservoirs? Yes, into the reservoir in Crown-street and Paddington.

C. Moore,
Esq.

22 Oct., 1867.

SATURDAY, 26 OCTOBER, 1867.

Present:—

MR. MORIARTY,
MR. WOORE,MR. ADAMS,
MR. GRUNDY.

PROFESSOR SMITH, M.D., (PRESIDENT), IN THE CHAIR.

Edward Bell, Esq., M. Inst. C. E., City Engineer, called in and examined:—

63. *President.*] In your capacity as City Engineer, I suppose you have charge of the Waterworks? Yes.
64. How long have you had this charge? Nearly twelve years—eleven years and three-quarters.
65. Was the present scheme of supply entered upon before you took office? The scheme was entered upon.
66. But it was not fully carried out? The Botany works were not commenced.
67. They were not actually commenced? No; some of the machinery had been ordered.
68. Then, the general scheme had been determined upon, but the works had not been commenced? No.
69. So that, although you are not responsible for the scheme, you have carried out the details? Yes. Some of the machinery was ordered before I came to the Colony. The 30-inch main was ordered, and a set of engines, but not the engines at present in use.
70. I understand that Sydney is supplied at present with water partly by the old tunnel from the Lachlan Swamp and partly by the pumping engine at Botany? It is.
71. Could you inform us how much of the city is supplied from each of those sources? Not exactly.
72. They are not kept distinct? They are kept distinct, but the extent of the different supplies varies according to circumstances. At one season of the year a much larger part is supplied from the Lachlan Swamp than in the drier seasons. The lower parts of Woolloomooloo

E. Bell, Esq.,
M.I.C.E., C.E.

26 Oct., 1867.

E. Bell, Esq., mooloo and the lowest parts of Kent and Sussex Streets between Bathurst-street and M.I.C.E., C.E. Erskine-street, are nearly always supplied from the tunnel. The remainder of the city is supplied from Botany.

- 26 Oct., 1867. 73. I believe the tunnel is liable to get out of order occasionally, and that when this takes place the supply stops? I know of only one instance. It has occurred but once during the last twelve years.
74. In such a case, have you the means of supplying those parts of the city with water from Botany? We have—the whole of them.
75. The Botany water, I believe, is pumped up into two reservoirs—What are the elevations of those two reservoirs above the sea? One is 136 feet, and the other 224 feet.
76. The elevation of the Crown-street reservoir is 136 feet? Yes.
77. And the elevation of the Paddington reservoir is? 224 feet above the level of the sea.
78. If the supply from the tunnel and the supply from the reservoirs run into the same pipe, how do you prevent regurgitation into the tunnel? The one service is shut off while the other is put on.
79. They do not flow at the same time? No; one service is entirely shut off while the other is in operation. The Paddington reservoir is entirely confined to its own district—the higher parts of Darlinghurst and Bourke and Crown Streets.
80. Is it your opinion that the water of the Botany stream is derived entirely from the rainfall on its drainage area, or that there may be springs bringing water from some other drainage area? I fancy that there must be springs.
81. I ask the question, because, on the occasion of our visit in your company to the Lachlan Swamp, I was struck with that comparatively large stream of clear water running down towards the tunnel, and it did not seem to me possible that the watershed within our view was sufficient to supply that stream—Have you ever traced that stream to its source? I have traced it a long way towards its source, and the supply was equally great, or in fact, greater, as we approached its source. The stream increased in volume on removing the sand, to let the water come more freely away from the hills near and at Waverley.
82. So that you infer there is a spring? I always did. I feel certain that there is a spring there. When more water is required from Lachlan Swamp, I have only to send men to clear away the sand-drift and the water flows more freely.
83. After allowing for evaporation, do you think all the rainfall drains off by the surface streams, or may a portion of the water find its way to the sea by percolation under ground? I do not think that any of it finds its way to the sea by percolation under ground.
84. You think it all passes from the surface? The rock crops out along the margin of Botany Bay to some little distance westward of the Waterworks. I think I have traced it nearly to the neighbourhood of La Perouse's Monument. Above that, the rock dips at an inclination of something like 1 in $1\frac{1}{2}$ or 1 in 2; and the surface of the stone is covered with clay as far as I have traced it—very compact, tenacious clay.
85. Then you think that the whole of the rainfall on the area may be accounted for in two ways,—that it passes off either by evaporation or by the surface streams? Yes.
86. Have you estimated the superficial area that drains into the tunnel? I think I did some years back, but I cannot tell you at this moment what that estimate was. I find, on reference to memoranda, that the superficial area draining into the tunnel is about 756 acres.
87. I see that there is a statement in regard to this matter in the Water Report of 1852, but I wish to know if you have verified that statement? Not since.
88. Have you made any general estimate of the drainage area of the whole of the Botany swamps? Yes; you mean the catch-water or water-shed?
89. Yes? I think it is as nearly as possible 10 square miles.
90. In the Water Supply Report of 1852, paragraph 211, it is said that a very slight engineering work will convey the drainage of 1,800 acres into Bird's Gully. Has that engineering work ever been done—has the water upon this land ever been conveyed into Bird's Gully? No.
91. Do you know from observation, whether it is a fact that a slight engineering work would convey this drainage into Bird's Gully? I think a good deal of drainage could be taken in there, but I would not speak confidently with regard to the acreage.
92. Are you aware whether the rainfall has been determined on any portion of this drainage area? I am not.
93. What amount of water is pumped up daily at the present time from Botany? From about 2 o'clock on Monday morning to about 2 p.m. on Saturday, a little over 20,000,000 gallons. In the winter-time it is about 14,000,000. The last return is 20,130,000 gallons. That is for the week ending 19 October.
94. That was the quantity supplied in the week? That was supplied in the week.
95. And in the winter-time you say the supply is about 14,000,000 a week? In the months of March and April it averaged from 12,500,000 gallons to 13,500,000.
96. That is still per week? Yes. At the beginning of the month of May the supply was 15,000,000. Towards the end of the month it rose to 19,000,000, but there was a special reason for that increase. The supply during the winter may be taken at an average of from 13,000,000 to 15,000,000 gallons, and it will extend now most likely to 22,000,000 gallons in the summer months.
97. The quantity pumped up is regulated, I suppose, by the condition of the reservoirs? Yes; when the reservoirs are full the engines stop.
98. Is it necessary at present to keep pumping continuously from Monday morning until Saturday? No. With one engine it would be necessary, but one is not sufficient; with two engines we stop occasionally four or five hours in the day; and we stop always, from 2 o'clock p.m. on Saturday, till 2 o'clock a.m. on Monday. 99.

99. How much water could the present pumping arrangements send up to Sydney? *E. Bell, Esq., M.I.C.E., C.E.*
Pumping the seven days through?
100. Yes; but not working the engines beyond their proper capability? Of course not. For nine months in the year, during wet seasons, the three engines could very well send in 26 Oct., 1867.
50,000,000 gallons per week—or 1,950,000,000, in the nine months.
101. *Mr. Grundy.*] Why do you say for nine months? Because the engines would want something doing to them occasionally. Three engines would work and keep in good order, without stoppage of any kind, beyond three or four hours at a time, for nine months of the year, and I have allowed for casual stoppages in the quantity I have stated. During other three months of the years, supposing each engine to be stopped for adjustment or repairs one month, and two of the engines to be constantly working, they would send in 32,000,000 gallons per week, or 416,000,000 in the three months; this, together with the before-mentioned quantity of 1,950,000,000, would make 2,366,000,000 gallons of water in the twelve months, or three times the quantity which is now pumped into Sydney.
102. *Mr. Moriarty.*] What is the power of the engines you have at work? Three hundred: they work exactly to a hundred each.
103. *President.*] Have you any mode of ascertaining the amount of water that at present escapes into the sea? Yes; by the weir and the sluices, with tolerable accuracy; but I have no means of calculating or ascertaining the quantity which flows over the margin of the engine pond at Botany, and passes over the surface of the paddock into the creek on the eastern side of Botany Reserve, and thus finds its way into the sea; the quantity is, however, very great.
104. Do you from time to time estimate the waste? Yes; by the weir and the sluices I am enabled to give a tolerably correct return. I make my calculations from the returns which come up to me from Botany. Fortunately, this year I have had a register kept of the depth of the water which passes over the weir, and the height to which the gates have been raised, each and every day. There are two sluice gates, each 45 inches wide, and one waste weir, 8 feet 7 inches in width. I submit a return, prepared from the daily register, in a tabular form, shewing the height the gates were lifted, the depth of water passed over the weir, and the head of water above the sill of the sluice gates each day. From the 24th March in this year to the 15th October, the gates were shut only eight days. The height both gates were lifted ranged from 6 inches to 45 inches. The depth of the water over the weir ranged from 1 inch to 10 inches. I calculate the minimum quantity that passed over the weir at 749,869,501 gallons.
105. During what period has that water escaped? From the 24th March, to the 15th October, over the weir and through the flood-gates. The quantity which escaped was 10,148,220,000 gallons, making a total, through sluices and over the weir, of 10,898,089,501 gallons. I have annexed hereto, marked Appendix A, a register of the depths of water passed over the waste weir, and of the heights the flood-gates were open daily from 24th March to the 24th October, 1867. The above quantity would be more than sufficient to supply the present population of Sydney and the suburbs for six years, at the rate of 40 gallons per head per diem.
106. That period, however, includes (I think) a time when the rainfall was unusual? It was the wet season in the Colony. The rain had been excessive; but I think the quantity that flowed across the paddock and passed away to the sea, through the creek, would compensate for the excessive difference.
107. You think that the excessive rainfall of this season would have passed over in that way, and that you cannot estimate it? In ordinary seasons sometimes the flow is greater than at others. But this has been an extraordinary season, and the quantity of water that must have passed over the paddock and through the creek will meet the extraordinary difference which has taken place this year.
108. On the occasion of the visit of the Commission, a few days ago, to the Botany Works, there was no water running over the weir, but there seemed to be a considerable leakage between the dam and the waste water canal—can you give any estimate of that leakage? I tried it yesterday. There was none coming in at the head of the race. I tried it again a few days since, and found equal to half an inch over the small weir, 8 feet 7 inches wide, by the side of the pond. I have not reckoned the quantity running to waste across the paddock, in these calculations.
109. At present is there water still running to waste into the sea? There would be, but some of the locks are shut at the dams up above. To-morrow (Sunday), there will be. To-day, two engines are working, and the locks in some of the dams being shut, the two engines are capable of sending into Sydney the water which runs into the swamps, between the locks which are shut and the engines. When the reservoirs are full, which will be in the course of this (Saturday) afternoon, the water will pass over the weir into the sea.
110. If the water were not kept back to-day, would there be water running into the sea? As soon as the engines cease working, it will overflow into the sea. The water is now as high as the edge of the weir.
111. In the beginning of the present year, before the heavy rains set in, was it the case, or not, that the supply of water was short on some occasions? Yes.
112. Had the engines then to be stopped on any occasion simply from the want of water? No.
113. Then why was not the supply kept up as long as there was water to be pumped? The engines would have been stopped if the street watering had not ceased. We ceased, for a time, to water the streets.
114. So that you economized the water in Sydney? Yes, by stopping the watering of the streets.

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115. On that occasion, if the usual amount had been consumed in Sydney, do you think there really would not have been enough water to pump up? I think there would not have been enough to pump up, because the water which should have been at our service to pump had all run into the sea. We have no convenience in Sydney to keep it. I mean no storage reservoirs. It is very probable that we shall be in want of water again this year from the very same cause as last year, 10,000,000,000 of gallons having, as I have shewn, run into the sea in the last six months.

116. What I am leading to is, that the stream does not run all the year round at such a rate as to supply the engines? It does not run at such a rate as to supply the two engines—it would supply one very well.

117. And therefore, without some means of preserving the excess in the rainy period, the present supply would not be sufficiently abundant? The stream itself will not be sufficient. At one season of the year, for about six weeks, it requires supplementing to the extent of about 1,250,000 gallons per diem; during the remainder of the year the supply is super-abundant.

118. How many dams have been constructed, up to the present time, in the course of the stream? Six; one in course of construction.

119. Have you calculated how much water can be stored in these dams when completed? There are six in addition to the engine pond and the pond immediately above it within our own reserve. Those six dams will hold 200,000,000 gallons; the engine pond 10,000,000, and the upper pond 44,000,000, making 254,000,000 gallons altogether, which will be retained by the dams above the surface of the swamps. There will be a very large quantity in addition to this, which will be kept back below the surface of the swamps, and in the sandhills, which will not be able to drain away from them until the water retained by the dams above the surface of the swamps has been let off. This quantity is very considerable, and will be more so when all the dams are made. However, the 254,000,000 gallons will be sufficient at the present time to supplement the stream for 177 days, at the rate of 2,000,000 gallons per diem.

120. It is admitted, I believe, that these dams will not be watertight? Yes, they were never expected to be.

121. For how long a time do you suppose they would remain full if the supply of water were cut off? If it were cut off from the stream?

122. Yes? It would be a mere guess. Until they are completed I should not like to say. It would be some considerable length of time. The stream itself will keep the dams full for more than ten months in the year; the remainder of the year the water held in the dams would be used to supplement the stream.

123. The principal utility of these dams would be to preserve the excess of water at one period to supply the deficiency at another? That is one of the objects.

124. But if they would not hold water, say for three months, they would not so equalize the supply? They will retain the water in the swamps, for a considerably longer period than three months, and the stream has never yet required augmenting for a longer period than five or six weeks. There are two important uses in these dams: one is, to retain some of the water, which now finds its way rapidly to the sea, in the swamps longer than at present; and the other is, to afford us more control over the supply to the engine pond. At present, if anything occurs to the wells or machinery in them, at Botany, we have no means of getting at the supply-pipe to the engine without opening the sluice-gates, and letting all the water run away into the sea, whatever may be the season of the year. One of the most important objects in making these dams was, by shutting the sluices in them to enable us to keep the water back while we empty the reservoirs by the engines. Thus, by letting the stream flow only sufficiently fast to supply the engine, we could effect any repairs or work to the engine pond, or the pipes which take the supply from the pond to the engines, at any time, without wasting the water or stopping the engines. The next important object is, to keep the water back in the swamps for a greater length of time than we are now able, in order that during the dry season we may be enabled to supplement the stream sufficiently to keep up a supply equal to the present consumption of Sydney. In the year 1856, during the dry season, I gauged the quantity of water which the stream afforded, and have annexed hereto the result (Appendix B). By this it will be seen that, at the driest season, the stream afforded nearly 2,000,000 gallons per diem, and then the woolwashing dams were in operation. My reports on the gauging are annexed, marked Appendix B.

125. Still, if they are not watertight, their equalizing power cannot be very great? If they were quite watertight, we should have to keep the valve open to let the stream down in order to supply the engines; if they are not, we shall not keep the valve open to a greater height than is necessary to supply the engines—we shall merely supplement the filtration.

126. But supposing we had no rainfall for (say) six months, and the natural stream had stopped, or nearly so, would these dams equalize the supply over those six months? Probably not; I cannot undertake to say that they would or would not, because the demand is increasing every year; we must then construct the remainder of the dams projected, and some reservoirs in or near Sydney, such as I recommended in 1856. I then suggested that as the demand increased, reservoirs should be made to hold a sufficient supply, and that in future years as much as five or six millions of gallons per day more than was required for consumption in wet seasons should be pumped into Sydney, to meet the requirements of dry seasons. I made those suggestions to the City Commissioners, and prepared a plan in 1856, shewing the situation for such reservoirs in Hyde Park, which might be supplied by gravitation from the tunnel. I proposed to raise the bank, which you inspected on the Lachlan Reserve, two or three feet, and to bring all the water that now escapes over that bank

bank into the lower swamps, into Sydney through the tunnel, and deposit it in reservoirs under the Racecourse. I also suggested that the reservoirs in Hyde Park could be supplied from the low-level reservoir, that reservoir being about 24 feet above the level of Hyde Park.

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127. Perhaps you could furnish the Commission with a copy of that report upon the subject? There is no report upon the subject: there is a plan, of which I have a copy annexed, marked Appendix C. The overflow from the Lachlan Swamp was to come into the reservoirs under Hyde Park by gravitation; and any further quantity that was necessary to fill these reservoirs in Hyde Park was to be taken from the low-level reservoir and pass through ornamental fountains in Hyde Park before going into the reservoirs which I proposed to construct under the surface. You will find some reference to that subject, I think, in evidence I gave in 1862.

128. Was that evidence given on the occasion of an inquiry by the Legislature? Yes, before a Select Committee. On page 13 of the evidence, question 279, you will see that I told the Committee—"It will be necessary at some future time to go to a considerable expense to store the water in the swamps between the Racecourse and Botany. It will be necessary to put some impediments in its way, and to cause it to come down more by filtration; and, in addition, it will be necessary to make a store for water in or near Sydney." That was in 1862; but there was a large report before that of 1862, in which my evidence of the same purport is given. I think it was on the occasion of an inquiry into the state of the City Commissioners' Department.

129. You perhaps could supply us afterwards with a copy of the plan of these Sydney reservoirs? It is a plan showing how the Park was to be laid out. The reservoirs were indicated by dotted spaces. My idea was, to put a very large reservoir or pond in the neighbourhood of Paddington, another at Waverley, another at Newtown, and another, of smaller dimensions, at the Glebe.

130. Were you in Sydney during any of the periods of great drought that have occurred? Not prior to 1856.

131. The last great drought was in 1849? I was not here. I have heard of that drought, and I know a great deal about it, from what I have been told; and for that reason, I conceived that it was necessary to store some hundreds of millions of gallons of water in Sydney, or in the neighbourhood of Sydney which would be far better.

132. In the Water Supply Report of 1852 it is mentioned that, in 1849, the water at the tunnel mouth fell to 3 inches, from its usual height of 2 feet 8 inches. Mr. Clarke, being examined, said—"The water decreased very considerably for the first year I had charge of the works, insomuch that the depth of the water at the eastern end of the tunnel decreased to 3 inches, from its usual height—2 feet 8 inches." That was in 1849? I think in 1856 it was nearly as low, until I sent men to the hills at Waverley to clear away the sand. When this was done, every day shewed an increase of 2, 3, and sometimes 4 inches, until we got a very good supply.

133. In 1849 the public records shew that $21\frac{1}{2}$ inches of rain fell at the South Head? Yes.

134. When the dams on the Botany stream are completed, do you think the supply could be trusted in such a drought as that which is described in the year 1849? We could not trust to those dams alone—certainly not. Six only are being made, out of ten or eleven which are necessary.

135. So that, in fact, the present arrangements could not be trusted to supply Sydney with water, in such a drought as that which occurred in the year 1849? They could not, so far as our present arrangements have gone; but if the whole scheme is carried out, I believe that with only one reservoir near the town, capable of containing 1,000,000 cubic yards, we could supply Sydney and the suburbs for the next fifteen years, without any additional works. There has been water running to waste, during the past six months, sufficient to supply Sydney for five years without a drop being added to it from the ordinary stream—there has been an enormous overflow into the sea at Botany for the last eleven years, to my knowledge, during the wet season. If only 40,000,000 of gallons of this water had been pumped into a storage reservoir each year, or had been retained in the swamps, Sydney would have been most abundantly supplied every year.

136. But then you think the dams on the Botany stream ought to be supplemented by watertight reservoirs in Sydney? Yes. I would rather have them near Sydney. There should be one on Hyde Park, to take the overflow from the Lachlan Swamp. There should be also, as I have previously stated, a very large reservoir at Paddington; another at Waverley, of smaller dimensions; another at Newtown; and another at the Glebe. It is not so important that there should be one at the Glebe, but it is necessary that Newtown should have a reservoir in its locality, as we can supply it more conveniently from Botany than from Sydney.

137. Do you know what amount of water is delivered daily at the Hyde Park end of the tunnel? I cannot say positively, but I believe it is about 3,000,000 of gallons per week.

138. There is no convenient mode of determining the quantity of water delivered? No.

139. Do you think that anything should be done to render the supply through the tunnel more permanent—I mean to prevent the effect of any accident? Yes; I have recommended, more than once, that pipes should be used—that an iron main should be run through the tunnel to bring the water to Sydney; and that the tunnel round the pipes should be filled. That would prevent any stoppage in future.

140. Could that be done without opening up the tunnel? Yes.

141. Have you made any estimate of the expense of laying such a pipe through the tunnel? Yes. The cost of a cast-iron main would not exceed £12,000.

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142. What suburbs do you think ought to share in the general supply of water? The whole of them. At present we supply the Glebe, Redfern, and part of Paddington.
143. Do you supply Waverley? No.
144. This [*List handed to witness*] paper supplied by the Registrar General contains a list of the districts around Sydney. Which of those districts share in the supply? The Glebe shares in the supply, at present the whole of Redfern (but here they have combined Redfern and Botany), and a very small part of Paddington.
145. Then what suburban districts receive no part of the supply? We have no means of supplying the higher parts of Paddington. We must have a reservoir at Waverley to supply the whole of Paddington. It is for that reason I recommend that a reservoir should be constructed to supply Randwick, Paddington, and Waverley. To supply this reservoir it would be necessary to erect a small engine near the storage reservoir.
146. *Mr. Woore.*] What is the height of Paddington? The height is about 224 feet where the reservoir is made. It is 226 feet at the Windmill. The highest parts of Paddington range between 230 and 235 feet.
147. *President.*] And you want a reservoir to supply those parts? To supply Randwick, Waverley, and Paddington.
148. Does Newtown receive any share of the supply? No.
149. Does Balmain? No, not at present.
150. But those two places ought to share in the supply? Yes; I propose to have a reservoir at Newtown, to supply Newtown, Marrickville, &c.
151. I suppose Concord is too distant to share in the supply? Yes, probably.
152. And St. Leonards? Yes. To cross the river is not impracticable, but the expense would be enormous in proportion to supply to be given. St. Leonards might be better supplied from another source on the northern side of the harbour.
153. The district called St. George, including Marrickville, and extending towards Cook's River—ought that to share in the supply? That might also be supplied.
154. That should share in the general supply? Yes. Darlington is supplied.
155. In a general water supply, how much per head ought to be allowed to the population per day? I think 40 gallons per head here would be sufficient. Taking the population that we supply now at about 70,000, I think they use about 30 or 32 gallons per head.
156. Does that include water for manufactories? Yes, and for street-watering too.
157. You think that for all purposes 40 gallons per day per head of the population would be a sufficient supply? I think so.
158. Would that permit of a very free use of water for water-closets, flushing sewers, and such like purposes? I think it would. It is very freely used now for those purposes. It might be 45 gallons per head per day, but I think 40 gallons would be found as much as the people would use here.
159. Have you formed any estimate of what proportion of that supply would go to manufactories? No. I may say that there is a very large quantity of water now used by the Sugar Company. Their consumption of water is enormous for one establishment. Tooth's brewery is also supplied, as well as several soap works and tanneries. A great many other works within the city are also supplied with the city water.
160. Can you give us an approximate statement of the whole cost of the present plan for supplying Sydney with water—I do not include the pipes in Sydney, because they must be used for any supply—What we want to know is, what is the cost of the present arrangement for pumping water into Sydney? The cost of the engines and house, the 30-inch main, the high and low level reservoirs, was £130,000, exclusive of land.
161. And also the cost of the dams in course of construction? The six dams in course of construction will cost £10,000. The cost of those contemplated, and which ought to be constructed without delay, would be £8,000 more.
162. If you had been City Engineer when the present scheme was initiated, would you have recommended it as the best possible, or do you know of any other scheme that you would have preferred? I know of none that I would have preferred to this, if properly carried out.
163. But if carried out according to your views, the expense, I understand, would be very great? The expense would be no greater than that which you would have to incur if you brought the water from other places.
164. Would it not have been better to expend that amount, or even a larger sum, in procuring a supply of water for the city by gravitation? If you can get water equally good and pure, I should prefer to bring water into Sydney by gravitation. If brought from any other place than the present, I would not recommend that it should be brought in any other way than by gravitation through cast-iron mains, and the level of the source of supply or reservoir should not be less than 600 feet above-high water mark in Sydney, for a length of 50 miles of supply main. But with the purity of the Lachlan Swamp water, its excellence and abundance, I should certainly have been satisfied to have commenced the present scheme entirely, and taken the responsibility on myself. I believe there is to be obtained from that watershed a sufficient quantity of water to meet the wants of the city and suburbs for many years hence.
165. *Mr. Woore.*] Have you had an opportunity of comparing the expense and advantages of this scheme you have proposed with the expense and advantages of other schemes? I have considered this—that, bring the water from where you will, you must have reservoirs in or near Sydney, to ensure a safe supply to the city. You cannot depend, for instance, upon a main. For instance, the main at Melbourne might burst, and put the inhabitants to considerable inconvenience for some time. There is as much, and even more danger from that, as there is of our main being injured, through which we force the water from

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Botany to Sydney. A sudden check to the current in the Melbourne main—in or near Melbourne (at any great distance from its source) must burst that main. Consequently I conceive that you are never safe until you have got an abundance in or near the town you wish to supply.

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166. Never, by machinery? By machinery or by gravitation. That is by machinery too—the main and the apparatus connected with it are machinery.

167. But when you give this scheme of procuring the water from Botany so great a preference, have you had any opportunity of comparing it minutely with any other plan of bringing water from the interior? I have never had any other plan to compare it with. It is only my own conjecture.

168. It has never been compared with any other? It never has—it is only my own opinion. I have seen the Nepean—and I have inspected the Chain of Ponds above Picton. I consider the Lachlan Swamp, as a source of supply, preferable to both of these. My suggestion with regard to the present works would not necessitate the construction of enormous reservoirs at one time. There may be ground reserved sufficient to make them, but they need not be carried to their full extent in the first instance.

169. From the plan of the tunnel which we have here, I observe that there are several obstructions in it. Has it been cleared out since the time it was made? No. Once when the water ceased to flow through the tunnel, I opened the man-hole opposite Darlinghurst Gaol, and I found that the tunnel itself was perfectly clean.

170. All through? As far as I could get through.

171. How long is it since any person has passed through the tunnel? It is impossible for any one to pass through the tunnel. You will see by the section on the table that it is water-locked, and I found it so in reality.

172. I have been through it? Before the water was let in you may have been; but not since, as it is impracticable.

173. The water was then passing into Sydney. There are obstructions? There are places where the crown of the tunnel dips into the water. No one can get through there. There are two places which effectually prevent any one passing through.

174. What was the occasion of this mound [*indicated in the plan*]? I cannot say.

175. It must have fallen in? The clay and ironstone have fallen down and prevented the water flowing, but the dips must have existed when the tunnel was made.

176. There must be a large quantity of water to get through at all. How does the water now supplied to Sydney find its way into the tunnel? It runs into the end by gravitation.

177. Then there must be considerable depth to rise over the point. What depth of water is there at the entrance of the tunnel now? ———

178. Does the tunnel collect water as it passes in? When the stoppage took place in the tunnel there was no water on the city side of the stoppage, but there was a stream flowing into the swamps from the tunnel itself. It is very possible that that was from some pond. It might have been from that pond near the Barracks. It is impossible to say, however, with certainty. I do not think it was from any spring.

179. At the time I was in the tunnel it had not been opened all through, but it was then supplying the city. There was a considerable stream coming into the city. The water was running in many places in streams from the top? That was from swamps, above and not from springs.

180. Is that the case now? I cannot tell you. There must have been some water coming into the tunnel at the time it was choked up; otherwise we should not have seen a stream flowing from the tunnel into the swamps. I attributed that supply to the swamps above in the Sydney Common and the water reserve.

181. Then I apprehend that all the water now comes through the roof, and that there is nothing from the swamp? There is a very large quantity coming from the swamp. There is another question much more curious than the formation of this vertical section of the channel, and that is the tortuous course taken in the plan of the tunnel.

182. Have any borings taken place in the swamp under your directions? Yes, at the lower end.

183. Only at the lower end? Only at the lower end. I have probed the swamp all the way across with a bar, where the dams are placed.

184. Have you probed it down to the rock? Down to the hard sand crust underneath the bog.

185. It seems that these swamps are in a basin, and that the rock crops up along the shores of Botany. Have you ever bored to the bottom of that basin, and got on to the rock. You say there is a layer of clay on the rock? Yes; that is at Botany, where the outcrop takes place.

186. Has any boring taken place in any part of it? Yes. The engines were to have been placed in the paddock near to Mr. Costello's cottage, on the eastern side of the swamp. When I took charge of the works, I was told that was the site chosen by the engineer of the works, and there I bored to some extent.

187. Have you the details of that boring? I think we bored 70 or 80 feet, and it was all the same.

188. You did not come to the rock? We did not come to the hard, and the rods were lost. There is a cast-iron pipe now on the spot where the boring was taken.

189. Was that only in one quarter of the swamp? No, in many parts; the borings were about half a chain distant from each other.

190. To what extent? All over the reserve, except where the water was lying.

191. How many acres is it? I think it is 72 acres.

192. Have there been any borings made outside those 72 acres? Not made by me, or to my knowledge.

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193. Have you the details of the borings? I think perhaps I might find them. [I have since endeavoured, and cannot find them.]
- 26 Oct., 1887. 194. It would be desirable to have them? My object was satisfied directly I found the nature of the land where it was proposed to put the engines. I knew it was absurd to attempt to put the engines on a place where I could bore 70 feet deep without finding a foundation. I found a place where the rock was cropping out into the sea, and I put them on the rock. I do not think there is anything recorded in the boring which will be of much service to you, but I will see if I can find the plan of the paddock on which I laid down the sections for boring every half chain.
195. *Mr. Adams.*] How many days' supply for the city do the various reservoirs hold? Do you mean in the city?
196. Yes? One and a half day altogether—two at the outside. Crown-street reservoir contains three and a half million gallons, and Paddington one and a half million gallons; and five million gallons will only last us two days. My idea is, that we ought to have reservoirs—in the first instance ponds—to contain 150 or 200 days' supply of water. We have the machinery to fill them with.
197. What sort of tanks did you propose to construct in Hyde Park? I proposed to make them of brick, with brick arches, and grass them on top, similar to the two reservoirs built at Crown-street and at Paddington.
198. Not open? No, they must be closed in the city; outside the city they may be open for some years to come. But I propose to build them in such a manner that they may be covered at any time when the population of Sydney becomes so dense as to render it necessary for the public health that they should be covered.
199. Have you ascertained the direction of the dip that the rock takes at the Botany Waterworks? The dip is to the north.
200. Have you made any bearings to ascertain the depth of the rock below the surface at that place? The rock crops out at the Waterworks. The engine-house is built on the crop of the rock.
201. But does that extend as a bar all across the natural outlet? Yes, excepting where the creek used to empty itself into the bay. It must be some considerable depth down at that crevice, but you can trace it all the way along the northern side of the bay as far as La Perouse's Monument.
202. Then, is it your opinion that the whole of the filtration is stopped by this bar? Yes.
203. You estimate the capacity of the new dams at 200,000,000 gallons. At what height do you estimate the water to stand in them to represent that amount? 8 feet at the lower end.
204. How much below the waste weir of the dam do you estimate that level to be? The wood-work is 2 feet higher, and the crown of the dam on the whole 3 feet higher than the weir.
205. Have you ever sunk any shafts, or taken observations by boring, to ascertain the probable capacity of the sub-strata of the Upper Lachlan Swamps for the retention of water? No; I have taken soundings by a bar.
206. Across the site of the intended dams, to ascertain how deep they are. How far did you go down? To the hard crust.
207. Did that lead you to suppose that there was any large capacity of loose strata that would hold water below the level of the present? No; I have dipped bars down in many places about the Lachlan Swamps to ascertain whether there were such holes and places we read of in evidence in which you can lose boring rods and bars; but the deepest place I have discovered is down in the paddock where it was originally intended to place the engine-house. You can go to any depth there.
208. What sort of bar did you sound with? Five-eighths or three-quarters of an inch in diameter.
209. To what depth did you go? Never more than 18 feet up the stream above the Botany Reserve. The greatest depth I found anywhere was, I think, 22 feet.
210. Then, I infer that you do not think any system of shafts and levels below the surface of the Lachlan Swamps would be of use as a means of supplementing the present supply? No, I think not. I suggested when these dams were in contemplation to excavate No. 4 dam; to take out the whole of the bog 18 feet in depth, and make a large permanent dam across the end of it sufficiently high to dam the water up 15 feet above the intended surface, and to pass a tunnel through the hill on the south side, and to carry a main through the tunnel so as to supply Botany direct from that immense reservoir in times of drought. Of course we could not expect the stream to take it. We should have to take a main from the bottom of that reservoir which I proposed to form and bring the water out at a lower level nearer to Botany, which I found we could do very easily. It might either be turned into the stream, or the pipe could be put into the engine well. It was found sufficiently elevated to discharge at a point near No. 1 Dam. If carried on to Botany, and anything had to be done to the dams between No. 1 and the discharge at Botany, I thought it would be advisable to carry the main at once to the engine well that we might work that stream for a considerable length of time. The cost of that work I estimated at about £45,000 if uncovered, and £80,000 if covered, and the suggestion was not entertained. I did not see any reason why a reservoir at that distance from Sydney should be covered. There is room there for an immense reservoir, the contents of which it is not possible to give without a special survey being made for the purpose. No. 4 Dam, as at present made, will cover with water an area of 26 acres. If the water be headed up to the height I suggested, we should cover with water over 35 or 40 acres, nearly 35 feet in depth in a natural basin. That reservoir would contain 300,000,000 gallons at least.

211. *Mr. Moriarty.*] I think you said that about 70,000 people are at present supplied from the city Waterworks? I suppose we supply about 75,000 people.
212. Do you know what is the total population of the city and suburbs? I do not know for a fact, but I think it does not exceed 80,000.
213. *President.*] You mean such portions as ever could come under the general supply? No, that does not include Newtown.
214. The population of Sydney and suburbs is 109,000. You would exclude several of the districts contained in that list? I think Concord might be supplied.
215. *Mr. Moriarty.*] Ought it not to be supplied? Yes, it might easily be supplied. I dare say the Newtown Reservoir might supply Concord; if not, we could erect one. Botany Redfern, Newtown, the whole of the Glebe, and Balmain, can be supplied. Sydney is supplied. Paddington can be supplied.
216. *President.*] In fact, the only one you would leave out would be St. Leonards? It is a question whether St. George's would not be better supplied in the neighbourhood.
217. You would leave out only St. Leonards? Only St. Leonards. There would then be about 105,000 people to supply.
218. *Mr. Moriarty.*] Then, there are 75,000 people now supplied, and 30,000 to be supplied? Yes, according to that return.
219. Do you not think that those 30,000 ought to be supplied? I do, undoubtedly.
220. I think you said that the quantity of water ordinarily delivered by the engines was 10,000,000 in winter and 20,000,000 in summer? About 22,000,000 in summer, and 14,000,000 or 15,000,000 in winter. I reckon that the average is about 18,000,000.
221. How many gallons per head are now supplied per day? I make it about 40.
222. That includes all the manufactories and shipping? I believe that every manufactory in the city is supplied with it.
223. Have you estimated the quantity of water taken by the manufactories? Only in one instance—that is, the sugar-house.
224. You do not know the exact quantity taken by the manufactories? No; but the quantity consumed by the sugar-house is something enormous.
225. You said (I think) that the rainfall was not the only source of supply at the Lachlan Swamp? I said I thought so.
226. Looking at the nature of the stratification, and seeing that there is, in fact, no higher ground in the immediate neighbourhood of Sydney than that of the watershed itself, where do you think springs could come from; or do you think there can possibly be any springs except from the rain-water that falls on that basin? Yes; the hills beyond our watershed are very much higher than the hills in the watershed.
227. But are they not intercepted by valleys? Not that I am aware of.
228. Then, in point of fact, they become part of the watershed? You will find on the hill above Sir Daniel Cooper's residence, above the Lower South Head Road, a high hill where there is a copious spring of good water.
229. Is not that in your basin? No, it is a long way out; but it shews that there are springs in that ridge. This is no part of the catch-water. A 3-inch pipe could be well supplied from that spring.
230. When you talked of opening the springs, and getting thereby an increased supply of water, did you not mean that you removed the sand through which water was or had been percolating? Yes.
231. So that, in point of fact, although you opened those springs and got the water, before you opened them that water was still running to waste through the sand? It was quietly filtering through a gully, the head of which had been filled with sand drift. That sand drift I was removing, and the more I worked into it the more rapidly the water came. I was enabled in a few days, with a large number of men, to raise the water in the tunnel, and give us as good a supply from the tunnel as we had in the wet season.
232. But before you removed the obstruction, was not that water escaping under the surface through the sand? It was kept back by the sand.
233. Do you think it was kept back permanently, or do you think it was escaping through the old basin? There was no way for it to escape; it was in a gully, and the head of the gully was filled with sand drift.
234. But would not the water escape through the sand drift? It was escaping, no doubt, as fast as the filtration would allow it. I attribute the increased supply to relieving it of perhaps a quarter of a mile of filtration. There was an immense tract of sand there.
235. *Mr. Woore.*] You were removing the impediment to its free flow? Yes.
236. *Mr. Moriarty.*] Do you think there is anything in the sand at Botany which would make it different from free soils in any other part of the world, through which we know that water does escape underground in enormous quantities—as, for instance, the sands of the London or Paris basins? Do you mean whether I think they differ in substratum?
237. No; what I desire to ask is, whether there is any peculiarity or density in the sands at Botany which would prevent water escaping through it, as it is known to do through the green sands, and gravels, and flints of the chalk and other basins where water is found by artesian sinking? Before the water was found on the bog I think it used to settle down by percolation; but since that time the bog has been carried by filtration into the sand, and filled up the pores, and so checked the natural filter, which you cannot clear. I think the filtration is seriously impeded, almost enough to stop it.
238. You are aware that bog is a vegetable growth? Yes.
239. And you have no doubt read of shaking bogs in various parts of the world? Yes.
240. Which means that a skin of bog has formed over a surface of water—you have heard of Chat Moss? Yes, I have seen it.

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241. A film is formed on the top, shewing that bog is lighter than water? Yes, it can readily be seen floating on the water.

242. That being the case, do you think bog would be likely to come down through the sand, which is so much denser and heavier, and thereby interfere with its powers of filtration? I do not think the bog would go of itself; but there are certain portions of the bog mixed up with water, and which make it impure until it is filtered. Organic matter would pass off from the bog to the water, and the water filtering through the sand would deposit those impurities. Thus the interstices would be choked, and filtration would cease after a time.

243. Supposing we cut a moderate depth from the surface? I do not think that sand crust goes more than four or five feet in depth.

244. And what is under that? Probably sand again.

245. Would water percolate through that? It would percolate through clean sand. I have dug a great deal in those swamps, in laying the main, and wherever we came to this hard crust we found it very retentive of water indeed.

246. But is there not a free soil underneath that hard crust? I have not discovered it anywhere.

247. You considered it four feet from the surface? You would lose the colour of the bog.

248. You would get a stratum which would prevent water percolating away? To a certain extent.

249. Will you undertake to say that water will not percolate through the whole of the sand lying in the Botany basin, in considerable quantities? Certainly it percolates in considerable quantities, but to nothing like the extent it originally escaped. The bog is very retentive of water indeed; the hard encrusted sand is also —

250. I think I understood you to say that you did not consider that your dams would retain a sufficient quantity of water to supply Sydney, and that you proposed therefore to supplement it by the construction of some reservoirs in the city? I have stated that the dams will retain a sufficient quantity to supplement the stream in dry seasons, so as to supply Sydney for some time to come; to supply Sydney and the suburbs, reservoirs will be required also.

251. Have you tried at all the power of retention of the dams? No, not beyond one I made previously of sand entirely, and I found that retain the water remarkably well to a height of 8 feet. Mr. Atkinson's dam has retained water to the height of 10 feet perfectly well. There was always some passing through it, but not nearly so much as one would have thought. It was not enough for them to wash their wool with.

252. It did not hold water enough to wash their wool? Yes, it did; but it did not pass enough by filtration for that purpose—they were obliged to resort to the sluice as well.

253. Have you considered the least quantity of water that has fallen in Sydney in a year—do you know what the rainfall of the driest year has been? Yes. I cannot speak from memory with certainty, but I think it was 21 or 22 inches.

254. *President.*] In 1849 it was 21½ inches? Yes. That depth falling upon an area of 10 acres would yield more than our present requirements for Sydney, Redfern, the Glebe, and part of Paddington. I did intend to have put my views in a concise form in regard to the carrying out of those works, and to have handed them in; but my time is so fully occupied in attending to the duties of my office that I have had no time to devote to it.

255. *Mr. Moriarty.*] Shall we have an opportunity before long of examining as to whether these dams do really hold water or not? You will, very shortly.

256. How soon? In three weeks or a month. You will bear in mind that if these dams do not strictly succeed, we must have more expensive and permanent works.

257. *President.*] But you would not consider it fair to judge of the dams just at first; you think we ought to wait until they acquire a covering of organic matter? At first they would admit of more filtration than they will afterwards. I do not think that when they are first in operation there will be any excessive escapement. We shall have to pass a large supply through the sluices for the engines.

258. *Mr. Moriarty.*] Do you think the general effect of time will be to consolidate the stuff used as puddle both above and below? I do not expect it will ever be much more consolidated than it is during the first twelve months. But the filtration will carry some of the particles of bog into the sand, and we shall have a crust of the same description as that which we discover now below the surface of the bog. The percolation will be much checked. We know that such must be the case, because sand filters constructed in the ordinary way are never in operation above a week without being cleaned. The surface is skimmed for an inch or so in depth, and then occasionally a foot or so of clean sand is laid on to replace that taken off—otherwise the filters become choked and will not act.

259. That is to remove the deposit of clay or mud? And the vegetable or organic matter that may be in the water.

260. *President.*] I believe the choking up of the sand is by fine clay, as in the Chelsea works? I do not think you would have clay at all here, but you would have some boggy matter passing through. Instead of cleaning our filter-beds once a week, as they do at the Chelsea works, I dare say once a month or once in six weeks would answer the purpose; but I mention the circumstance to show that filtration is almost stopped by the impurities deposited in the sand by water filtering through it—

261. *Mr. Moriarty.*] It has occurred, has it not (we read it in the papers) that the water supply has been in a very precarious state; that there has been no water running to waste and very little in the reservoir; and that the engines have had to be stopped for want of water? I do not know what the papers say—I seldom read what they say about the Waterworks. It is not true beyond what I said to you,—that we had to cease watering the streets to enable us to get a sufficient supply to meet the wants of the people. The engine

engine was never stopped at all. We should never, in any instance, have been short of water for watering the streets or for any other purpose, if means had been adopted to prevent the water from running into the sea. E. Bell, Esq.,
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262. But, as I understand, the engines were able to pump off all the water that came down, so that there was none running to waste? Yes, for a short time in the dry season. 26 Oct., 1867.

263. Was that an unusually dry season? I do not think it was unusually dry. We had had four or five months' dry weather before that occurred.

264. At that time you just kept pumping the whole of the water that came down to the engines? We pumped all we could during that dry season, and that was not sufficient to water the streets.

265. And you were obliged to shut off the water at night—If you had had to provide for the whole of the population of Sydney and the suburbs, would you have had water enough to supply them? No; but we should have had a superabundance of water if we had only retained some of that which ran to waste in the winter.

266. If you could have kept the water from the winter to the summer? Yes.

267. Do you anticipate that your dams will hold water for six months? Which dams?

268. Those at Botany? I do not understand your meaning.

269. Will they hold the surplus rainfall of winter, for the purposes of summer? Yes, to a certain extent; but as the demand increases, we must have reservoirs made purposely for that, after all the projected dams are completed.

270. In addition to those you are now making? Yes. The surplus rain water this winter has largely exceeded 10,000,000,000 of gallons; the present dams will retain only about 250,000,000, so it would be impossible to retain the whole rainfall without some very extensive reservoirs; but we shall not require to retain the whole for many years. The present and the contemplated dams will retain sufficient of the surplus rainfall of winter for the purposes of summer, for several years hence. The filtration through each dam will be very slight, and what little passes through one dam will be retained by the one below it; so the filtration through the lowest dam is all that will pass off in that way, and this quantity will be very far from sufficient to supply one engine—the sluices must be raised in each dam, to assist the supply for the engine. The effects of filtration will only be felt in the highest dam, and what passes through it will be more than supplied by the stream, which is constant to the extent of nearly 2,000,000 gallons per diem in the driest seasons.

271. I think I understand you to say that you have not as yet made any examination as to the amount of filtration which takes place through the dams? Only when I got the water up 6 feet in one of them I found that the filtration was very slight indeed. My object in raising it was to test whether the contractor had done his work tight round the pipe, and I found he had not.

272. I think you stated, in answer to Mr. Adams, that although the rock crops up generally along the north side of Botany Bay, there is one little dip where the old stream was? Yes.

273. Do you know what is the depth there below the surface? No, I never tried it. I have put a dam across the stream with a puddle bank to prevent the escape of the water, and, as near as my memory serves me, that was only 19 feet deep.

274. Did you go to the bottom? I excavated to the hard rock, and put a puddled clay bank upon it.

275. Does the rock rise to the westward? Yes; the engine-house is placed on it. On the eastern rise it goes towards La Perouse's monument.

276. And to what level does the rock crop up as regards the level of the water in your reservoir? The natural crop of the rock was as nearly as possible level with high water mark.

277. Do you think any considerable accession of water would be got by putting a little clay dam at the top of that rock, at such a height as may divert the water now supposed to flow into the bay? Do you mean from other outlets?

278. I mean, to cap the outcrop of the rock by a small clay dam all the way along? I have done that at the Botany Waterworks. There is a 5-foot clay bank from the engine-house to the extreme point of our land embedded on the clay and taken from the clay surface above the rock. We took the outside of the crop of clay to make the puddled embankment of.

279. You have, in point of fact, done that? Yes; I did it to prevent the escape of fresh water into the sea, which I saw was going on rapidly.

280. You have given the particulars of the reservoirs you propose to construct in addition to the present works? That is, the storing reservoirs?

281. Yes. How many months' supply for the present population do you estimate they will contain? That of course depends upon the size of the reservoirs.

282. But have you not fixed any particular size? Yes, but I have not expressed any particular size here. I will add the dimensions.

283. How many months' supply would you make them capable of holding? I would commence with a supply for twelve months.

284. You would make reservoirs in the city, capable of holding a twelve months' supply? Yes, or near Sydney.

285. At the rate of how many gallons per head per day? Forty. I almost think, that for storing, thirty would be sufficient.

286. Have you made any estimate of the cost of these works? I have an idea of the cost of them all.

287. Have you gone into particulars? I know how much they would cost an acre to make. There is an eligible site for a storage reservoir on Sydney Common, at the site formerly intended for a necropolis. It is a natural basin, about 20 chains long, by 20 chains

- E. Bell. Esq., chains wide; on the western side is an opening, through which the drainage of the basin passes off to Shaw's Creek. Across this opening an impervious dam could be constructed; the interior of the reservoir puddled with clay, and made to contain 350,000,000 gallons of water, at an elevation to supply the districts now supplied by the Crown-street reservoir and the tunnel. It would cost about £35,000. A reservoir at Waverley, to contain 5,000,000 gallons, would cost £18,000; and a reservoir at Newtown, to contain 6,000,000 gallons, would cost £24,000. These works, together with the dams I have named on the Lachlan Swamps, will keep Sydney and the suburbs supplied for the next twenty years at the least, without fear of interruption, and sufficient storage room will be afforded for one year's supply, at a cost not exceeding £130,000.
- 26 Oct., 1867. 288. You have never had your attention drawn to any other source of supply? Yes, I have. I visited those ponds above Picton, and the Nepean.
289. Have you any opinion of them as a source of supply for Sydney? If their elevation is what I suppose it to be, I think they are very well placed for supplying Sydney. I should think an enormous quantity of water might be stored in those ponds. The extent of the catch-water appeared to be small, but I can give no decided opinion with regard to the extent of the water-shed, owing to the amount of wood which covers it and screens it from view, and to my want of knowledge of the country. I think they might be made so as to store an enormous quantity of water, which could be brought into Sydney by gravitation. The taste of the water seemed to me exceedingly soft, but it contained a great quantity of vegetable matter not pleasant to the taste. I believe their elevation to be high enough to send the water from there to Sydney by gravitation. I estimated the distance at 55 or 60 miles.
290. Is there any other place to which your attention has been drawn, as likely to furnish a supply of water to the city? No. I have been told of places of which I know nothing.
291. Have you ever looked at the Nepean, with a view to deriving a supply of water from it? In some parts I have—above Penrith. I think it is impossible to supply Sydney with water from that district, without putting engines on the bank of the river, to bring the water above the level of the banks at all seasons. The expense of works to bring the water from that place would cost £600,000 or £700,000 at the least. 50 miles of main laid would of itself not cost far short of £600,000.
292. The construction of the present dams at Botany was undertaken, I suppose, in consequence of either an existing or apprehended insufficiency of water? The greatest anxiety I had with regard to those dams was, to ensure a safe supply at the Botany end, in case of anything happening there. For instance, the pond at Botany has been deepened, and it is impossible to put in the weir and sluice to that pond until I am in a position to stop the water up above, unless we open the sluice and let the water run into the sea.
293. Or make a cofferdam? That would cost five times the amount of the work we have to do.
294. Then, in point of fact, the adequacy of the supply to the city hereafter depends to some extent on the retention of these dams and upon the formation of reservoirs within or in the neighbourhood of the city? I consider that it depends entirely upon the reservoirs, which ought to be constructed in the neighbourhood of Sydney. But some dams are indispensable, whether the reservoirs are made or not, to enable us to work with safety and convenience at Botany.
295. That is their main object? So far as I am concerned; except that I believe for a few years they will supplement the stream sufficiently to supply the present population of Sydney (not extending beyond the present limits in the suburbs), without rendering it necessary to cease to water the streets, or to deprive the people of water at nights.
296. *Mr. Grundy.*] The reservoir in Hyde Park would be the one by which you would supply a great portion of Sydney? Yes—all the lower levels. The district now supplied by the tunnel would be supplied from that reservoir; and, in case of need, we should have a large quantity of water at our disposal, which might be pumped from that reservoir and used, in cases of extreme drought, for other parts of the city.
297. But you would have very little head, and there would consequently be no force of water? You must supply Elizabeth-street from the reservoir, unless these Hyde Park reservoirs were full.
298. But you could not get a power of gravitation to throw the water over the houses? Not there.
299. You do not contemplate that? No; the object is to store the water so as to be provided against any casualty.
300. You could not supply it with anything like power—there being no head of water? Not except to the lowest levels of the city.
301. Is it not a fact that fresh water is known to come at low tide into some portions of Botany Bay? In some parts.
302. Is not that a proof that there is percolation? Not from our reserve, eastward of us there are two or three outlets. There is one on Captain Masters' property—a mile and a half to the eastward of our works. We might bring the whole of that water into our pond.
303. *Mr. Moriarty.*] That is what I asked you a short time ago? At our works the fresh water is entirely intercepted from the sea.
304. My question had reference to the Botany basin? There is an outlet that comes from Prince's woolwashing establishment also.
305. Would not that stop the woolwashing? Yes, but there is the water. There is a copious stream which comes out from Captain Masters' property, and flows into the sea. That I am sure might be brought into our Botany basin. That I have always considered ought

ought to be done, after we have pumped into Sydney the water which now runs from our present supply into the sea. Our object is to get the water into Sydney, and to have it there without any fear of the supply being cut off by failure of the pumping apparatus or any other cause.

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306. *Mr. Grundy.*] With reference to the 1,800 acres which it is said can be drained into Bird's Gully—is that water in a condition to be used—is it not polluted by all sorts of things? I will not answer for there being 1,800 acres—I have not surveyed it. I have examined Bird's Gully and its neighbourhood, to a great extent; the water must find its way into our watershed.

307. It filters? Yes.

308. But if you made those works of which you have spoken in your report, it would no longer filter? —

309. *President.*] Have you in your office any plan of Sydney and its suburbs, showing the present distribution of the water? No, I have none beyond the trigonometrical survey, which is comprised of about fifty sheets the size of this table, on which our water mains are laid down. We find that on no smaller plan can we shew them. There are three pipes in some of the streets.

310. Would it not be comparatively easy to have a map of Sydney and its surrounding districts, showing those portions supplied with water and those that are not, by means of colours? That might be done, but even then, where one service meets another they must necessarily overlap in a hilly town like this. The pipes run past each other, and in some instances, the "dead end" has been carried up so that the foul water can be carried without injuring the water at a lower level. Then we have to carry the other a great way past it, to get a head of water above the houses.

311. Without going into details, I should like to see what portions of the suburbs are supplied and what portions are not? It would take a great deal of time to prepare a map.

312. *Mr. Moriarty.*] Could it not be done by an enlargement of the Surveyor General's plan of the town? It would be possible to do it, but it would take some time.

313. *President.*] What is the height of the Hyde Park end of the tunnel above high-water mark? 104 or 105 feet to the surface of the water.

314. A question was asked regarding the dip of the rock at the mouth of the Botany stream—you state that the rock dips to the northward—can you state the angle of the dip? No, I never tried it, but I fancied it was in some places, 1 foot in 2.

315. *Mr. Moriarty.*] Do you mean degrees? No, feet.

316. *President.*] You fancy the dip would be 1 in 2? I think it would be 1 in 2. Where I made that boring could not have been 3 chains from where the outcrop of the rock is. The edge of the basin must be very steep.

317. During the time of comparative scarcity, in the beginning of the year, there were complaints of the quality of the water, and persons asserted in the newspapers that the salt-water must have got in from the sea to the dam—do you think there was any foundation for that supposition? No, I think not. It was said by many that it must percolate through the masonry. We know that there was a leak in the masonry, but, five years ago, when I repaired the sluice gates, I caused a puddle bank to be put across the mouth of the pond, at its junction with the race carrying off the water, and when I had done with it I left it there. People, because they saw a little water weeping out through the masonry originally, conceived that where the weep was, the water found its way into the pond; but there was a puddle bank inside higher than the highest spring-tides. Those assertions were made by persons who afterwards found, very much to their annoyance, that there was a bank under the water which they did not see.

318. Was it a fact that the water, as delivered in Sydney, had a taste of salt? It had a taste which it does not always have. That I attributed to it having lain so long in the bog around the engine-pond over which the tide used to rise at one time. It was thought that the water was impregnated in some way with saline matter from what was originally deposited in the bog by the sea which used to rise up there before our dam was made. I believed myself that it was merely the flavour given to the water by the bog and that it was not caused by saline matter at all.

319. *Mr. Moriarty.*] Does the tide outside rise in dry seasons to the height of the water inside? In dry seasons, when the water is very low in the reservoir the high spring-tides rise 7 or 8 inches above it.

320. So that if there is any leakage, the salt-water would get in? Yes, but for the puddle bank between the sluice gates and the pond itself.

320½. We saw some water leaking out there the other day? Yes; but inside there is a puddled clay bank below the surface of the water but higher than the highest spring-tides, and through which no water can pass. The leak the Commissioners saw was from the dam, which is considerably higher than the clay bank.

321. *President.*] In the Water Supply Report of 1852, I find this statement made with regard to the watering of the streets:—"It is very much to be questioned whether this superficial watering of the streets does not in reality increase the evil. It is remarked of a similar proceeding at New York, that the filth of the streets, which no ordinances can prevent, was kept by constant watering in a perpetual state of decay. Under our fierce sun, the garbage soon became dry and comparatively harmless, but now it is watered hour after hour as fast as it shews any approach to dryness, and is thus kept incessantly fermenting and putrifying, to the great annoyance of delicate olfactories and the deterioration of the common air." Have you considered that possible effect of watering the streets? It is very possible that might be the case in towns where the streets are not so steep as they are in Sydney. I am certain it is not the case in Sydney.

E. Bell, Esq., M.I.C.E., C.E. 322. And you have heard no complaints of such an effect? No; I heard frequent complaints when the streets used to be watered with salt-water. People complained that their eyes were affected.

26 Oct., 1867. 323. But since fresh water has been used you know of no complaint? No.

324. Do you think of any other facts of importance respecting the present supply of water to the city, that have not been elicited by the questions put to you? No; if I should think of anything further I will mention it.

325. *Mr. Woore.*] When I was at Botany, some time ago, I observed that several of the pipes had been broken, and on inquiry I understood that they gave way in their bed. Can you account for that? In every case where I have taken up a broken pipe and replaced it by another, I have found that the crack was an old one. Many of the pipes were broken in coming out, on board the ship.

326. They broke in consequence—it was an original flaw? In many of them there was an original flaw—they had split in cooling after casting. I gave evidence to that effect at a trial on the subject, but my evidence was said to be extraordinary, and it was supposed that it could not be correct. The pipes, which were 9 feet long, were to be cast thoroughly sound, but many of those that came out were split from 9 to 12 inches at the socket end; very few were broken at the spigot end.

327. But there were some broken? Yes. What I attributed the breakage to was as follows:—They were cast vertically, with a core inside; that core was formed of bricks. As soon as the pipe is cast it begins to contract. It cannot contract without putting great strain upon the core inside. This brick core will not compress, nor can a bar be put down to cut the brickwork out in sufficient time to relieve the red hot pipe from strain, which it is unable to bear; hence the end of the pipe which is downwards splits, and the socket is always cast downwards. The pipes are cast in Scotland, and I know that in open castings the Scotch iron has not strength sufficient to draw itself together while contracting. To these facts I attribute the straining and cracking of the socket ends of the pipes.

328. It is only some of them that are cracked? Only some. Every one that has cracked has exhibited the appearance of having cracked when hot. Since those pipes were cast, there have been three patents taken out in Scotland for making a core of iron which will allow itself to contract by the outward pressure of the metal when cooling.

329. Can you account for these pipes supporting the pressure for a considerable time and then breaking? Yes; there has been some sudden check and a reaction. One of the stop back valves has probably been a little out of order. There has not been a pipe broken for these three or four years. When a pipe broke, another was put in its place within six hours.

330. Can you state the average cost of pumping water to Sydney, or the total annual charge on account of pumping? The cost per annum of pumping water into Sydney is £4,700.

331. What is the rate charged for water? 5s. per room.

332. What is the number of houses paying rates at the present time? I have no means of telling correctly.

333. What is the total amount of water rates received per annum? About £24,000 last year. The following is a list of the dams and reservoirs made, constructing, and proposed to be constructed, on the swamps between Waverley and Botany:—

Engine Pond	10 million gallons.
Upper Pond	44 "
No. 1 Dam	30 "
2 "	29 "
3 "	21 "
4 "	57 "
5 "	20 "
6 "	43 "
7 "	34 "
8 (Atkinson's)	46 "
9 "	26 "
10 (Armitage's)	22 "
11 Dam	36 "
12 "	42 "
13 "	26 "

486 million gallons.

Proposed reservoir on Sydney Common	361 million gallons.
Do. at Waverley and Newtown	12 "
Crown-street contains	3½ "
Proposed extension	4½ "
Paddington contains	1½ "
Proposed extension of do.	6½ "

875 million gallons.

Hyde Park
 20 " |

895 million gallons, exclusive of 800 million gallons which might be stored at No. 4 Dam, as before stated. Thus we shall be enabled to hold in reserve 875,000,000 gallons—a quantity more than sufficient to

to supply Sydney and the suburbs for twelve months, at the present time, without any pumping—quite sufficient to supplement the ordinary stream, and thus meet the requirements of the city and the suburbs for some years hence. When additional storage is required, a large dam should be constructed on the site of No. 4 Dam. Here in the gorge between the hill, a dam might be constructed at least 35 or 40 feet higher than the present dam which would give storage room for 800,000,000 gallons of water at the least. I believe I might state double this amount, but in the absence of more extensive surveys than have yet been made, I state the minimum quantity. The works I have enumerated would retain sufficient water to supplement the constant stream, and afford an uninterrupted supply of 45 gallons per head per diem of water, which cannot be excelled, if equalled, in purity and softness, in the Colony, to three times the number of the present population of Sydney and the suburbs. With regard to the loss which may be sustained by evaporation from the ponds formed by the several dams, I may state that the town of Bombay is supplied by a catch-water very similar to that from which the supply for Sydney is obtained. Across a valley some short distance from Bombay, dams are made to head up the water which falls during the wet season, and thus the two lakes of Vehar and Poway are formed, which retain sufficient water to supply the town of Bombay with water throughout the year. In a paper upon these works, which was read before the Institution for Civil Engineers, in London, by the Engineer who constructed the works, is the following statement, viz. :—“ Since the termination of the last rains the level of the lake has kept up remarkably well, its surface not having lowered more than six inches per month. This loss is stated to be principally due to leakage through the temporary plug by which the conical orifice of the pipe 41 inches in diameter is at present closed; no leakage whatever is perceptible through either of the dams. The small amount of this monthly loss proves how inapplicable the result of observational experiments on evaporation, on a small scale, are to the circumstances of a large body of water such as that constituting the Vehar Lake.”

E. Bell, Esq.,
M.I.C.E., C.E.
26 Oct., 1867.

APPENDIX A.

REGISTER of the Depths of Water passed over the Wasteboard, and of the Heights the Floodgates were open, daily, from the 24th March to 24th October, 1867.

Date.	Depth of Water over Waste-board.	Floodgates open.	Head of Water above Sills of Gates.	Date.	Depth of Water over Waste-board.	Floodgates open.	Head of Water above Sills of Gates.
1867.	in.	in.	in.	1867.	in.	in.	in.
March 24	...	...	...	May 7	3	6	75
" 25	7	30	79	" 8	3	6	75
" 26	3	12	75	" 9	3	6	75
" 27	nil	12	67	" 10	3	6	75
" 28	"	12	67	" 11	3	6	75
" 29	"	12	67	" 12	3	6	75
" 30	"	12	67	" 13	3	6	75
" 31	"	12	67	" 14	3	6	75
April 1	"	6	67	" 15	3	6	75
" 2	"	6	67	" 16	3	6	75
" 3	1	6	73	" 17	3	6	75
" 4	1	6	73	" 18	3	6	75
" 5	1	6	73	" 19	4	6	76
" 6	1	6	73	" 20	4	6	76
" 7	1	6	73	" 21	3	6	75
" 8	1	6	73	" 22	3	6	75
" 9	1	6	73	" 23	3	6	75
" 10	nil	6	70	" 24	3	6	75
" 11	"	6	70	" 25	3	6	75
" 12	8	45	80	" 26	3	6	75
" 13	2	22	74	" 27	3	6	75
" 14	2	18	74	" 28	3	6	75
" 15	nil	6	71	" 29	3	6	75
" 16	1	6	73	" 30	3	6	75
" 17	3	6	75	" 31	3	6	75
" 18	3	6	75	June 1	4	6	76
" 19	3	6	75	" 2	5	6	77
" 20	3	6	75	" 3	6	6	78
" 21	3	6	75	" 4	4	6	76
" 22	3	6	75	" 5	3	6	75
" 23	3	6	75	" 6	3	6	75
" 24	3	6	75	" 7	3	6	75
" 25	3	6	75	" 8	3	6	75
" 26	3	6	75	" 9	5	6	77
" 27	3	6	75	" 10	4	6	76
" 28	3	6	75	" 11	4	6	76
" 29	3	6	75	" 12	3	6	75
" 30	3	6	75	" 13	3	6	75
May 1	3	6	75	" 14	3	6	75
" 2	3	6	75	" 15	3	nil	75
" 3	3	6	75	" 16	5	"	77
" 4	2	6	74	" 17	4	"	76
" 5	2	6	74	" 18	3	"	75
" 6	4	6	76	" 19	5	6	77

E. Bell, Esq.
M.I.C.E., C.E.

APPENDIX A—continued.

26 Oct., 1867.

Date.	Depth of Water over Waste-board.	Floodgates open.	Head of Water above Sills of Gates.	Date.	Depth of Water over Waste-board.	Floodgates open.	Head of Water above Sills of Gates.
1867.	in.	in.	in.	1867.	in.	in.	in.
June 20	11	45	83	August 22	6	6	78
" 21	8	45	80	" 23	5	6	77
" 22	6	45	78	" 24	5	6	77
" 23	7	12	79	" 25	6	6	78
" 24	6	6	78	" 26	6	6	78
" 25	3	nil	75	" 27	6	6	78
" 26	4	12	76	" 28	6	6	78
" 27	5	12	77	" 29	6	6	78
" 28	5	12	77	" 30	6	6	78
" 29	5	12	77	" 31	6	6	78
" 30	8	12	80	September 1	9	6	81
July 1	7	9	79	" 2	8	6	80
" 2	8	9	80	" 3	6	6	78
" 3	4	6	76	" 4	4	6	76
" 4	4	6	76	" 5	4	6	76
" 5	4	6	76	" 6	4	6	76
" 6	6	6	76	" 7	4	6	76
" 7	6	6	78	" 8	6	6	78
" 8	5	6	77	" 9	6	6	78
" 9	4	6	76	" 10	6	6	78
" 10	4	6	76	" 11	Nil.	6	68
" 11	4	6	76	" 12	"	6	68
" 12	4	6	76	" 13	"	6	68
" 13	4	6	76	" 14	"	6	68
" 14	4	6	76	" 15	"	6	69
" 15	4	6	76	" 16	"	6	69
" 16	4	6	76	" 17	"	6	89
" 17	4	6	76	" 18	6	6	78
" 18	4	6	76	" 19	6	6	78
" 19	4	6	76	" 20	6	6	78
" 20	4	6	76	" 21	6	6	78
" 21	6	6	78	" 22	7	6	79
" 22	6	6	78	" 23	7	6	79
" 23	5	6	77	" 24	8	9	80
" 24	4	6	76	" 25	8	9	80
" 25	4	6	76	" 26	8	9	80
" 26	4	6	76	" 27	8	9	80
" 27	4	6	76	" 28	8	9	80
" 28	6	6	78	" 29	8	9	80
" 29	6	10	78	" 30	8	9	80
" 30	6	10	78	October 1	8	9	80
" 31	4	6	76	" 2	6	9	78
August 1	4	6	76	" 3	4	9	76
" 2	4	6	76	" 4	2	9	74
" 3	4	6	76	" 5	4	9	76
" 4	6	6	78	" 6	7	9	79
" 5	6	6	78	" 7	6	9	78
" 6	6	6	78	" 8	6	9	78
" 7	6	6	78	" 9	0	9	72
" 8	6	6	78	" 10	3	9	75
" 9	6	6	78	" 11	5	9	77
" 10	6	6	78	" 12	5	9	77
" 11	8	6	80	" 13	7	9	79
" 12	7	6	79	" 14	5	9	77
" 13	6	6	78	" 15	2	9	74
" 14	4	6	76	" 16	2	shut	74
" 15	4	6	76	" 17	2	"	74
" 16	4	6	76	" 18	2	"	74
" 17	4	6	76	" 19	2	"	74
" 18	4	6	76	" 20	4	"	78
" 19	4	6	76	" 21	3	"	75
" 20	5	6	77	" 22	0	"	72
" 21	6	6	78	" 23	2	"	74

Quantity discharged in gallons, from the 24th of March to the 24th of October, 1867, into the sea :—

	galls.
Over the weir	749,869,501
Through the flood-gates	10,148,220,000
Total... ..	10,898,089,501

in addition to a large quantity which passed over the paddock into the sea, and which could not be gauged or estimated.

E. BELL,
C.E.

APPENDIX B.

E. Bell, Esq.,
M.I.C.E., C.E.

The City Engineer to The Commissioners for the City of Sydney.

City Commission,
Engineer's Department,
Sydney, 30 July, 1856.

26 Oct., 1867.

Gentlemen,

In accordance with instructions received from you on the 11th instant, to gauge the escape of water at Lord's Mill, I made immediate preparations for so doing, by cutting off, as effectually as possible, every escape excepting that at the waste watercourse of the mill.

I had previously constructed a new wasteboard and gauge for the same purpose, at an elevation of six-teen and a half (16½) inches above the old one, in order to prevent the possibility of the sea-water at spring-tide from running over it into the mill-pond.

The notch in the new wasteboard is exactly five (5) feet wide, and in the side next the pond, in still water, a gauge is fixed, which is divided into inches and tenths of an inch, to denote the depth of water at the edge of the wasteboard, the point of zero on the gauge being fixed horizontally with the edge of the wasteboard.

The works were ready on the morning of the 18th instant, and the following table shews the result of the observations which have been made from the 18th to the 30th instant inclusive.

I have annexed a plan, section, elevation, and also a sketch of the wasteboard, to illustrate the arrangement by which the gauging was effected.

The gauging of the wasteboard will continue daily, and a return shall be made weekly of the results.

It is necessary to remark that, since the wasteboard was raised, the soakage through the sea-embankment is very considerable; previously it was almost imperceptible. The escape of water by this soakage is not less than ninety thousand (90,000) gallons per diem.

Also, that there is a small stream in the neighbourhood of Lord's Mill, which takes its water from this watershed, passes through the tannery, and discharges into the sea not less than two hundred and twenty thousand (220,000) gallons of water per diem.

In addition to the quantities escaping at Lord's Mill, as shewn by the annexed table, is the present supply from Lachlan Swamp to the city, which is computed at six hundred thousand (600,000) gallons per diem.

It will be seen by the annexed tables that (if the city contains ten thousand (10,000) houses) the smallest quantity stated therein will supply to each house two hundred and forty-six (246) gallons per diem, and the largest quantity two hundred and ninety-two (292) gallons per diem, or an average of two hundred and sixty-nine (269) gallons; and, with the addition of the Lachlan Swamp water, the average daily supply would be increased to three hundred and twenty-nine (329) gallons per house; therefore, taking the population of the city at sixty thousand (60,000) or six people to each house, the supply would average fifty-five (55) gallons per head per diem, or more than double the necessary quantity.

I have, &c.,
E. BELL, M.Inst.C.E.,
City Engineer.

Date.	Time.	Depth in inches and decimal parts of the Water passing over the Waste-board, which is 60 inches in width.	Escape in gallons of Water per minute over the Waste-board, from the result of experiments made in Scotland.	Escape in gallons of Water per minute over the Waste-board, computed from Beardmore's Tables. Constant '666.	Remarks.
1856.					
July 18	10 a.m.	5.3	2,768,169	2,836,890	Fine weather.
	3 p.m.	5.3	2,768,169	2,836,890	do.
" 19	12 noon	5.3	2,768,169	2,836,890	Showery.
	3 p.m.	5.3	2,768,169	2,836,890	do.
" 20					} This being Sunday, no gauge was taken.
" 21	11 a.m.	5.5	2,924,169	2,990,250		Showery weather.
	3 p.m.	5.5	2,924,169	2,990,250	do.
" 22	10 a.m.	5.5	2,924,169	2,990,250	do.
	3 p.m.	5.5	2,924,169	2,990,250	Fine weather.
" 23	10 a.m.	5.4	2,846,188	2,913,570	do.
	3 p.m.	5.4	2,846,188	2,913,570	do.
" 24	10 a.m.	5.4	2,846,188	2,913,570	do.
	3 p.m.	5.4	2,846,188	2,913,570	do.
" 25	10 a.m.	5.3	2,768,169	2,836,890	do.
	3 p.m.	5.3	2,768,169	2,836,890	Showery weather.
" 26	10 a.m.	5.2	2,690,232	2,760,210	Fine weather.
	3 p.m.	5.1	2,611,617	2,683,530	Showery weather.
" 27					} Being Sunday, no gauge was taken.
" 28	10 a.m.	5.0	2,535,166	2,606,850		Fine weather.
	3 p.m.	4.9	2,463,084	2,495,096	do.
" 29	10 a.m.	5.0	2,535,166	2,606,850	do.
	3 p.m.	5.0	2,535,166	2,606,850	do.
" 30	10 a.m.	5.1	2,611,617	2,683,530	do.
	3 p.m.	5.1	2,611,617	2,683,530	Showery weather.

The City Engineer to The Commissioners for the City of Sydney.

Engineer's Department,
City Commissioners' Offices,
Sydney, 11 August, 1856.

Gentlemen,

Annexed, I have the honor to lay before you my report upon the gauging of the water passing over the wasteboard at Lord's Mill, Botany, from the 1st to the 9th instant inclusive, and to observe that the quantity of water which escapes into the sea by filtration through the embankment without passing over the wasteboard, has increased very considerably since my last report to you on this subject; also, that there are no means of checking this escape until the permanent puddled embankment is made.

I have, &c.,
EDWARD BELL, C.E.,
City Engineer.

E. Bell, Esq.,
M.I.C.E., C.E.

26 Oct., 1867.

APPENDIX B—continued.

Date.	Time.	Depth in inches and decimal parts of the upper edge of the Wasteboard below the surface of the Water passing over it.	Escape in gallons of Water per diem passing over the edge of the Wasteboard, according to experiments made in Scotland.	Escape in gallons of Water per diem passing over the edge of the Wasteboard, as computed by Beardmore's Tables. Constant '666.	Remarks.
1856.					
August 1	10 a.m.	5.1	2,611,617	2,683,530	Fine weather.
	3 p.m.	5.1	2,611,617	2,683,530	do.
" 2	10 a.m.	5.1	2,611,617	2,683,530	Fine, but windy.
	3 p.m.	5.1	2,611,617	2,683,530	do.
" 3					do.
" 4	10 a.m.	5.0	2,534,234	2,606,850	do.
	3 p.m.	4.9	2,432,054	2,495,096	Fine weather.
" 5	10 a.m.	4.7	2,317,939	2,334,592	do.
	3 p.m.	4.5	2,173,824	2,153,088	do.
" 6	10 a.m.	4.5	2,173,824	2,153,088	do.
	3 p.m.	4.5	2,173,824	2,153,088	do.
" 7	10 a.m.	4.4	2,102,366	2,082,918	do.
	3 p.m.	4.3	2,029,708	2,012,751	do.
" 8	10 a.m.	4.2	1,957,651	1,942,584	do.
	3 p.m.	4.2	1,957,651	1,942,584	do.
" 9	10 a.m.	4.2	1,957,651	1,942,584	do.
	3 p.m.	4.2	1,957,651	1,942,584	do.
Mean of depths and quantities.....		4.6	2,388,406	2,280,995	

The City Engineer to The Commissioners for the City of Sydney.

Engineer's Department, City Commissioners' Office,
Sydney, 30 August, 1856.

Gentlemen,

Annexed, I have the honor to lay before you my report upon the gauging of the water passing over the wasteboard at Botany, from the 11th August to the 29th August, 1856, inclusive.

I have, &c.,

EDWARD BELL, C.E.,
City Engineer.

Date.	Time.	Depth in inches and decimal parts of the upper edge of the Wasteboard below the surface of the Water passing over it.	Escape in gallons of Water per diem passing over the edge of the Wasteboard, according to experiments made in Scotland.	Escape in gallons of Water per diem passing over the edge of the Wasteboard, as computed by Beardmore's Tables. Constant '666.	Remarks.
1856.					
August 11	10 a.m.	4.1	1,885,584	1,872,417	Fine weather.
	3 p.m.	3.9	1,779,917	1,741,412	do.
" 12	10 a.m.	5.1	2,611,617	2,683,530	Shower during night.
	3 p.m.	4.4	2,102,366	2,082,918	Fine weather.
" 13	10 a.m.	4.5	2,173,824	2,153,088	do.
	3 p.m.	4.4	2,102,366	2,082,918	do.
" 14	10 a.m.	4.5	2,173,824	2,153,088	do.
	3 p.m.	4.4	2,102,366	2,082,918	do.
" 15	10 a.m.	4.1	1,885,584	1,872,417	do.
	3 p.m.	3.9	1,779,917	1,741,412	do.
" 16	10 a.m.	4.5	2,173,824	2,153,088	do.
	3 p.m.	4.0	1,813,536	1,802,250	do.
" 17	10 a.m.				do.
	3 p.m.				do.
" 18	10 a.m.	4.3	2,029,708	2,012,751	Shower during night.
	3 p.m.	3.9	1,779,917	1,741,412	Fine weather.
Mean of depths and quantities.....		4.29	2,028,453	2,012,502	
1856.					
August 19	10 a.m.	4.5	2,173,824	2,153,088	Fine weather.
	6 p.m.	6.7	4,155,418	3,975,860	One of the sluices of Wool-
" 20	10 a.m.	3.5	1,521,371	1,498,140	washing Establishment opened.
	3 p.m.	3.0	1,198,193	1,194,066	Fine weather.
" 21	10 a.m.	3.9	1,779,917	1,741,412	do.
	3 p.m.	3.8	1,715,281	1,680,594	do.
" 22	10 a.m.	4.4	2,102,366	2,082,918	do.
	3 p.m.	3.8	1,715,281	1,680,594	do.
" 23	10 a.m.	4.0	1,813,536	1,802,250	do.
	3 p.m.	3.4	1,456,737	1,437,330	do.
" 24					Sunday.
" 25	10 a.m.	3.3	1,392,101	1,376,520	Fine weather.
	3 p.m.	3.4	1,456,737	1,437,330	do.
" 26	10 a.m.	3.9	1,779,917	1,741,412	do.
	3 p.m.	3.9	1,779,917	1,741,412	do.
" 27	10 a.m.	4.3	2,029,708	2,012,751	do.
	3 p.m.	4.1	1,885,584	1,872,417	do.
" 28	10 a.m.	4.4	2,102,366	2,082,918	Showery weather.
	3 p.m.	4.3	2,029,708	2,012,751	Fine weather.
" 29	10 a.m.	4.3	2,029,708	2,012,751	do.
	3 p.m.	4.2	1,957,651	1,942,584	do.
Mean of the depths and quantities.....		4.06	1,902,632	1,874,054	

WATER SUPPLY OF SYDNEY AND ITS SUBURBS—EVIDENCE.

APPENDIX B—continued.

E. Bell, Esq.,
M.I.C.E., C.E.

The City Engineer to The Commissioners for the City of Sydney.

City Commission, Engineer's Department, 26 Oct., 1867.
Sydney, 6 October, 1856.

Gentlemen,

Annexed, I have the honor to lay before you the gauging of the water at Botany, from the 30th August to the 30th September inclusive, and to remark that soakage of water through the whole bank still continues, and the quantity of water which escapes by this means into the sea without passing over the wasteboard, increases considerably.

I have also added, for your information, the mean of the depths and quantities of water passing over the wasteboard, from the commencement of its rise, viz., from the 18th July to the 30th September, inclusive.

I have, &c.,
EDWARD BELL, C.E.,
City Engineer.

Date.	Time.	Depth in inches, and decimal parts of the upper edge of the Wasteboard below the surface, of the Water passing over it.	Escape in gallons of Water per diem passing over the edge of the Wasteboard according to experiments made in Scotland.	Escape in gallons of Water per diem passing over the edge of the Wasteboard, as computed by Beardmore's Tables. Constant '666	Remarks.
1856.					
August 30	10 a.m.	4.0	1,815,049	1,805,014	Showery weather.
	3 p.m.	4.2	1,958,781	1,936,688	do.
Sept. 1	10 a.m.	4.4	2,102,503	2,080,718	Fine weather.
	3 p.m.	4.1	1,886,915	1,870,850	Showery, with thunder.
" 2	10 a.m.	4.3	2,030,607	2,008,703	Showery weather.
	3 p.m.	4.3	2,030,607	2,008,703	Fine weather.
" 3	10 a.m.	4.4	2,102,503	2,080,718	do.
	3 p.m.	4.3	2,030,607	2,008,703	do.
" 4	10 a.m.	4.2	1,958,781	1,936,688	do.
	3 p.m.	4.2	1,958,781	1,936,688	do.
" 5	10 a.m.	4.1	1,886,915	1,870,850	do.
	3 p.m.	4.0	1,815,049	1,805,014	do.
" 6	10 a.m.	4.1	1,886,915	1,870,850	do.
	3 p.m.	4.3	2,030,607	2,008,703	Showery weather.
" 7	10 a.m.	3.9	1,751,878	1,739,178	do.
	3 p.m.	3.8	1,687,829	1,673,342	Fine weather.
" 8	10 a.m.	3.9	1,751,878	1,739,178	do.
	3 p.m.	4.0	1,815,049	1,805,014	do.
" 9	10 a.m.	4.0	1,815,049	1,805,014	do.
	3 p.m.	4.0	1,815,049	1,805,014	do.
" 10	10 a.m.	4.2	1,958,781	1,936,688	do.
	3 p.m.	4.0	1,815,049	1,805,014	do.
" 11	10 a.m.	3.8	1,687,829	1,673,348	do.
	3 p.m.	3.8	1,687,829	1,673,348	do.
" 12	10 a.m.	3.6	1,560,610	1,541,670	do.
	3 p.m.	3.7	1,624,220	1,607,506	do.
" 13	10 a.m.	4.0	1,815,049	1,805,014	do.
	3 p.m.	4.0	1,815,049	1,805,014	do.
" 14	10 a.m.	4.0	1,815,049	1,805,014	do.
	3 p.m.	4.0	1,815,049	1,805,014	do.
" 15	10 a.m.	4.2	1,958,781	1,936,688	do.
	3 p.m.	4.1	1,886,915	1,870,850	do.
" 16	10 a.m.	3.7	1,624,220	1,607,506	do.
	3 p.m.	3.7	1,624,220	1,607,506	do.
" 17	10 a.m.	3.8	1,687,829	1,673,342	do.
	3 p.m.	3.8	1,687,829	1,673,342	do.
" 18	10 a.m.	3.9	1,751,878	1,739,178	do.
	3 p.m.	3.7	1,624,220	1,607,506	do.
" 19	10 a.m.	3.9	1,751,878	1,739,178	do.
	3 p.m.	3.9	1,751,878	1,739,178	do.
" 20	10 a.m.	3.9	1,751,878	1,739,178	do.
	3 p.m.	3.9	1,751,878	1,739,178	do.
" 21	10 a.m.	3.9	1,751,878	1,739,178	do.
	3 p.m.	3.9	1,751,878	1,739,178	do.
" 22	10 a.m.	3.9	1,751,878	1,739,178	Light shower last night.
	3 p.m.	3.9	1,751,878	1,739,178	Fine weather.
" 23	10 a.m.	4.0	1,815,049	1,805,014	do.
	3 p.m.	4.0	1,815,049	1,805,014	do.
" 24	10 a.m.	4.2	1,958,781	1,936,688	Rain last night.
	3 p.m.	4.1	1,886,915	1,870,850	Fine weather.
" 25	10 a.m.	4.4	2,102,503	2,080,718	Rainy since midnight.
	3 p.m.	4.5	2,174,379	2,152,733	do.
" 26	10 a.m.	4.5	2,174,379	2,152,733	Fine since 7 a.m.
	3 p.m.	4.5	2,174,379	2,152,733	Fine weather.
" 27	10 a.m.	4.6	2,245,245	2,224,748	do.
	3 p.m.	4.6	2,245,245	2,224,748	do.
" 28	10 a.m.	4.5	2,174,379	2,152,733	do.
	3 p.m.	4.4	2,102,503	2,080,718	do.
" 29	10 a.m.	4.3	2,030,647	2,008,703	do.
	3 p.m.	4.3	2,030,647	2,008,703	do.
" 30	10 a.m.	4.3	2,030,647	2,008,703	do.
	3 p.m.	4.3	2,030,647	2,008,703	do.
Mean of depths and quantities		4.08	1,869,500	1,859,164	
Mean of depths and quantities of water per diem, from July 18th to Sept. 30th, 1856 ...		4.4	2,102,503	2,080,718	

WEDNESDAY, 30 OCTOBER, 1867.

Present:—

MR. GRUNDY,
MR. ADAMS,MR. MORIARTY,
MR. WOORE.

PROFESSOR SMITH, M.D., (PRESIDENT), IN THE CHAIR.

Edward Lord, Esq., called in and examined:—

- E. Lord, Esq. 334. *President.*] I believe you have had a knowledge of the Botany Swamps for a considerable number of years? Yes; I recollect them for about forty years.
- 30 Oct., 1867. 335. Will you tell us of the driest years you have known? I could not tell you what was the effect upon the Botany Swamps of the driest year I have known, because at that time, in 1838-9, I was in the Bathurst district.
336. During the drought of 1838-9, then, you were not acquainted with the Botany Swamps? I was acquainted with them, but I was not in the locality, to form any opinion with regard to the effect of the drought upon them.
337. Did you observe the effect of the drought of 1849 upon them? Yes.
338. And after that I think the next very dry year was 1862? Yes.
339. Could you give us some account of the condition of the Botany Swamps during the driest periods you have known them, as compared with their present condition? I could not exactly give you that without reference to some data to aid my memory; but as to giving you a general description or opinion in regard to the swamps, I can tell you what my views have been during the period I have known them, and the effects which these continuous droughts have had upon them.
340. Has the stream ever actually ceased running in seasons of great drought? No, never.
341. Has it become very small as compared with its average condition? Latterly it has become very small.
342. Have you observed any material change in the appearance of the swamps since you first knew them? Yes, I have observed a very great change in them. The change is very material. That property of the soil enabling it to absorb water has been diminishing year after year.
343. Has it become less spongy and less retentive? It has become less retentive.
344. To what would you attribute that? To the cultivation which is carried on in the locality, and to the ground being trodden over by cattle and stock, and by men; generally, by population approaching more closely to the parts where this rain was retained.
345. When you knew the swamps first, were they more covered with brushwood than they are now? Yes, it was entirely covered with brushwood, from the boundaries of the city all the way out to the place in question.
346. I suppose that the mere destruction of the brushwood would tend to dry up the surface? No doubt of it.
347. Do you think the Botany stream is supplied entirely by the rain falling on its drainage area, or might it be supplied partly by springs? I have no doubt that it is supplied by the rain that falls on its area. I have had every opportunity of observing that.
348. Do you think the Botany stream can be relied on as a source of water supply to Sydney? I do not think so now. I may once have entertained an opinion that it could. I have thought that, if the same means had been adopted some seven or eight years ago that are being adopted now by the Council, of damming up the stream at intervals and saturating the contiguous land, there might have been preserved for a very long time sufficient water to supply Sydney; but I believe the population is so increasing, and the retentive property of this soil is so diminishing, that it cannot now be relied upon as a place from which so large a city with its suburbs can be supplied.
349. Have you examined the dams now in course of erection at Botany? No, I have not been there.
350. Do you think there would be any use in planting trees over the swamps—would they grow now? There are kinds of trees that I have no doubt would grow very well there, but I do not think that the planting of any trees now would have the effect desired. I do not think you could by any possibility restore the place to the same natural state in which it was thirty or forty years since.
351. Did trees grow there then, or only low scrubby vegetation? Trees were growing over the greater part of the place.
352. In average years, keeping out of view seasons of great drought, do you think there is a sufficient supply in the Botany stream for the present population of Sydney? Well, there might be for the present population of Sydney. The way I look at the matter is this:—If we got the same amount of rain spread over the year at such times as that it would not form a flood and run away, there is no question in my mind that it would be sufficient; but if it were to come in falls of a week or a fortnight, and then we were to have an intermission of two or three months, I do not think anything could be done to keep a sufficient supply there.
353. You do not think that the present system of dams would preserve the abundant supply of one period to make up for two or three months without rain? I do not.
354. Have you thought of any other source of water supply that would be preferable to the Botany stream? I have not an acquaintance with those rivers up above the Nepean; but from what I have heard, I think that the Government or the Corporation will have to adopt some means of procuring water from some source up that way.

355. You think that wherever it is to be obtained, there must be some further supply? There must be some further supply obtained. Wherever it is obtained, I think it ought to be sent in by its own gravity, and not forced in. I may mention to you, that this experience I have of the Botany Swamp, extending over such a length of time, has given me opportunities of seeing how the quantity of water is diminishing. When I was a boy, we had a flour-mill at the mouth of Cook's River. At that time—thirty or forty years ago—there was a stream there working the imperfect machinery then employed equal to 15-horse power; the wheel was undershot, and the pressure of water was never above from 3 feet 6 inches to 4 feet, that is, the height of water in the dam was never more than 3 feet 6 inches to 4 feet from the bottom of the race. If you were to try and apply the water for the same purpose, and with the same imperfect machinery now, I do not think you would be able to work it two hours a day. But at the time I speak of, it was continually employed. This shews how the water has diminished. There is another circumstance I have observed:—When we had a rainfall of a week or a fortnight, or three weeks, that would leave us a source of supply for the working of the mill and other purposes that would last for three or four months, according to the quantity that fell. But now, directly a heavy rainfall is over, the effect is removed immediately. The water runs off to the sea, and scarcely any of it is retained. In fact, it is nearly all drained off in three weeks or a month.

E. Lord, Esq.

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356. Do you think that is from the consolidation of the surface of the swamp? Unquestionably; and from the gardens, and the cuttings which have been made for the purpose of removing the water. There are two sources of supply to this place,—one coming from the northward or north-west, and the other more easterly. We used to have from that north-westerly source always a gradual supply of water. The swamps in that locality were almost always full; but the road now passes through several of them. There used to be a gradual supply all through the summer; but now, in the dry seasons, you will scarcely see a drop. There is another matter which I have noticed, as shewing how the treading down of the surface has destroyed the retentive property of the soil:—If it comes on any continuous rain, there is a flood immediately; whereas before, we were never apprehensive of a flood if it came on to rain five or six weeks at a stretch.

357. *Mr. Woore.*] Where was your mill? About half a mile from the old factory.

358. Was it erected at the same time as the factory? About the same time.

359. *President.*] Is there not a large amount of swampy ground to the eastward, on the Church and School Estate? Yes.

360. Can any of that be brought into the drainage of the Botany stream? I have no doubt that all of it could be brought into it, because all the waters of these reserves, or nearly all, fall into Botany Bay, through those streams you meet with as you go along. The first is where those veterans' farms are; then you come to another, and after that there is another one near Mr. Brown's. I suppose that by a small dam all along the margin of Botany Bay it might all be conducted to this stream.

361. You see no means of restoring the retentive character of the swamps? No, I do not. If this large area of ground which now drains into the bay had its drainage diverted into the stream, I have no doubt that a supply might be obtained sufficient to last for a considerable number of years, because you would almost double the area.

362. Do you know if portions of the watershed of the Botany stream are being built upon now? I believe not to a very great extent on the 640 acres [*indicated on map*] about where the tannery is. It is being taken up gradually; but there is nothing to prevent the whole of the land along that stream being taken up and built upon.

363. It is mostly private property? It is nearly all private property all the way up.

364. Can you make any comparison between the quality of the water when you knew it first and its quality now? No; the only thing I can say in regard to that matter is, that being subject to more frequent floods, and drains being cut, the water is more frequently impure. But if the water is allowed to remain for a length of time undisturbed, it is very pure.

365. *Mr. Moriarty.*] You said that there was nothing to prevent the whole of that land being built upon, or nearly the whole of it, from the Botany Waterworks almost up to the Water Reserve? Yes.

366. And the same causes which you have observed as having tended to drain the land about Shea's Creek may come into operation there? No doubt.

367. Drains may be cut over it, and the land may lose its power of retaining water? Yes.

368. And it will then, of course, be worthless as a source of water supply? No doubt it will.

369. And might not the same occur in regard to the Church and School Lands, which you mention as a place from which a large additional supply might be derived? Precisely so.

370. Then, unless the whole were reserved from beginning to end, you would not say that the supply could be trusted? Undoubtedly not; and even then I should have great doubt about it.

371. *President.*] I understand you to say that the evil is already done, and that the swamps have ceased to be trustworthy? Yes. You may judge of the circumstances from what I have said,—that a number of years ago there was a supply yielded gradually, and that if it rained for three or four weeks continuously, the effect of it would remain for four or five months; but now, immediately after a heavy rain there is a flood, and away the water goes.

372. During the thirty or forty years you have known the place, do you recollect whether there was any period of lengthened drought—Did you ever run short of water? No, we never ran short of water there; we always had plenty to work the machinery, and the quantity required for that is about the best criterion one could have. The lower part, where

E. Lord, Esq. where the road is, was relied upon as an assistant to the supply, but we always got the principal part of the water elsewhere. Now, in times of flood the water rushes down by the road with immense impetuosity; formerly it used to yield the water gradually.

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373. *Mr. Grundy.*] Some portions which then were swamps are not now swamps at all? No, they have been made into gardens. Where the present road goes, you could not get half the distance with a horse years ago.

374. You could not get half the distance you can get now? No. Of course they have made a good portion of the road, but the whole character of the country is altered altogether.

375. *Mr. Woore.*] When did you become acquainted with the swamps? I knew them when I was a child, and am speaking of them as far back as I recollect.

376. How many years ago is that? I have mentioned forty years as a time from which I have a perfect recollection of all the circumstances.

377. *President.*] Can you suggest anything further that could be done as a temporary provision, other than the dams that are being erected? I believe it is a matter of great magnitude, and that every precaution should be taken, judging from what took place last year. There was not then such a great drought, but the water was becoming very scarce. I think large additions might be made to the supply, if precautionary means were adopted to collect the water that now flows into Botany Bay from the reserves.

378. *Mr. Grundy.*] There is, I believe, quite a large stream running into Botany Bay to the eastward? There are two or three streams nearly always running.

379. There is one where the Long Bay road passes? There is a very large quantity of water collected over a large area running into the sea.

380. Do you know what difficulty there would be in bringing the water into the Botany stream—The ground rises between the Sir Joseph Banks Hotel and that place considerably, does it not? No, there is a bank all along the margin of the bay. The plan would be, to make a dam of sufficient elevation at Bunnerong and the intermediate streams, and convey it to the Botany Waterworks.

381. That part of the swamps appears to have been less interfered with than any other? Yes, its distance from Sydney has saved it from encroachments similar to those which have taken place on other parts.

382. *President.*] Do you know that portion of the swamp marked on the map "Bird's Gully"? Yes.

383. Have you traced that up to the head? No, I do not think I have. It is a tributary to this main stream.

384. Could any of the more easterly swamps be drained into the head of Bird's Gully, and so into the Botany stream? I dare say they could. It would not require a great deal of trouble to ascertain that, if the levels were taken to the end of Long Swamp.

385. One of the easterly swamps is called Long Swamp, is it not? Yes; the Long Swamp takes its rise almost at the back of Maroubra beach. It comes down and delivers its waters into Botany Bay at Bunnerong. I do not know whether the continuation of this would intercept others, but it would only get the portion of water above it. If you got to Bunnerong, three miles from Botany, by elevating the water a little, you might throw it down to the next stream, and from that into the reservoir at Cook's River, where the machinery is.

386. *Mr. Moriarty.*] We have been told that there is an outcrop of the rock all along the north shore of Botany, close to the beach—Do you know if that is the case? I never heard that there was. But at the time Mr. Rider was doing the engineering work there for the Corporation, he had a man making borings all over the place. There is no indication of rock at all till you come beyond Bunnerong—that is the point that runs out. The Long Swamp is not a continuous swamp—there is a rise in the middle, so that the water would percolate gradually.

387. Are you of opinion, supposing it is possible to reserve these lands for the purpose of supplying water to the city, that it would be advisable to do so in view of the probable increased requirements consequent on the extension of the city? I think it would be desirable to retain them in the hands of the Government until some other mode is adopted for supplying the city with water.

388. But generally, supposing it possible to get water from some other source, do you think it would be advisable then to retain the swamps in the hands of the Government? The necessity for doing so would then be done away with. I think any Government would be exceedingly culpable to allow things to remain in the same state as at present. That is my opinion, formed from the observations I have made during the last few years.

389. *President.*] Do you think that Sydney runs great risk now from the deficiency of water? It altogether depends upon the uniformity of the rainfall. If we have similar droughts to those we have already experienced in this country, they would be attended with considerable inconvenience and injury to the citizens.

SATURDAY, 2 NOVEMBER, 1867.

Present:—

MR. MORIARTY,	|	MR. GRUNDY,
MR. ADAMS,	|	MR. WOORE.

PROFESSOR SMITH, ESQ., M.D., (PRESIDENT), IN THE CHAIR.

Simeon Henry Pearce, Esq., called in and examined:—

390. *President.*] I understand that you are very familiar with the Botany Swamps? I am. S. H. Pearce,

391. Has your knowledge of that district extended back many years? For the last twenty years I have been living at Randwick in that neighbourhood. Esq.

392. And have you had occasion to pay much attention to the condition of the swamps and the streams that drain them? I have; I have made the subject a matter of much consideration. 2 Nov., 1867.

393. Could you give us your views of the condition of the swamps now, as compared with their condition when you first knew them? In the case of most of them, the surface is much harder than it was when I first knew them—twenty years ago. I think that is on account of the drains which have been cut through them—especially in the Lachlan Swamp—by the City Corporation. They cut those drains twelve or fifteen years ago, for the purpose of getting a supply of water when they were at that time very short of it. The City Corporation then opened a number of ditches through the swamp, towards the hills at Waverley, in order to get the surface drainage to supply the city. They thus drained the whole of the bed of the swamp to the depth they took the drains; and hence the hardness of the soil, which is, however, owing in part to the cattle that used to depasture there. The swamps became more dense, and consequently more dry, on account of the ditches which were cut to drain them, &c. The other swamps also, to the south of the Sydney Common, which were in the possession of private individuals—Atkinson, Armitage and others, who had sheep-washing establishments on the creek, made dams and cut channels, for the purpose of supplying themselves with water in drougthy seasons. They took a course similar to that pursued by the Corporation to supply the city. The consequence was, that when those dams gave way by the water percolating under the bottom, the water washed channels below those dams—large and deep, so that the original boggy matter (decomposed vegetation) which previously remained in the swamps, was to a certain extent washed away.

394. Then you think that the means taken to increase the supply had the effect of injuring the retentive power of the swamp? Exactly so; the bog on the surface was formerly very retentive—it kept back the surface water, excepting in very dry seasons; but when they cut the ditches through the swamps, the water was drained from the higher levels. If you have a swampy garden, the first thing to make it dry is to cut a ditch through it and drain it; and that is what has been done on the Lachlan Swamps.

395. When you knew the swamps first, was there more scrubby vegetation upon them—or even trees—than there is now? In some of the swamps there was. Since the City Corporation have fenced in the Lachlan Reserve, the scrub and other indigenous plants and grasses have been better preserved from fires, &c. The land has thus been preserved from the denudation which was previously caused by fires and the cutting of timber, as well as by the depasturing of cattle. There is more vegetation on the Lachlan Swamps now than there was previous to their being fenced in.

396. You think there is more vegetation over the general surface of the swamps than there was twenty years ago? That is, over the surface of the Lachlan Swamp which has been enclosed.

397. Does that apply also to the unenclosed swamps? No; because the fires which have occurred have to a certain extent destroyed the vegetation. There might be an answer given as to the use of the vegetation in two ways:—The vegetation, as it originally existed, no doubt prevented in some degree the evaporation of the water by the sun and air, and also retarded its course; but nevertheless, it required some moisture to support its own life, which it partly drew from the soil, and the absorption in one way was equal, I presume, to the absorption in the other.

398. Do you remember if there were trees growing on the slopes and on the drier parts of the district twenty years ago? There were but very few trees twenty years ago; but previous to my appointment as Commissioner of Crown Lands, in 1848, there were some large trees growing there, for the stumps remained in the ground at that time, and it became a part of my duty to protect what was then left.

399. Do you not think that the destruction of the trees that had once grown there would tend to diminish the drainage of water from the district? The preservation of the trees would have prevented the water flowing so rapidly from the surface, because the roots, and the leaves which would fall from the trees, would, as a matter of course, when decomposed, form a retentive substance, and act as surface dams for the retention of the surface water; in rainy weather, consequently, it would not flow off so suddenly as though the surface was smooth and regular.

400. Do you think, then, that the chief cause of the drying of the swamps is the cutting of these channels of which you have spoken? To a certain extent, to a very large extent, the surface has been drained in that way, and partly produced the present result.

401. Is much of the effect produced, do you think, in consequence of the treading down of the soil by the cattle? No doubt that has made the surface of the ground very hard, and consequently,

- S. H. Pearce, consequently, the water, instead of percolating into the sand in times of heavy rain, runs rapidly off into the ditches or channels referred to, and thence into Botany Bay.
Esq.
- 2 Nov., 1867. 402. Have you observed any evident diminution in the volume of the Botany stream, within your own knowledge? I have. Twenty years ago I could scarcely pass the place where the engine-house is now erected on the Randwick Road. There was no road to my property when I first resided there in 1848, and I had to wade over that place—the main stream—up to my knees in mud and water. I had to carry over in the same way a portion of the timber to build my house, it being impossible to take over a dray with a load. There was a large stream flowing there then, and until they began to cut the ditches I never saw that place without water.
403. What have been the driest years since you went to live there? I do not remember the dates, but I know that we have had two or three very dry seasons since I have been at Randwick.
404. Were you living there in 1849? I was.
405. It appears by the public records that that was a very dry year? It was; I believe it was very dry in 1848 and '49.
406. Have you any remembrance of the condition of the Botany stream at that time? Not towards Botany, but at the Lachlan Swamp, where I used to cross to go to Randwick, the stream was large, and continually running into Botany.
407. Even in 1849? Yes, in 1849. I remember it well, as previously stated.
408. *Mr. Woore.*] What part was that? At the watercourse near where the engine-house now is, on the Randwick Road.
409. *Mr. Grundy.*] Near the Racecourse? Yes, near where the old engine-house now stands.
410. *President.*] Do you think the Lachlan Swamp is supplied with water merely by the rain which falls on its drainage area? Exactly—by the surface drainage. Once I thought otherwise, on account of the large quantity of water which was continually running, but the present state of the stream clearly shows that it is merely surface drainage.
411. You do not think it is supplied by springs deriving water from other drainage areas? No, I do not think there is any supply except from the surface drainage of the land sloping to the swamp and its immediate vicinity. The Lachlan Swamp is surrounded by hills on the north-east and west, and in rainy seasons the water runs in from the top and slopes of those hills. There is, perhaps, a large quantity of water collected in the swamp by percolation from adjacent lands. My own opinion is, that the Lachlan Swamp was once an arm of the sea. I think the waters of the ocean originally extended to the Waverley Hills, and have no doubt that when proper experiments are made, it will be found to have been so.
412. Have you lately observed the stream of water that comes down towards the tunnel from a north-easterly direction? From Waverley?
413. Yes? I have many times crossed it, and found it dry except after rain. It is dry at the present time.
414. Do you think that could be supplied at present entirely from the rain that has fallen upon its drainage area? I do. All the rocks in that locality are known as ferruginous sandstone. The rocks and sandhills during winter absorb a large quantity of water, and supply it gradually by percolation into the lower levels.
415. Have you ever traced that stream to its source? I have. It is on property now belonging to my brother.
416. It arises from percolation through the rocks, and not from any distinct spring? Yes; there is no doubt as to its source, and that it is from surface drainage only—from the sandhills near the Episcopalian Church at Waverley.
417. To the eastward of the drainage area of the Botany stream, on the Church and School Estate, I believe there are many swamps of considerable size? There are several swamps in that locality, but in dry seasons there is no water in most of them. When dry, the surfaces of some are loam, others, I believe, rock.
418. Have you observed if they retain the water for a length of time after rain, or whether they dry speedily? In summer they dry speedily, on account of their shallowness, except the swamp we call "Seventy-four Swamp." The former Commission named it "Seventy-four Swamp," from some information I gave respecting it. My information was to the effect that even in dry weather I believed they could float a "seventy-four" in it. That is at the west of Maroubra Bay [*Witness pointed out "Seventy-four Swamp" on the map*], but since that time I have seen that swamp nearly dry, and was disappointed with reference to its anticipated depth.
419. *Mr. Adams.*] Where does that empty? It drains by percolation into Maroubra Bay. The bottom of this swamp is lower than the north end of "Long Swamp."
420. *President.*] Then that could not be made available? No, not without pumping apparatus. I once advised that a windmill and pump be there erected to assist in supplying the city, but I now see that the quantity would not be sufficient for any permanent purpose. I do not think that any of the water could be taken from there into Bird's Gully by drainage except the swamp was full, and then only a small quantity could be obtained in that way.
421. And it drains or percolates into the sea? Yes, it drains through the coast range into Maroubra Bay.
422. Can you point out the position of "Long Swamp"? Yes. [*Witness pointed to the swamp on the map.*]
423. Does that swamp retain much water? Not except in wet weather—then it is a series of small lakes; the surface soil in dry weather is loam. The water dries up very rapidly, in consequence of the percolation through the sandy loam, and the evaporation which is continually going on, consequent on its being exposed to the sun and air.

424. In the Water Report of 1852 it was stated that the Long Swamp could easily be connected, by a slight engineering work, with Bird's Gully—Is that your opinion? To a certain extent it is, by connecting it at the north end. There is a ridge of sandhills at the north-west end which would have to be cut through. In order to get a proper incline to drain that swamp into Bird's Gully, a long deep dyke would have to be cut. I think it would be necessary to put a tunnel through the hills, because if cuttings were made and left open, the sand would be constantly drifting into them and filling them up. Provision must also be made to prevent the sand being carried into the dams in times of flood.

S. H. Pearce,
Esq.
2 Nov., 1867.

425. Do you think that by connecting Long Swamp with Bird's Gully, a material increase in the supply of water can be obtained? *In wet weather it could.* An enormous quantity could be collected at Botany in rainy weather, if you connected all the swamps with the main stream below Bird's Gully—that stream which now supplies the present engine at Botany; but in very dry weather you would have but little from that source. The head of Bird's Gully is on the boundary of the parish of Alexandria and Botany, and further north than the Long Swamps. The Long Swamps are south of Bird's Gully, and could never be thoroughly drained into it, because Bird's Gully is much higher than the south end of the Long Swamps; but by cutting a tunnel through the hills, on the west of those swamps, south of Bird's Gully, they could be drained into the present stream that supplies the Botany Waterworks.

426. Then, in point of fact, to drain the Long Swamp would be only increasing a superabundant supply in wet weather? Yes, in very wet weather you would bring down such a flood that it would wash away all your dams, and also fill your reservoirs at Botany with sand. It would be much better to let it remain as it is, and be content with what is now received from those swamps by percolation through the hills.

427. You think that there would be no such accumulation of water as would increase the supply in dry weather? No; if you go out and see the place *even now*, you will find that what I say is correct.

428. What is the present outlet for Long Swamp in rainy weather? It runs out at the west end of Bunnerong. The Long Swamps all drain to the north-west of Brown's grant of 131 acres into Botany Bay.

429. What amount of ground is drained by that stream to the east of Bird's Gully—could you give us a rough idea of the superficial area? I should say that the Long Swamps drain about 400 acres, exclusive of water running into Bird's Gully. On the east of Bunnerong there are other swamps, but the watercourses are *dry in summer*.

430. And what by the other stream at Bunnerong? About 200 acres, but you could not bring that into the main stream, because there are spurs to the hills which divide the waters; and all the water from that area runs into a small creek between the grants of Brown and Crane. There is another swamp on the east of Crane's grant at Botany, which overflows in rainy seasons and runs into the bay.

431. Do you think that 600 more acres are drained to the east of Bunnerong? About 200 acres drain into the bay from that locality. *In wet weather* there is a beautiful stream running on the east of Brown's land—between the grants of Brown and Crane, but in *dry weather* there is but little water at either of those places.

432. Have you inspected the dams now being constructed on the Botany stream? I have not. If I had been asked any questions about them, I should have denounced the plan now adopted, as being a perfect waste of money.

433. You think they will not retain the water? My practical experience of these matters convinces me that no dam will retain water if it is built on a sandy foundation. The water will always percolate through the sand, and ultimately destroy the dam, similar to what lately occurred in Yorkshire. It is of no use putting a puddle dam on a rope of sand. My experience in the plan of making dams in England and in this Colony has been quite the reverse of the mode said to be adopted at Botany. The driving of piles to make dams to hold water with a sandy bottom is a perfect farce.

434. But might they not be useful in the way of keeping the surface more wet, and therefore so far retaining the spongy character of the surface? To a certain extent they might. When I was examined twenty years ago before the City Council on the same subject, I believe I recommended that dams should be made across certain places, being then under the impression that there was a good bottom to be found near the surface; but my experience since has convinced me that it is useless to make dams for the retention of water in that stream, believing as I do that the water of the sea formerly ran up to the base of the Waverley Hills, and that therefore it is all sand to a great depth. In some places the sand is perhaps more than 100 feet deep. I took great interest in the experiments made by the Commission appointed by the Parliament in 1852. I gave that Commission some information with reference to the water question, and paid great attention to their operations. They bored in the Lachlan Swamp, and at 60 odd feet (I forget the exact depth) they came upon a large log of timber lying horizontally in the sand. They bored with two tubes, but could get no further, on account of the timber. In many instances I saw them boring, and on one occasion they brought up in the tube chips of the indigenous timber of this Colony—*eucalyptus gumiferum*.

435. Is not that rather against your supposition that it was once an arm of the sea? No; because there is every probability that those hills and the slopes abounded with large timber trees, and by reason of floods or some other cause they may have been washed down the slopes to the centre of the stream, as is found in many places in England, where whole forests have been overturned and buried. In fact, we have sufficient evidence to shew from the coal deposits that such has been the case in the mother country, and the same causes may have produced the same effects here.

engine was never stopped at all. We should never, in any instance, have been short of water for watering the streets or for any other purpose, if means had been adopted to prevent the water from running into the sea. E. Bell, Esq.,
M.I.C.E., C.E.

262. But, as I understand, the engines were able to pump off all the water that came down, so that there was none running to waste? Yes, for a short time in the dry season. 26 Oct., 1867.

263. Was that an unusually dry season? I do not think it was unusually dry. We had had four or five months' dry weather before that occurred.

264. At that time you just kept pumping the whole of the water that came down to the engines? We pumped all we could during that dry season, and that was not sufficient to water the streets.

265. And you were obliged to shut off the water at night—If you had had to provide for the whole of the population of Sydney and the suburbs, would you have had water enough to supply them? No; but we should have had a superabundance of water if we had only retained some of that which ran to waste in the winter.

266. If you could have kept the water from the winter to the summer? Yes.

267. Do you anticipate that your dams will hold water for six months? Which dams?

268. Those at Botany? I do not understand your meaning.

269. Will they hold the surplus rainfall of winter, for the purposes of summer? Yes, to a certain extent; but as the demand increases, we must have reservoirs made purposely for that, after all the projected dams are completed.

270. In addition to those you are now making? Yes. The surplus rain water this winter has largely exceeded 10,000,000,000 of gallons; the present dams will retain only about 250,000,000, so it would be impossible to retain the whole rainfall without some very extensive reservoirs; but we shall not require to retain the whole for many years. The present and the contemplated dams will retain sufficient of the surplus rainfall of winter for the purposes of summer, for several years hence. The filtration through each dam will be very slight, and what little passes through one dam will be retained by the one below it; so the filtration through the lowest dam is all that will pass off in that way, and this quantity will be very far from sufficient to supply one engine—the sluices must be raised in each dam, to assist the supply for the engine. The effects of filtration will only be felt in the highest dam, and what passes through it will be more than supplied by the stream, which is constant to the extent of nearly 2,000,000 gallons per diem in the driest seasons.

271. I think I understand you to say that you have not as yet made any examination as to the amount of filtration which takes place through the dams? Only when I got the water up 6 feet in one of them I found that the filtration was very slight indeed. My object in raising it was to test whether the contractor had done his work tight round the pipe, and I found he had not.

272. I think you stated, in answer to Mr. Adams, that although the rock crops up generally along the north side of Botany Bay, there is one little dip where the old stream was? Yes.

273. Do you know what is the depth there below the surface? No, I never tried it. I have put a dam across the stream with a puddle bank to prevent the escape of the water, and, as near as my memory serves me, that was only 19 feet deep.

274. Did you go to the bottom? I excavated to the hard rock, and put a puddled clay bank upon it.

275. Does the rock rise to the westward? Yes; the engine-house is placed on it. On the eastern rise it goes towards La Perouse's monument.

276. And to what level does the rock crop up as regards the level of the water in your reservoir? The natural crop of the rock was as nearly as possible level with high water mark.

277. Do you think any considerable accession of water would be got by putting a little clay dam at the top of that rock, at such a height as may divert the water now supposed to flow into the bay? Do you mean from other outlets?

278. I mean, to cap the outcrop of the rock by a small clay dam all the way along? I have done that at the Botany Waterworks. There is a 5-foot clay bank from the engine-house to the extreme point of our land embedded on the clay and taken from the clay surface above the rock. We took the outside of the crop of clay to make the puddled embankment of.

279. You have, in point of fact, done that? Yes; I did it to prevent the escape of fresh water into the sea, which I saw was going on rapidly.

280. You have given the particulars of the reservoirs you propose to construct in addition to the present works? That is, the storing reservoirs?

281. Yes. How many months' supply for the present population do you estimate they will contain? That of course depends upon the size of the reservoirs.

282. But have you not fixed any particular size? Yes, but I have not expressed any particular size here. I will add the dimensions.

283. How many months' supply would you make them capable of holding? I would commence with a supply for twelve months.

284. You would make reservoirs in the city, capable of holding a twelve months' supply? Yes, or near Sydney.

285. At the rate of how many gallons per head per day? Forty. I almost think, that for storing, thirty would be sufficient.

286. Have you made any estimate of the cost of these works? I have an idea of the cost of them all.

287. Have you gone into particulars? I know how much they would cost an acre to make. There is an eligible site for a storage reservoir on Sydney Common, at the site formerly intended for a necropolis. It is a natural basin, about 20 chains long, by 20 chains

ought to be done, after we have pumped into Sydney the water which now runs from our present supply into the sea. Our object is to get the water into Sydney, and to have it there without any fear of the supply being cut off by failure of the pumping apparatus or any other cause.

E. Bell, Esq.,
M.I.C.E., C.E.

26 Oct., 1867.

306. *Mr. Grundy.*] With reference to the 1,800 acres which it is said can be drained into Bird's Gully—is that water in a condition to be used—is it not polluted by all sorts of things? I will not answer for there being 1,800 acres—I have not surveyed it. I have examined Bird's Gully and its neighbourhood, to a great extent; the water must find its way into our watershed.

307. It filters? Yes.

308. But if you made those works of which you have spoken in your report, it would no longer filter? —

309. *President.*] Have you in your office any plan of Sydney and its suburbs, showing the present distribution of the water? No, I have none beyond the trigonometrical survey, which is comprised of about fifty sheets the size of this table, on which our water mains are laid down. We find that on no smaller plan can we shew them. There are three pipes in some of the streets.

310. Would it not be comparatively easy to have a map of Sydney and its surrounding districts, showing those portions supplied with water and those that are not, by means of colours? That might be done, but even then, where one service meets another they must necessarily overlap in a hilly town like this. The pipes run past each other, and in some instances, the "dead end" has been carried up so that the foul water can be carried without injuring the water at a lower level. Then we have to carry the other a great way past it, to get a head of water above the houses.

311. Without going into details, I should like to see what portions of the suburbs are supplied and what portions are not? It would take a great deal of time to prepare a map.

312. *Mr. Moriarty.*] Could it not be done by an enlargement of the Surveyor General's plan of the town? It would be possible to do it, but it would take some time.

313. *President.*] What is the height of the Hyde Park end of the tunnel above high-water mark? 104 or 105 feet to the surface of the water.

314. A question was asked regarding the dip of the rock at the mouth of the Botany stream—you state that the rock dips to the northward—can you state the angle of the dip? No, I never tried it, but I fancied it was in some places, 1 foot in 2.

315. *Mr. Moriarty.*] Do you mean degrees? No, feet.

316. *President.*] You fancy the dip would be 1 in 2? I think it would be 1 in 2. Where I made that boring could not have been 3 chains from where the outcrop of the rock is. The edge of the basin must be very steep.

317. During the time of comparative scarcity, in the beginning of the year, there were complaints of the quality of the water, and persons asserted in the newspapers that the salt-water must have got in from the sea to the dam—do you think there was any foundation for that supposition? No, I think not. It was said by many that it must percolate through the masonry. We know that there was a leak in the masonry, but, five years ago, when I repaired the sluice gates, I caused a puddle bank to be put across the mouth of the pond, at its junction with the race carrying off the water, and when I had done with it I left it there. People, because they saw a little water weeping out through the masonry originally, conceived that where the weep was, the water found its way into the pond; but there was a puddle bank inside higher than the highest spring-tides. Those assertions were made by persons who afterwards found, very much to their annoyance, that there was a bank under the water which they did not see.

318. Was it a fact that the water, as delivered in Sydney, had a taste of salt? It had a taste which it does not always have. That I attributed to it having lain so long in the bog around the engine-pond over which the tide used to rise at one time. It was thought that the water was impregnated in some way with saline matter from what was originally deposited in the bog by the sea which used to rise up there before our dam was made. I believe myself that it was merely the flavour given to the water by the bog and that it was not caused by saline matter at all.

319. *Mr. Moriarty.*] Does the tide outside rise in dry seasons to the height of the water inside? In dry seasons, when the water is very low in the reservoir the high spring-tides rise 7 or 8 inches above it.

320. So that if there is any leakage, the salt-water would get in? Yes, but for the puddle bank between the sluice gates and the pond itself.

320½. We saw some water leaking out there the other day? Yes; but inside there is a puddled clay bank below the surface of the water but higher than the highest spring-tides, and through which no water can pass. The leak the Commissioners saw was from the dam, which is considerably higher than the clay bank.

321. *President.*] In the Water Supply Report of 1852, I find this statement made with regard to the watering of the streets:—"It is very much to be questioned whether this superficial watering of the streets does not in reality increase the evil. It is remarked of a similar proceeding at New York, that the filth of the streets, which no ordinances can prevent, was kept by constant watering in a perpetual state of decay. Under our fierce sun, the garbage soon became dry and comparatively harmless, but now it is watered hour after hour as fast as it shews any approach to dryness, and is thus kept incessantly fermenting and putrifying, to the great annoyance of delicate olfactories and the deterioration of the common air." Have you considered that possible effect of watering the streets? It is very possible that might be the case in towns where the streets are not so steep as they are in Sydney. I am certain it is not the case in Sydney.

to supply Sydney and the suburbs for twelve months, at the present time, without any pumping—quite sufficient to supplement the ordinary stream, and thus meet the requirements of the city and the suburbs for some years hence. When additional storage is required, a large dam should be constructed on the site of No. 4 Dam. Here in the gorge between the hill, a dam might be constructed at least 35 or 40 feet higher than the present dam which would give storage room for 800,000,000 gallons of water at the least. I believe I might state double this amount, but in the absence of more extensive surveys than have yet been made, I state the minimum quantity. The works I have enumerated would retain sufficient water to supplement the constant stream, and afford an uninterrupted supply of 45 gallons per head per diem of water, which cannot be excelled, if equalled, in purity and softness, in the Colony, to three times the number of the present population of Sydney and the suburbs. With regard to the loss which may be sustained by evaporation from the ponds formed by the several dams, I may state that the town of Bombay is supplied by a catch-water very similar to that from which the supply for Sydney is obtained. Across a valley some short distance from Bombay, dams are made to head up the water which falls during the wet season, and thus the two lakes of Vehar and Poway are formed, which retain sufficient water to supply the town of Bombay with water throughout the year. In a paper upon these works, which was read before the Institution for Civil Engineers, in London, by the Engineer who constructed the works, is the following statement, viz. :—“ Since the termination of the last rains the level of the lake has kept up remarkably well, its surface not having lowered more than six inches per month. This loss is stated to be principally due to leakage through the temporary plug by which the conical orifice of the pipe 41 inches in diameter is at present closed; no leakage whatever is perceptible through either of the dams. The small amount of this monthly loss proves how inapplicable the result of observational experiments on evaporation, on a small scale, are to the circumstances of a large body of water such as that constituting the Vehar Lake.”

E. Bell, Esq.,
M.I.C.E., C.E.
26 Oct., 1867.

APPENDIX A.

REGISTER of the Depths of Water passed over the Wasteboard, and of the Heights the Floodgates were open, daily, from the 24th March to 24th October, 1867.

Date.	Depth of Water over Waste-board.	Floodgates open.	Head of Water above Sills of Gates.	Date.	Depth of Water over Waste-board.	Floodgates open.	Head of Water above Sills of Gates.
1867.	in.	in.	in.	1867.	in.	in.	in.
March 24	...	...	...	May 7	3	6	75
" 25	7	30	79	" 8	3	6	75
" 26	3	12	75	" 9	3	6	75
" 27	nil	12	67	" 10	3	6	75
" 28	"	12	67	" 11	3	6	75
" 29	"	12	67	" 12	3	6	75
" 30	"	12	67	" 13	3	6	75
" 31	"	12	67	" 14	3	6	75
April 1	"	6	67	" 15	3	6	75
" 2	"	6	67	" 16	3	6	75
" 3	1	6	73	" 17	3	6	75
" 4	1	6	73	" 18	3	6	75
" 5	1	6	73	" 19	4	6	76
" 6	1	6	73	" 20	4	6	76
" 7	1	6	73	" 21	3	6	75
" 8	1	6	73	" 22	3	6	75
" 9	1	6	73	" 23	3	6	75
" 10	nil	6	70	" 24	3	6	75
" 11	"	6	70	" 25	3	6	75
" 12	8	45	80	" 26	3	6	75
" 13	2	22	74	" 27	3	6	75
" 14	2	18	74	" 28	3	6	75
" 15	nil	6	71	" 29	3	6	75
" 16	1	6	73	" 30	3	6	75
" 17	3	6	75	" 31	3	6	75
" 18	3	6	75	June 1	4	6	76
" 19	3	6	75	" 2	5	6	77
" 20	3	6	75	" 3	6	6	78
" 21	3	6	75	" 4	4	6	76
" 22	3	6	75	" 5	3	6	75
" 23	3	6	75	" 6	3	6	75
" 24	3	6	75	" 7	3	6	75
" 25	3	6	75	" 8	3	6	75
" 26	3	6	75	" 9	5	6	77
" 27	3	6	75	" 10	4	6	76
" 28	3	6	75	" 11	4	6	76
" 29	3	6	75	" 12	3	6	75
" 30	3	6	75	" 13	3	6	75
May 1	3	6	75	" 14	3	6	75
" 2	3	6	75	" 15	3	nil	75
" 3	3	6	75	" 16	5	"	77
" 4	2	6	74	" 17	4	"	76
" 5	2	6	74	" 18	3	"	75
" 6	4	6	76	" 19	5	6	77

APPENDIX B.

E. Bell, Esq.,
M.I.C.E., C.E.

The City Engineer to The Commissioners for the City of Sydney.

City Commission,
Engineer's Department,
Sydney, 30 July, 1856.

26 Oct., 1867.

Gentlemen,

In accordance with instructions received from you on the 11th instant, to gauge the escape of water at Lord's Mill, I made immediate preparations for so doing, by cutting off, as effectually as possible, every escape excepting that at the waste watercourse of the mill.

I had previously constructed a new wasteboard and gauge for the same purpose, at an elevation of six-teen and a half (16½) inches above the old one, in order to prevent the possibility of the sea-water at spring-tide from running over it into the mill-pond.

The notch in the new wasteboard is exactly five (5) feet wide, and in the side next the pond, in still water, a gauge is fixed, which is divided into inches and tenths of an inch, to denote the depth of water at the edge of the wasteboard, the point of zero on the gauge being fixed horizontally with the edge of the wasteboard.

The works were ready on the morning of the 18th instant, and the following table shews the result of the observations which have been made from the 18th to the 30th instant inclusive.

I have annexed a plan, section, elevation, and also a sketch of the wasteboard, to illustrate the arrangement by which the gauging was effected.

The gauging of the wasteboard will continue daily, and a return shall be made weekly of the results.

It is necessary to remark that, since the wasteboard was raised, the soakage through the sea-embankment is very considerable; previously it was almost imperceptible. The escape of water by this soakage is not less than ninety thousand (90,000) gallons per diem.

Also, that there is a small stream in the neighbourhood of Lord's Mill, which takes its water from this watershed, passes through the tannery, and discharges into the sea not less than two hundred and twenty thousand (220,000) gallons of water per diem.

In addition to the quantities escaping at Lord's Mill, as shewn by the annexed table, is the present supply from Lachlan Swamp to the city, which is computed at six hundred thousand (600,000) gallons per diem.

It will be seen by the annexed tables that (if the city contains ten thousand (10,000) houses) the smallest quantity stated therein will supply to each house two hundred and forty-six (246) gallons per diem, and the largest quantity two hundred and ninety-two (292) gallons per diem, or an average of two hundred and sixty-nine (269) gallons; and, with the addition of the Lachlan Swamp water, the average daily supply would be increased to three hundred and twenty-nine (329) gallons per house; therefore, taking the population of the city at sixty thousand (60,000) or six people to each house, the supply would average fifty-five (55) gallons per head per diem, or more than double the necessary quantity.

I have, &c.,
E. BELL, M.Inst.C.E.,
City Engineer.

Date.	Time.	Depth in inches and decimal parts of the Water passing over the Waste-board, which is 60 inches in width.	Escape in gallons of Water per minute over the Waste-board, from the result of experiments made in Scotland.	Escape in gallons of Water per minute over the Waste-board, computed from Beardmore's Tables. Constant '666.	Remarks.
1856.					
July 18	10 a.m.	5.3	2,768,169	2,836,890	Fine weather.
	3 p.m.	5.3	2,768,169	2,836,890	do.
" 19	12 noon	5.3	2,768,169	2,836,890	Showery.
	3 p.m.	5.3	2,768,169	2,836,890	do.
" 20					} This being Sunday, no gauge was taken.
" 21	11 a.m.	5.5	2,924,169	2,990,250		Showery weather.
	3 p.m.	5.5	2,924,169	2,990,250	do.
" 22	10 a.m.	5.5	2,924,169	2,990,250	do.
	3 p.m.	5.5	2,924,169	2,990,250	Fine weather.
" 23	10 a.m.	5.4	2,846,188	2,913,570	do.
	3 p.m.	5.4	2,846,188	2,913,570	do.
" 24	10 a.m.	5.4	2,846,188	2,913,570	do.
	3 p.m.	5.4	2,846,188	2,913,570	do.
" 25	10 a.m.	5.3	2,768,169	2,836,890	do.
	3 p.m.	5.3	2,768,169	2,836,890	Showery weather.
" 26	10 a.m.	5.2	2,690,232	2,760,210	Fine weather.
	3 p.m.	5.1	2,611,617	2,683,530	Showery weather.
" 27					} Being Sunday, no gauge was taken.
" 28	10 a.m.	5.0	2,535,166	2,606,850		Fine weather.
	3 p.m.	4.9	2,463,084	2,495,096	do.
" 29	10 a.m.	5.0	2,535,166	2,606,850	do.
	3 p.m.	5.0	2,535,166	2,606,850	do.
" 30	10 a.m.	5.1	2,611,617	2,683,530	do.
	3 p.m.	5.1	2,611,617	2,683,530	Showery weather.

The City Engineer to The Commissioners for the City of Sydney.

Engineer's Department,
City Commissioners' Offices,
Sydney, 11 August, 1856.

Gentlemen,

Annexed, I have the honor to lay before you my report upon the gauging of the water passing over the wasteboard at Lord's Mill, Botany, from the 1st to the 9th instant inclusive, and to observe that the quantity of water which escapes into the sea by filtration through the embankment without passing over the wasteboard, has increased very considerably since my last report to you on this subject; also, that there are no means of checking this escape until the permanent puddled embankment is made.

I have, &c.,
EDWARD BELL, C.E.,
City Engineer.

WATER SUPPLY OF SYDNEY AND ITS SUBURBS—EVIDENCE.

APPENDIX B—continued.

E. Bell, Esq.,
M.I.C.E., C.E.

The City Engineer to The Commissioners for the City of Sydney.

City Commission, Engineer's Department, 26 Oct., 1867.
Sydney, 6 October, 1856.

Gentlemen,

Annexed, I have the honor to lay before you the gauging of the water at Botany, from the 30th August to the 30th September inclusive, and to remark that soakage of water through the whole bank still continues, and the quantity of water which escapes by this means into the sea without passing over the wasteboard, increases considerably.

I have also added, for your information, the mean of the depths and quantities of water passing over the wasteboard, from the commencement of its rise, viz., from the 18th July to the 30th September, inclusive.

I have, &c.,
EDWARD BELL, C.E.,
City Engineer.

Date.	Time.	Depth in inches, and decimal parts of the upper edge of the Wasteboard below the surface, of the Water passing over it.	Escape in gallons of Water per diem passing over the edge of the Wasteboard according to experiments made in Scotland.	Escape in gallons of Water per diem passing over the edge of the Wasteboard, as computed by Beardmore's Tables. Constant 666	Remarks.
1856.					
August 30	10 a.m.	4.0	1,815,049	1,805,014	Showery weather.
	3 p.m.	4.2	1,958,781	1,936,688	do.
Sept. 1	10 a.m.	4.4	2,102,503	2,080,718	Fine weather.
	3 p.m.	4.1	1,886,915	1,870,850	Showery, with thunder.
" 2	10 a.m.	4.3	2,030,607	2,008,703	Showery weather.
	3 p.m.	4.3	2,030,607	2,008,703	Fine weather.
" 3	10 a.m.	4.4	2,102,503	2,080,718	do.
	3 p.m.	4.3	2,030,607	2,008,703	do.
" 4	10 a.m.	4.2	1,958,781	1,936,688	do.
	3 p.m.	4.2	1,958,781	1,936,688	do.
" 5	10 a.m.	4.1	1,886,915	1,870,850	do.
	3 p.m.	4.0	1,815,049	1,805,014	do.
" 6	10 a.m.	4.1	1,886,915	1,870,850	do.
	3 p.m.	4.3	2,030,607	2,008,703	Showery weather.
" 7	10 a.m.	3.9	1,751,878	1,739,178	do.
	3 p.m.	3.8	1,687,829	1,673,342	Fine weather.
" 8	10 a.m.	3.9	1,751,878	1,739,178	do.
	3 p.m.	4.0	1,815,049	1,805,014	do.
" 9	10 a.m.	4.0	1,815,049	1,805,014	do.
	3 p.m.	4.0	1,815,049	1,805,014	do.
" 10	10 a.m.	4.2	1,958,781	1,936,688	do.
	3 p.m.	4.0	1,815,049	1,805,014	do.
" 11	10 a.m.	3.8	1,687,829	1,673,348	do.
	3 p.m.	3.8	1,687,829	1,673,348	do.
" 12	10 a.m.	3.6	1,560,610	1,541,670	do.
	3 p.m.	3.7	1,624,220	1,607,506	do.
" 13	10 a.m.	4.0	1,815,049	1,805,014	do.
	3 p.m.	4.0	1,815,049	1,805,014	do.
" 14	10 a.m.	4.0	1,815,049	1,805,014	do.
	3 p.m.	4.0	1,815,049	1,805,014	do.
" 15	10 a.m.	4.2	1,958,781	1,936,688	do.
	3 p.m.	4.1	1,886,915	1,870,850	do.
" 16	10 a.m.	3.7	1,624,220	1,607,506	do.
	3 p.m.	3.7	1,624,220	1,607,506	do.
" 17	10 a.m.	3.8	1,687,829	1,673,342	do.
	3 p.m.	3.8	1,687,829	1,673,342	do.
" 18	10 a.m.	3.9	1,751,878	1,739,178	do.
	3 p.m.	3.7	1,624,220	1,607,506	do.
" 19	10 a.m.	3.9	1,751,878	1,739,178	do.
	3 p.m.	3.9	1,751,878	1,739,178	do.
" 20	10 a.m.	3.9	1,751,878	1,739,178	do.
	3 p.m.	3.9	1,751,878	1,739,178	do.
" 21	10 a.m.	3.9	1,751,878	1,739,178	do.
	3 p.m.	3.9	1,751,878	1,739,178	do.
" 22	10 a.m.	3.9	1,751,878	1,739,178	Light shower last night.
	3 p.m.	3.9	1,751,878	1,739,178	Fine weather.
" 23	10 a.m.	4.0	1,815,049	1,805,014	do.
	3 p.m.	4.0	1,815,049	1,805,014	do.
" 24	10 a.m.	4.2	1,958,781	1,936,688	Rain last night.
	3 p.m.	4.1	1,886,915	1,870,850	Fine weather.
" 25	10 a.m.	4.4	2,102,503	2,080,718	Rainy since midnight.
	3 p.m.	4.5	2,174,379	2,152,733	do.
" 26	10 a.m.	4.5	2,174,379	2,152,733	Fine since 7 a.m.
	3 p.m.	4.5	2,174,379	2,152,733	Fine weather.
" 27	10 a.m.	4.6	2,245,245	2,224,748	do.
	3 p.m.	4.6	2,245,245	2,224,748	do.
" 28	10 a.m.	4.5	2,174,379	2,152,733	do.
	3 p.m.	4.4	2,102,503	2,080,718	do.
" 29	10 a.m.	4.3	2,030,647	2,008,703	do.
	3 p.m.	4.3	2,030,647	2,008,703	do.
" 30	10 a.m.	4.3	2,030,647	2,008,703	do.
	3 p.m.	4.3	2,030,647	2,008,703	do.
Mean of depths and quantities		4.08	1,869,500	1,859,164	
Mean of depths and quantities of water per diem, from July 18th to Sept. 30th, 1856 ...		4.4	2,102,503	2,080,718	

355. You think that wherever it is to be obtained, there must be some further supply? There must be some further supply obtained. Wherever it is obtained, I think it ought to be sent in by its own gravity, and not forced in. I may mention to you, that this experience I have of the Botany Swamp, extending over such a length of time, has given me opportunities of seeing how the quantity of water is diminishing. When I was a boy, we had a flour-mill at the mouth of Cook's River. At that time—thirty or forty years ago—there was a stream there working the imperfect machinery then employed equal to 15-horse power; the wheel was undershot, and the pressure of water was never above from 3 feet 6 inches to 4 feet, that is, the height of water in the dam was never more than 3 feet 6 inches to 4 feet from the bottom of the race. If you were to try and apply the water for the same purpose, and with the same imperfect machinery now, I do not think you would be able to work it two hours a day. But at the time I speak of, it was continually employed. This shews how the water has diminished. There is another circumstance I have observed:—When we had a rainfall of a week or a fortnight, or three weeks, that would leave us a source of supply for the working of the mill and other purposes that would last for three or four months, according to the quantity that fell. But now, directly a heavy rainfall is over, the effect is removed immediately. The water runs off to the sea, and scarcely any of it is retained. In fact, it is nearly all drained off in three weeks or a month.

E. Lord, Esq.

30 Oct., 1867.

356. Do you think that is from the consolidation of the surface of the swamp? Unquestionably; and from the gardens, and the cuttings which have been made for the purpose of removing the water. There are two sources of supply to this place,—one coming from the northward or north-west, and the other more easterly. We used to have from that north-westerly source always a gradual supply of water. The swamps in that locality were almost always full; but the road now passes through several of them. There used to be a gradual supply all through the summer; but now, in the dry seasons, you will scarcely see a drop. There is another matter which I have noticed, as shewing how the treading down of the surface has destroyed the retentive property of the soil:—If it comes on any continuous rain, there is a flood immediately; whereas before, we were never apprehensive of a flood if it came on to rain five or six weeks at a stretch.

357. *Mr. Woore.*] Where was your mill? About half a mile from the old factory.

358. Was it erected at the same time as the factory? About the same time.

359. *President.*] Is there not a large amount of swampy ground to the eastward, on the Church and School Estate? Yes.

360. Can any of that be brought into the drainage of the Botany stream? I have no doubt that all of it could be brought into it, because all the waters of these reserves, or nearly all, fall into Botany Bay, through those streams you meet with as you go along. The first is where those veterans' farms are; then you come to another, and after that there is another one near Mr. Brown's. I suppose that by a small dam all along the margin of Botany Bay it might all be conducted to this stream.

361. You see no means of restoring the retentive character of the swamps? No, I do not. If this large area of ground which now drains into the bay had its drainage diverted into the stream, I have no doubt that a supply might be obtained sufficient to last for a considerable number of years, because you would almost double the area.

362. Do you know if portions of the watershed of the Botany stream are being built upon now? I believe not to a very great extent on the 640 acres [*indicated on map*] about where the tannery is. It is being taken up gradually; but there is nothing to prevent the whole of the land along that stream being taken up and built upon.

363. It is mostly private property? It is nearly all private property all the way up.

364. Can you make any comparison between the quality of the water when you knew it first and its quality now? No; the only thing I can say in regard to that matter is, that being subject to more frequent floods, and drains being cut, the water is more frequently impure. But if the water is allowed to remain for a length of time undisturbed, it is very pure.

365. *Mr. Moriarty.*] You said that there was nothing to prevent the whole of that land being built upon, or nearly the whole of it, from the Botany Waterworks almost up to the Water Reserve? Yes.

366. And the same causes which you have observed as having tended to drain the land about Shea's Creek may come into operation there? No doubt.

367. Drains may be cut over it, and the land may lose its power of retaining water? Yes.

368. And it will then, of course, be worthless as a source of water supply? No doubt it will.

369. And might not the same occur in regard to the Church and School Lands, which you mention as a place from which a large additional supply might be derived? Precisely so.

370. Then, unless the whole were reserved from beginning to end, you would not say that the supply could be trusted? Undoubtedly not; and even then I should have great doubt about it.

371. *President.*] I understand you to say that the evil is already done, and that the swamps have ceased to be trustworthy? Yes. You may judge of the circumstances from what I have said,—that a number of years ago there was a supply yielded gradually, and that if it rained for three or four weeks continuously, the effect of it would remain for four or five months; but now, immediately after a heavy rain there is a flood, and away the water goes.

372. During the thirty or forty years you have known the place, do you recollect whether there was any period of lengthened drought—Did you ever run short of water? No, we never ran short of water there; we always had plenty to work the machinery, and the quantity required for that is about the best criterion one could have. The lower part, where

SATURDAY, 2 NOVEMBER, 1867.

Present:—

MR. MORIARTY,	|	MR. GRUNDY,
MR. ADAMS,	|	MR. WOORE.

PROFESSOR SMITH, ESQ., M.D., (PRESIDENT), IN THE CHAIR.

Simeon Henry Pearce, Esq., called in and examined:—

390. *President.*] I understand that you are very familiar with the Botany Swamps? I am. S. H. Pearce,

391. Has your knowledge of that district extended back many years? For the last twenty years I have been living at Randwick in that neighbourhood. Esq.

392. And have you had occasion to pay much attention to the condition of the swamps and the streams that drain them? I have; I have made the subject a matter of much consideration. 2 Nov., 1867.

393. Could you give us your views of the condition of the swamps now, as compared with their condition when you first knew them? In the case of most of them, the surface is much harder than it was when I first knew them—twenty years ago. I think that is on account of the drains which have been cut through them—especially in the Lachlan Swamp—by the City Corporation. They cut those drains twelve or fifteen years ago, for the purpose of getting a supply of water when they were at that time very short of it. The City Corporation then opened a number of ditches through the swamp, towards the hills at Waverley, in order to get the surface drainage to supply the city. They thus drained the whole of the bed of the swamp to the depth they took the drains; and hence the hardness of the soil, which is, however, owing in part to the cattle that used to depasture there. The swamps became more dense, and consequently more dry, on account of the ditches which were cut to drain them, &c. The other swamps also, to the south of the Sydney Common, which were in the possession of private individuals—Atkinson, Armitage and others, who had sheep-washing establishments on the creek, made dams and cut channels, for the purpose of supplying themselves with water in drougthy seasons. They took a course similar to that pursued by the Corporation to supply the city. The consequence was, that when those dams gave way by the water percolating under the bottom, the water washed channels below those dams—large and deep, so that the original boggy matter (decomposed vegetation) which previously remained in the swamps, was to a certain extent washed away.

394. Then you think that the means taken to increase the supply had the effect of injuring the retentive power of the swamp? Exactly so; the bog on the surface was formerly very retentive—it kept back the surface water, excepting in very dry seasons; but when they cut the ditches through the swamps, the water was drained from the higher levels. If you have a swampy garden, the first thing to make it dry is to cut a ditch through it and drain it; and that is what has been done on the Lachlan Swamps.

395. When you knew the swamps first, was there more scrubby vegetation upon them—or even trees—than there is now? In some of the swamps there was. Since the City Corporation have fenced in the Lachlan Reserve, the scrub and other indigenous plants and grasses have been better preserved from fires, &c. The land has thus been preserved from the denudation which was previously caused by fires and the cutting of timber, as well as by the depasturing of cattle. There is more vegetation on the Lachlan Swamps now than there was previous to their being fenced in.

396. You think there is more vegetation over the general surface of the swamps than there was twenty years ago? That is, over the surface of the Lachlan Swamp which has been enclosed.

397. Does that apply also to the unenclosed swamps? No; because the fires which have occurred have to a certain extent destroyed the vegetation. There might be an answer given as to the use of the vegetation in two ways:—The vegetation, as it originally existed, no doubt prevented in some degree the evaporation of the water by the sun and air, and also retarded its course; but nevertheless, it required some moisture to support its own life, which it partly drew from the soil, and the absorption in one way was equal, I presume, to the absorption in the other.

398. Do you remember if there were trees growing on the slopes and on the drier parts of the district twenty years ago? There were but very few trees twenty years ago; but previous to my appointment as Commissioner of Crown Lands, in 1848, there were some large trees growing there, for the stumps remained in the ground at that time, and it became a part of my duty to protect what was then left.

399. Do you not think that the destruction of the trees that had once grown there would tend to diminish the drainage of water from the district? The preservation of the trees would have prevented the water flowing so rapidly from the surface, because the roots, and the leaves which would fall from the trees, would, as a matter of course, when decomposed, form a retentive substance, and act as surface dams for the retention of the surface water; in rainy weather, consequently, it would not flow off so suddenly as though the surface was smooth and regular.

400. Do you think, then, that the chief cause of the drying of the swamps is the cutting of these channels of which you have spoken? To a certain extent, to a very large extent, the surface has been drained in that way, and partly produced the present result.

401. Is much of the effect produced, do you think, in consequence of the treading down of the soil by the cattle? No doubt that has made the surface of the ground very hard, and consequently,

424. In the Water Report of 1852 it was stated that the Long Swamp could easily be connected, by a slight engineering work, with Bird's Gully—Is that your opinion? To a certain extent it is, by connecting it at the north end. There is a ridge of sandhills at the north-west end which would have to be cut through. In order to get a proper incline to drain that swamp into Bird's Gully, a long deep dyke would have to be cut. I think it would be necessary to put a tunnel through the hills, because if cuttings were made and left open, the sand would be constantly drifting into them and filling them up. Provision must also be made to prevent the sand being carried into the dams in times of flood.

S. H. Pearce,
Esq.
2 Nov., 1867.

425. Do you think that by connecting Long Swamp with Bird's Gully, a material increase in the supply of water can be obtained? *In wet weather it could.* An enormous quantity could be collected at Botany in rainy weather, if you connected all the swamps with the main stream below Bird's Gully—that stream which now supplies the present engine at Botany; but in very dry weather you would have but little from that source. The head of Bird's Gully is on the boundary of the parish of Alexandria and Botany, and further north than the Long Swamps. The Long Swamps are south of Bird's Gully, and could never be thoroughly drained into it, because Bird's Gully is much higher than the south end of the Long Swamps; but by cutting a tunnel through the hills, on the west of those swamps, south of Bird's Gully, they could be drained into the present stream that supplies the Botany Waterworks.

426. Then, in point of fact, to drain the Long Swamp would be only increasing a superabundant supply in wet weather? Yes, in very wet weather you would bring down such a flood that it would wash away all your dams, and also fill your reservoirs at Botany with sand. It would be much better to let it remain as it is, and be content with what is now received from those swamps by percolation through the hills.

427. You think that there would be no such accumulation of water as would increase the supply in dry weather? No; if you go out and see the place *even now*, you will find that what I say is correct.

428. What is the present outlet for Long Swamp in rainy weather? It runs out at the west end of Bunnerong. The Long Swamps all drain to the north-west of Brown's grant of 131 acres into Botany Bay.

429. What amount of ground is drained by that stream to the east of Bird's Gully—could you give us a rough idea of the superficial area? I should say that the Long Swamps drain about 400 acres, exclusive of water running into Bird's Gully. On the east of Bunnerong there are other swamps, but the watercourses are *dry in summer*.

430. And what by the other stream at Bunnerong? About 200 acres, but you could not bring that into the main stream, because there are spurs to the hills which divide the waters; and all the water from that area runs into a small creek between the grants of Brown and Crane. There is another swamp on the east of Crane's grant at Botany, which overflows in rainy seasons and runs into the bay.

431. Do you think that 600 more acres are drained to the east of Bunnerong? About 200 acres drain into the bay from that locality. *In wet weather* there is a beautiful stream running on the east of Brown's land—between the grants of Brown and Crane, but in *dry weather* there is but little water at either of those places.

432. Have you inspected the dams now being constructed on the Botany stream? I have not. If I had been asked any questions about them, I should have denounced the plan now adopted, as being a perfect waste of money.

433. You think they will not retain the water? My practical experience of these matters convinces me that no dam will retain water if it is built on a sandy foundation. The water will always percolate through the sand, and ultimately destroy the dam, similar to what lately occurred in Yorkshire. It is of no use putting a puddle dam on a rope of sand. My experience in the plan of making dams in England and in this Colony has been quite the reverse of the mode said to be adopted at Botany. The driving of piles to make dams to hold water with a sandy bottom is a perfect farce.

434. But might they not be useful in the way of keeping the surface more wet, and therefore so far retaining the spongy character of the surface? To a certain extent they might. When I was examined twenty years ago before the City Council on the same subject, I believe I recommended that dams should be made across certain places, being then under the impression that there was a good bottom to be found near the surface; but my experience since has convinced me that it is useless to make dams for the retention of water in that stream, believing as I do that the water of the sea formerly ran up to the base of the Waverley Hills, and that therefore it is all sand to a great depth. In some places the sand is perhaps more than 100 feet deep. I took great interest in the experiments made by the Commission appointed by the Parliament in 1852. I gave that Commission some information with reference to the water question, and paid great attention to their operations. They bored in the Lachlan Swamp, and at 60 odd feet (I forget the exact depth) they came upon a large log of timber lying horizontally in the sand. They bored with two tubes, but could get no further, on account of the timber. In many instances I saw them boring, and on one occasion they brought up in the tube chips of the indigenous timber of this Colony—*eucalyptus gumiferum*.

435. Is not that rather against your supposition that it was once an arm of the sea? No; because there is every probability that those hills and the slopes abounded with large timber trees, and by reason of floods or some other cause they may have been washed down the slopes to the centre of the stream, as is found in many places in England, where whole forests have been overturned and buried. In fact, we have sufficient evidence to shew from the coal deposits that such has been the case in the mother country, and the same causes may have produced the same effects here.

Nepean. I have seen it; but I cannot say that I am sufficiently acquainted with all its capabilities to enable me to give much information with regard to that source. But from what I have read and heard from persons capable of judging—men on whose opinion I place great reliance—I believe the only course you can adopt to get a pure, cheap, and an abundant supply of water is, to go either to the Grose, the Warragamba, or to the Nepean; and taking the elevations into consideration, I believe that from either of those sources you would be able to bring the water, by its own gravitation, to the highest levels in Sydney. That would save the expense of machinery, coal, and labour; and, by an aqueduct along the railway line, I think, at a reasonable cost, you could supply Sydney and its suburbs surely and constantly with a good, sufficient, and pure stream of water.

449. Do you think it would be worth while leaving the Botany stream for any other source, unless we could get the water into Sydney by its own gravitation? As the present common is granted to the citizens to depasture their cattle, and for the purposes of recreation, I think the water in the Lachlan Swamp might be reserved at present to supply the suburban municipalities of Paddington, Woollahra, Waverley, and Randwick. But there is this great difficulty with reference to recommending that,—that, to keep it pure, all the land on the western and southern slopes of Waverley in the drainage area must be purchased, or else the inhabitants must be prohibited from building too closely on lands now in private hands near the source of the Lachlan; otherwise the drainage from those localities will flow into that stream, and in the course of years, when the population has greatly increased, there is no doubt but that the water would become impure. If you take a grand and comprehensive scheme of supplying the city and suburbs with water, I would recommend that it should be taken from one source—either the Nepean, the Warragamba, Grose River, or some of the creeks which supply the Nepean. I think it important that the water should be obtained from a source from which it would flow into the city by its own gravitation, and thus save the expense of pumping machinery, labour, &c.

450. *Mr. Adams.*] Could you tell me whether the borings taken for the Commission of 1852 were made with a view of proving the substratum of the ground only? They were.

451. And not for the purpose of ascertaining the capacity of the ground underneath for water supply also—not for both purposes? I strongly recommended them then, if they could make dams to retain the water, to make them; and those borings were made to ascertain what the subsoil was. They could find nothing but quicksand and the logs I have referred to, and therefore they found that it would be impossible to make dams in those places.

452. Then we are to understand that the non-existence of rock or hard ground at the lower part, or below the Lachlan Swamp, was proved? In all the places they bored, they found, I believe, sand only. They bored in several places down the creek, and could find nothing but quicksand. What the depths were I could not undertake to say, except in that place where they came upon the logs. That was just above the present engine-house on the Randwick Road. The borings at that place clearly convinced me that an old creek had been filled up by the drifting of the sands and the washing of soil from the hills from time perhaps immemorial, and that the waters of the ocean had thus been shut out.

453. Were you often present at those borings? Yes, I was often present when they were being made.

454. Do you consider yourself in a position to state positively that the ground is proved in such a way as to leave no doubt that no hard ground or rock does exist? There is no hard ground at all, where the borings were taken, near the Randwick Road, within 60 feet of the surface.

455. But do you think a sufficient number of borings were taken to prove it? Yes, in the vicinity of the Lachlan Swamp. I do not think they went down the stream to Botany—I am satisfied that they did not. They thought of making one main or principal dam somewhere near the Randwick Road, and they bored above and below the place where they thought of making it. Mr. Dawson conducted the borings, and there was a report on the subject made by him, which, as far as I am aware, was not published.

456. *Mr. Grundy.*] You are then of opinion that the water percolates freely through the sand into Botany Bay? Exactly so.

457. Along the whole of the shore, almost? Yes, all the drainage of the Lachlan Swamp, and all the hills east and west, drain into the present Waterworks, and along the north shore, into the bay.

458. At a level below the present dams? Just so.

459. We have been told that the rock crops out in various places? There is no doubt that it does on the sides of the creek.

460. And that the swamps were a natural rock-bound basin, which would hold water continuously (I think) below a certain level, without any percolation into Botany Bay? The swamp is partly rock-bound, it is true, something like Sydney Harbour and Middle Harbour. There are rocks jutting out on the east and north sides. I have never seen any on the west, but on the east and north they are perceptible, like the rocks on the shores of the harbours referred to. But the Lachlan Swamp is 114 feet above the level of the sea, and I have no doubt that the sands in that swamp are much deeper than that. I am strongly of opinion that the waters of the sea formerly flowed to the Waverley Hills.

461. And you think the fresh water is escaping all over the area of the shore? Just so—you can perceive it. The late Mr. Brown, of Botany, who lived at Bunnerong thirty years or more, used to beach his boat on the north shore of Botany Bay, and he observed that the barnacles on the bottom of his boat were always killed by the fresh water oozing out of the sand.

475. Do you remember 1862—I think that that was a very dry year? I cannot remember it distinctly, but I think it was drier than 1865.
476. Had the water to be cut off at any time from portions of the city, in consequence of the scarcity of the supply? Yes. I have copies of letters upon that subject which I sent to the Government at the time. One of these is a letter dated 27th October, and having reference to the notice given in regard to restricting the supply. [*Letter handed in.*]
477. And had the watering of the streets to be stopped or restricted at that time? Yes; I ceased the watering of the streets, except during one hour in the day, or two—I am not certain which.
478. By means of those steps for economizing the water, was there a sufficient supply for manufactories and domestic use? There was; but fortunately in a very short time the rain came. Notwithstanding the precautions I took, the reservoir continued to fall.
479. The Crown-street reservoir? No, the reservoir at Botany. If the engine had been kept pumping, one day I was there, the reservoir would have been soon exhausted. It was pumping for two hours, and during that time the body of water fell $1\frac{1}{4}$ inch.
480. Shewing that the engine was pumping more water than the stream was bringing in? Decidedly.
481. Then if the dry weather had continued much longer, do you think that the supply for domestic purposes must have been restricted? Decidedly.
482. At that time I believe there were no dams excepting the engine-pond? None of the new dams. There were dams there, but since then those dams have been cleaned out—some of the mud from the bottom has been removed. I think the dams which then existed retained as much water then as they do now.
483. Are you aware that complaints were made as to the quality of the water supplied in times of drought? Yes.
484. And I suppose that you knew that the general opinion then expressed was that the salt-water must have got into the engine-pond, and been pumped up to supply the city? Yes.
485. Do you think that really occurred? I do.
486. Could you yourself taste salt in the water as delivered in Sydney? I do not remember. The only thing I remember is this,—that I went and examined the place, and I found that when the tide was flowing, it was higher than the bottom of our reservoir; consequently, the water of the sea percolated into the reservoir, and a puddle dam was then made across the weir to prevent it, and which I believe was the means of preventing it. Part of that puddle dam remains there now—at least it was there the last time I was at Botany.
487. Do you think the puddle dam that has since been put in will be sufficient to prevent such percolation? Partially it will—I do not think it will prevent it entirely.
488. Does the clay puddle rest on the sandstone rock? I do not think it.
489. Even if it did, might not the water percolate through the joints of the sandstone rock? I could not give an opinion upon that matter—I have never seen the bed of sandstone rock. It would depend entirely upon what kind of sandstone it was—whether it was solid or had many veins or layers.
490. Have you inspected the dams that are now being erected in the course of the stream? I have not been there for some time, but during their erection I saw some of them.
491. And I suppose you know thoroughly their mode of construction? I have a very good idea of it.
492. Have you any objection to express an opinion regarding the probable efficiency of those dams? No.
493. Will you state what you think of them? I stated in the Council my opinion as to the construction of those dams, previous to the tenders being accepted. I then said that I believed, from the way in which they were about to be constructed, that they would not answer the purposes contemplated. I never thought for a moment that the dams as constructed would stand against so great a body of water. I did not think they were sufficiently strong, nor could I believe that by putting bog upon bog upon a sandy bottom, a sufficient quantity of water would be retained to supply the citizens of Sydney. It was my opinion that the water would percolate under those dams or through them.
494. But if the water percolates freely, the strength of the dams will never be tried? I think the dams would stand in an ordinary season, but not in time of floods. It is my opinion that if those dams had been as far forward as they are now, in June last, the floods would have swept them away.
495. Then you think that the erection of these dams will not be of any material service to the water supply of Sydney? They can be made of service, as at present, but I do not think they will render the service contemplated. They may be the means of backing some of the water that would otherwise find its way into the sea. When the water falls in the stream, the water will no doubt percolate from the land into the dams; but I do not think the dams will have the effect of supplying that quantity of water which it is contemplated by the Engineer they will preserve.
496. You do not think they will be sufficient to carry the surplus water of a wet season over a dry season? I do not think so.
497. Do you know Mr. Bell's scheme of watertight reservoirs in and about Sydney? I know Mr. Bell's scheme of reservoirs at Botany; I have paid a good deal of attention to it.
498. He stated to us that his scheme, as a whole, involved the construction of large watertight tanks or reservoirs in and about Sydney? He sent a scheme down to the Council having reference to the excavation of a large reservoir at some place near to Mr. Atkinson's dams (I think), and he proposed to cover it over with galvanized iron; but I am not in a position to state whether in that scheme he stated that the dam ought to be puddled with clay or with bog, as the dams are at present.

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S. H. Pearce, Esq., 436. And you think the trees were of the same character as those which are growing at present? Yes, the *eucalyptus gumiferum*. I arrived at this conclusion from the chips I examined on the occasion.

2 Nov., 1867. 437. On the whole, do you think the Botany stream can be relied on as a source of water supply for the city of Sydney? Certainly not. At one time I thought otherwise; but twenty years ago I had not so much experience as at present, and also the population of the city and suburbs was less than it is now. *The experience of last year* should be sufficient to convince us that, with only the present population, the Lachlan and other swamps in that locality will not yield a supply sufficiently large to meet our present requirements; and what service will it be in twenty years time, when the population has increased to double the number it now is?

438. But if provision were made, by water-tight reservoirs, to preserve the surplus, would it be sufficient? If you could preserve *all the water* which falls on that area, you would have sufficient perhaps for the next thirty years; but unless you *can retain the water by good puddle dams sunk into the bed rock*, and prevent the evaporation, you will not be able to supply Sydney and the suburbs with water in sufficient quantity from that source.

439. I believe you were a member of a Commission appointed to inquire into the propriety of alienating certain lands situated on the Botany watershed? I was.

440. Has the Government acted in accordance with the recommendations of the report of that Commission? They have, that is, so far as reserving the land temporarily. Whether they have granted it to the City Corporation or not is a question I cannot answer. But they have so far adopted the suggestions of the Commission, by not selling those portions of land we recommended should be reserved for watersheds.

441. Do you think that at the present there is any objectionable drainage into the Botany watershed? At present I think there can be very little objection to the drainage into the Botany watershed, except the drainage from the heights at Waverley. That I am not so sure about, because the inhabitants are increasing, and the drainage from that locality must go direct into the head of the stream. It has however to percolate through the sand before it reaches the tunnel, and it thereby becomes filtered and cleansed from its impurities before reaching the swamp; but as the inhabitants of Waverley and other localities increase in number, the drainage will of course be larger, and whether the increased amount of sewage will ultimately injure the water after percolating and filtering through the sand is a question I am not able to determine. It is, however, certain that the purity of the water will not be improved by such addition.

442. Do you think, then, that in future there will be a greater liability to objectionable drainage? As the inhabitants increase on the southern and western slopes of Waverley, the eastern watershed and Paddington, there will be more or less noxious matter produced, which may, in the course of time, become injurious.

443. What becomes of the drainage of the Randwick Cemetery? I might say that in dry weather there is none. In wet weather there is a small amount of drainage, about the size of one's finger, through the pipes we put in, and which ultimately finds its way into the Botany Swamps.

444. It is not a pleasant thing to have a cemetery draining into the water supply? No; but there is a cemetery, I believe, in the locality of the engine-house at Botany, which does not appear to be considered injurious to the water.

445. And draining into the swamps? I do not know, but from what I have been told, it is not far from the engine-house.

446. Supposing the Botany Swamps were abandoned as a source of water supply, could much money be raised from the sale of the land at present reserved? Yes; I believe if all the land now reserved was sold, and the proceeds appropriated to the water supply, also all the money calculated which will have to be paid to Cooper & Co. as compensation for their property, which must be reserved if the present system is adopted, the total amount would be a very large sum. All the eastern portion of the Waterloo Estate drains into that stream which supplies the Sydney Waterworks; and if the present water supply is to be preserved, those portions of land will have to be purchased, perhaps at great cost. If that land is sold by its present proprietors, the probability is that it will be built upon and greatly populated, and that the stream will then become a common sewer, like the "Tank Stream" in Sydney. By selling the reserved land judiciously I think a large sum might be realized. For instance, if the allotments were sold, as a private individual would sell them—when and as they were required, and the proceeds added to the sum which would have to be paid as compensation to private individuals, the amount would go a long way towards the sum required to bring water by an aqueduct from the Nepean, the Grose River, or some other place near the Blue Mountains, which has been recommended by practical persons.

447. Could you give us an approximate idea of the amount of money which might be raised from the sale of those lands? Without making a calculation of the area I could not; but I know from the position and quality of the land that a large sum might be obtained for it. The stream below the Racecourse could be used for manufactories. All the manufactories of the city might be erected there. There would not be a sufficient supply of water to furnish water-power, but there would be sufficient to supply steam-engines, &c., &c. Manufactories could be established all down that stream to Botany Bay, and a large sum realized from the sale of the land for those purposes.

448. Do you think that stream is better suited to supply manufactories than to supply Sydney with water? Yes, to supply steam-engines for manufactories; but there is not sufficient to supply water power for those purposes.

448½. Have you thought of any other source of water supply which, in your opinion, would be preferable to the Botany stream? I have heard and read much with reference to the Nepean.

Nepean. I have seen it; but I cannot say that I am sufficiently acquainted with all its capabilities to enable me to give much information with regard to that source. But from what I have read and heard from persons capable of judging—men on whose opinion I place great reliance—I believe the only course you can adopt to get a pure, cheap, and an abundant supply of water is, to go either to the Grose, the Warragamba, or to the Nepean; and taking the elevations into consideration, I believe that from either of those sources you would be able to bring the water, by its own gravitation, to the highest levels in Sydney. That would save the expense of machinery, coal, and labour; and, by an aqueduct along the railway line, I think, at a reasonable cost, you could supply Sydney and its suburbs surely and constantly with a good, sufficient, and pure stream of water.

449. Do you think it would be worth while leaving the Botany stream for any other source, unless we could get the water into Sydney by its own gravitation? As the present common is granted to the citizens to depasture their cattle, and for the purposes of recreation, I think the water in the Lachlan Swamp might be reserved at present to supply the suburban municipalities of Paddington, Woollahra, Waverley, and Randwick. But there is this great difficulty with reference to recommending that,—that, to keep it pure, all the land on the western and southern slopes of Waverley in the drainage area must be purchased, or else the inhabitants must be prohibited from building too closely on lands now in private hands near the source of the Lachlan; otherwise the drainage from those localities will flow into that stream, and in the course of years, when the population has greatly increased, there is no doubt but that the water would become impure. If you take a grand and comprehensive scheme of supplying the city and suburbs with water, I would recommend that it should be taken from one source—either the Nepean, the Warragamba, Grose River, or some of the creeks which supply the Nepean. I think it important that the water should be obtained from a source from which it would flow into the city by its own gravitation, and thus save the expense of pumping machinery, labour, &c.

450. *Mr. Adams.*] Could you tell me whether the borings taken for the Commission of 1852 were made with a view of proving the substratum of the ground only? They were.

451. And not for the purpose of ascertaining the capacity of the ground underneath for water supply also—not for both purposes? I strongly recommended them then, if they could make dams to retain the water, to make them; and those borings were made to ascertain what the subsoil was. They could find nothing but quicksand and the logs I have referred to, and therefore they found that it would be impossible to make dams in those places.

452. Then we are to understand that the non-existence of rock or hard ground at the lower part, or below the Lachlan Swamp, was proved? In all the places they bored, they found, I believe, sand only. They bored in several places down the creek, and could find nothing but quicksand. What the depths were I could not undertake to say, except in that place where they came upon the logs. That was just above the present engine-house on the Randwick Road. The borings at that place clearly convinced me that an old creek had been filled up by the drifting of the sands and the washing of soil from the hills from time perhaps immemorial, and that the waters of the ocean had thus been shut out.

453. Were you often present at those borings? Yes, I was often present when they were being made.

454. Do you consider yourself in a position to state positively that the ground is proved in such a way as to leave no doubt that no hard ground or rock does exist? There is no hard ground at all, where the borings were taken, near the Randwick Road, within 60 feet of the surface.

455. But do you think a sufficient number of borings were taken to prove it? Yes, in the vicinity of the Lachlan Swamp. I do not think they went down the stream to Botany—I am satisfied that they did not. They thought of making one main or principal dam somewhere near the Randwick Road, and they bored above and below the place where they thought of making it. Mr. Dawson conducted the borings, and there was a report on the subject made by him, which, as far as I am aware, was not published.

456. *Mr. Grundy.*] You are then of opinion that the water percolates freely through the sand into Botany Bay? Exactly so.

457. Along the whole of the shore, almost? Yes, all the drainage of the Lachlan Swamp, and all the hills east and west, drain into the present Waterworks, and along the north shore, into the bay.

458. At a level below the present dams? Just so.

459. We have been told that the rock crops out in various places? There is no doubt that it does on the sides of the creek.

460. And that the swamps were a natural rock-bound basin, which would hold water continuously (I think) below a certain level, without any percolation into Botany Bay? The swamp is partly rock-bound, it is true, something like Sydney Harbour and Middle Harbour. There are rocks jutting out on the east and north sides. I have never seen any on the west, but on the east and north they are perceptible, like the rocks on the shores of the harbours referred to. But the Lachlan Swamp is 114 feet above the level of the sea, and I have no doubt that the sands in that swamp are much deeper than that. I am strongly of opinion that the waters of the sea formerly flowed to the Waverley Hills.

461. And you think the fresh water is escaping all over the area of the shore? Just so—you can perceive it. The late Mr. Brown, of Botany, who lived at Bunnerong thirty years or more, used to beach his boat on the north shore of Botany Bay, and he observed that the barnacles on the bottom of his boat were always killed by the fresh water oozing out of the sand.

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462. *Mr. Moore.*] Then in dry seasons would not salt-water percolate into the swamp? Yes, on the same principle that you cannot keep water in dams built on a sandy foundation—the salt-water would find its way to the lower levels. Supposing the dam or reservoir at the the Botany engine-house was emptied of the fresh-water, it would fill with salt-water by percolation from the bay, unless you adopted some mode which would keep the salt-water out and the fresh-water in. To do this effectually you must have the “puddle” bed sunk in a rock or other substantial foundation, and lengthened as required, to prevent the escape of the water.

463. It has been said that when the water is scarce it becomes brackish—How do you account for that? It arises from the percolation of salt-water through the rope of sand which divides the reservoir from the bay, and on account of the fresh-water being at a *lower level than the waters in the bay.*

464. *Mr. Grundy.*] You are aware that there is a puddle dam below the surface? Yes, but not to the *bed rock*, and unless a puddle dam goes not only to the surface of the rock *but into an excavation in the rock itself*, it can be of no service in preventing percolation. I have made, and seen many dams made, in England and elsewhere. Piles should never be used for such a purpose unless they can be driven into the clay, and even then they would decompose, and the water percolate underneath them. The proper way to make a dam is to *sink into the bed rock*, to excavate from 6 to 10 feet as the case may be, to the width you require, and into the solid rock on either side. Unless the clay puddle is so taken into the bed rock and secured at the ends, the water will never be retained, because its weight, with the perpendicular pressure of the atmosphere, will be sufficient to drive the water under the bottom of the dams, and ultimately the dams would be washed away. In very dry weather there would be no water in them. As long as the stream is sufficient to feed the dams and keep the water to a level, notwithstanding the percolation, no doubt you would retain water, but when the dry weather came on, and the feeder was cut off by drought, the water would escape by evaporation and percolation, and *when you wanted water for the special use of the citizens in dry weather, you would have none.* In the summer all those dams would be dry.

465. *President.*] Would it not be a difficult thing to make watertight dams on sandstone rock? Not if you excavated into the *proper bed rock* and put *clay puddles in.*

466. But seeing that the sandstone rock lies in layers, would not the water escape through the joints in the rocks? It would if you had not a proper bed. If you examine the rocks in that locality, you will see that they are not dipped much. The rock under the surface is nearly horizontal. There is a rock in my garden which covers the whole surface. I never was more deceived than when I came to cultivate that land. I thought it was a deep soil, but when I came to cultivate it I came on to the bed rock at 2 feet; and nearly the whole surface of that is horizontal. It is, therefore, evident that the rocks have but little dip in that locality.

467. *Mr. Grundy.*] It is then your opinion that there is a smaller quantity of water in the Botany Swamps now than there was twenty years ago, irrespective of the great increase of supply required? Yes, I believe that such is the case—not only from the causes I have already stated, but also from others. Every house that has been built at Randwick, Paddington, and Waverley, and also round Surry Hills, near the old tunnel, draws water from those hills for its own supply, and of course to that extent cuts off water from the city. They mostly have wells, and every one of those wells receives a portion of the surface drainage, which otherwise would find its way into the tunnel or into the Lachlan and Botany Swamps. Those people use a large quantity of water, not only for their own use, but also for *cattle, buss horses, &c., &c.* Those who have not wells, have erected tanks, more or less, to catch the rain water, and every gallon of water preserved in tanks or drawn from wells for the use of the people in those localities is, as a matter of course, so much taken from the Sydney supply. So that while the inhabitants of Sydney have been increasing, the supply of water has been decreasing, from the causes I have mentioned. And every year your supply from the present source will continue to decrease, while every year the demand for water in the city and suburbs will be greater.

John Woods, Esq., called in and examined:—

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468. *President.*] I understand that you have been Mayor of Sydney? Yes, I was Mayor in 1865.

469. And you have been a member of the Sydney Municipal Council since then? Yes.

470. And you were a member, I suppose, for some time before your election as Mayor? For six or seven years, I think.

471. Have you given much attention to the question of the water supply to the city of Sydney? Yes, I have given a good deal of attention to that subject; I have thought a good deal about it, as all the Aldermen have done, no doubt.

472. Since your connection with the City Council, have you known the supply of water from Botany deficient? Yes.

473. Would you state on what occasions? I think the first occasion was in the year 1865. It was brought more prominently under my notice during my term of office. In that year I caused letters to be written to the Government, and advertisements to be inserted in the daily papers, to the effect that the water supply was short, and that great care should be taken by the citizens to prevent waste.

474. And yet I think that 1865 was not an unusually dry year, was it? I think it was. I think we were some three months without rain in 1865.

475. Do you remember 1862—I think that that was a very dry year? I cannot remember it distinctly, but I think it was drier than 1865.
476. Had the water to be cut off at any time from portions of the city, in consequence of the scarcity of the supply? Yes. I have copies of letters upon that subject which I sent to the Government at the time. One of these is a letter dated 27th October, and having reference to the notice given in regard to restricting the supply. [*Letter handed in.*]
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479. The Crown-street reservoir? No, the reservoir at Botany. If the engine had been kept pumping, one day I was there, the reservoir would have been soon exhausted. It was pumping for two hours, and during that time the body of water fell $1\frac{1}{4}$ inch.
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481. Then if the dry weather had continued much longer, do you think that the supply for domestic purposes must have been restricted? Decidedly.
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484. And I suppose that you knew that the general opinion then expressed was that the salt-water must have got into the engine-pond, and been pumped up to supply the city? Yes.
485. Do you think that really occurred? I do.
486. Could you yourself taste salt in the water as delivered in Sydney? I do not remember. The only thing I remember is this,—that I went and examined the place, and I found that when the tide was flowing, it was higher than the bottom of our reservoir; consequently, the water of the sea percolated into the reservoir, and a puddle dam was then made across the weir to prevent it, and which I believe was the means of preventing it. Part of that puddle dam remains there now—at least it was there the last time I was at Botany.
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498. He stated to us that his scheme, as a whole, involved the construction of large watertight tanks or reservoirs in and about Sydney? He sent a scheme down to the Council having reference to the excavation of a large reservoir at some place near to Mr. Atkinson's dams (I think), and he proposed to cover it over with galvanized iron; but I am not in a position to state whether in that scheme he stated that the dam ought to be puddled with clay or with bog, as the dams are at present.

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499. But you do not know that part of his scheme which involved the construction of reservoirs in or about Sydney—in Hyde Park, for instance? I cannot say that I do. I never remember seeing it, to my knowledge.

500. How much water do you think ought to be supplied per head of the population? Well, I should say about 10 gallons per day.

501. I mean for all purposes, including the supply to manufactories and the watering of the streets? I do not know; I am not in a position to answer that question.

502. Do you think that if all the water which flows down the Botany stream could be preserved, it would furnish an abundant supply to the city of Sydney? I have no doubt that it would, if it could be all preserved.

503. Do you think it would be better to take means to preserve that water, or to go to some other source of supply altogether? I think it would be better to go to some other place where there was an inexhaustible stream. Ten years ago I expressed my opinion to that effect to Mr. Bell and to the City Commissioners.

504. Have you fixed, in your own mind, on any better source of supply than the Botany stream? I have read a good deal upon this subject in the Press, and much has been said by men who I suppose are better qualified than I am to give an opinion in regard to these matters. I think the Nepean or the Grose would be much preferable to Botany. I believe that in a very few years it will be necessary to go to some other place. Every year a less quantity is obtained from Botany Swamps. Many years ago the rain which fell on the watershed had not as great facilities to escape into the stream as it has at present. Many people have settled down on the watershed and round the suburbs. They have cut drains to drain their land, and thus, instead of the water remaining on the land and percolating into the streams, it runs off rapidly after a heavy rain. Every year the quality of the land is becoming less retentive, and the water would find its way into the stream almost at once. I think it is impossible to supply Sydney and the suburbs from the Botany Waterworks, or if not, that it would cost more than to go to an inexhaustible stream.

505. *Mr. Moriarty.*] Have the Corporation any control over the land below the Lachlan reserve—the land through which the stream flows?—It is shown on the plan as having been alienated? To Sir Daniel Cooper and other parties.

506. Have the Corporation any control over that land?—I have understood so; but I am not in a position to state it as a fact. I was led to believe so at the time these dams were under discussion in the Council.

507. But you have no knowledge as to whether they have any control or not? No, I have no knowledge in regard to that matter.

508. You do not know whether the persons who hold the land are prohibited or restricted from selling it? I do not think they are; I hardly think it can be possible. The only thing upon which there may be restriction is, the conveyance of objectionable matter into the stream.

509. As far as you are aware, is there anything to prevent them enclosing portions of land, making gardens on them, manuring the soil, and draining it? Nothing that I am aware of.

510. So that, practically, the only portion of the land really under the control of the Corporation is that which comprises the Lachlan Swamps? I think so. There is a great deal of valuable land in the hands of the Corporation at Botany.

511. Does that form any considerable part of the watershed? Yes, it does; as all the water that falls upon the land reserved at Botany, runs into the reservoir near to the engine-pond.

512. Whereabouts is that land? On this side of the engine-house and up the stream.

513. But not above the road? I am not prepared to state whether the land the stream runs through is the Corporation's or not, but I have heard that it belongs to other parties. I believe that Sir Daniel Cooper's agent and some other parties have sent in a claim.

514. For the land? For the soil or sand that is to construct the dams.

515. Then, in point of fact, houses might be built on either side? If the land belongs to Sir D. Cooper and others—which at present we have no means of disputing—they can do what they like with it; and the probability is, that in a few years the land will be built on.

516. A considerable part of the drainage now received at the Botany engine-house comes off that land? It must; that is inevitable; there is no other means by which it can get away.

517. So that, if the town rapidly extends in that direction, it may happen that the reserve for water will be seriously curtailed in a few years? Yes, to the extent of the land alienated from the Government to private individuals.

518. *Mr. Grundy.*] You have expressed an opinion that these new dams will not stand in case of a severe flood? Yes.

519. And you mentioned the floods of June last? Yes.

520. Did you happen to see the condition of the swamps at that time? No.

521. You do not speak then from your own personal experience? No; I was hemmed in with the floods at the time, at Shane's Park, South Creek. I have not seen the dams lately, but I have been told that one is gone already, and three others show signs of going.

522. It is probable that the City Engineer would see the dams during that period, is it not? No doubt he would. I think it is unwise to go to Botany for water, for this simple reason,—that the only stream near Sydney where it is possible to carry on any manufacturing establishments is the Botany stream. I stated this to the Commissioners years ago. And there is another objection which I think ought always to be taken into consideration:—Supposing an enemy came into the harbour, he could cut off the supply of water within an hour and a half of his arrival.

523. *President.*] Do you think that the supply through the tunnel should be carefully preserved? I do. J. Woods,
Esq.
524. Do you think it would be advisable to put an iron pipe through it, to prevent the risk of the tunnel falling in? I think it would be wise to put in a 30-inch main, to preserve it. 2 Nov., 1867.
525. Would you recommend a reservoir to be erected in Hyde Park to receive any surplus water from the tunnel? That would be a matter of great expense, and I do not think it would be wise or judicious if you go to another supply.
526. Even if we were to go to another source of supply, would it not still be judicious to have a second source as a stand-by? Such as the Lachlan—it would. If you go to the Nepean, you must have the machinery erected on a high place, to send the water into Sydney. It must be erected in some place where it will be out of the reach of the floods.
527. Do you think it would be worth while to go to the Nepean if we had to pump up the water? I would rather go further on to some place where we could obtain water that would flow into Sydney by its own gravitation. The first outlay would be larger, but I think it would be the cheapest in the end.
528. If we were to go to a distance from Sydney to obtain water, you think the supply ought to be by gravitation? I think so. There is an objection to the Nepean as a source of supply, because in time of flood the water is very dirty, and you would have to go to so large an expense to keep the machinery out of the reach of the floods. I think it would be much better to go to a place where you could obtain water by gravitation.
529. *Mr. Moriarty.*] Surely there would be no difficulty in keeping the machinery above the reach of the floods? No; but I say that the expense of erecting machinery in any place near Penrith, out of the way of the floods, would be very great.
530. What do you think it would cost to shift the Botany "plant" up there? I could not make any statement in regard to its erection, but if I saw the matter altogether I could give you a pretty good estimate of the cost. I have no doubt that the Botany engine-house could be used for some manufacturing establishment.
531. Have you ever thought what amount would be probably realized if the Lachlan Swamps were sold? I have not. I could not answer that question unless I knew the quantity of land. I have no doubt it would fetch a very large amount if it were properly sold, and if it were understood that the parties who bought it could erect manufacturing establishments along the stream.

TUESDAY, 5 NOVEMBER, 1867.

Present:—

MR. MORIARTY,	|	MR. GRUNDY,
MR. ADAMS,	|	MR. WOORE.

PROFESSOR SMITH, M.D., (PRESIDENT), IN THE CHAIR.

George Allen Mansfield, Esq., called in and examined:—

532. *President.*] The Commission has been favoured with copies of a pamphlet, containing three letters on the subject of the Water Supply of Sydney, one being signed by yourself, and the other two being signed "Senex"? So I understand. G. A.
Mansfield,
Esq.
533. Can you tell us the name of the writer of the two letters signed "Senex"? Yes; the author of those letters is Mr. Thomas Holt, of "The Warren," Cook's River. 5 Nov., 1867.
534. The pamphlet bears no date: when were those letters written? Towards the end of last year.
535. These letters advocate the abandonment of the Botany Swamps, and recommend George's River as a preferable source of supply? Yes.
536. Are you still of opinion that George's River best fulfils all the required conditions? No, I cannot say that I am, or ever was of that opinion. I do not wish to put myself forward as an advocate of the George's River scheme in preference to any other. I wrote this letter rather with a view to point that river-out as one source which seemed to me to have a good deal escaped attention. The idea was a new one to me; I had not seen it in print.
537. Do you still decidedly think that some other source of supply must be looked for than the Botany Swamps? I do, most decidedly. I have known the Botany Swamps for many years, and I am convinced that their character is altering. There are spots now perfectly dry and hard that were formerly swampy.
538. To what would you attribute that change? I would attribute it in a great measure to the occupation of the country; but I think that all swamps are natural features differing from mountains and rivers, as being in a transitional state. I think, from their very nature, they are transitional and constantly undergoing changes—swamps of that kind particularly. The drifting of the sands from the hills, I think, in a great measure tends to fill up the lower parts.
539. Since writing this letter, have you thought of any other source of water supply which you think would be preferable to George's River? The only sources that have come under my notice at all are George's River and the Nepean and its tributaries. It appears to me of great importance that the source of supply should be so elevated as to furnish water to Sydney by gravitation alone, without the expense of pumping engines. One source of danger,

G. A.
Mansfield,
Esq.

5 Nov., 1867.

danger, in connection with the use of pumping engines, has occurred to me. I allude to the danger of a boiler bursting, and injuring the machinery. The danger of accidents to the machinery I have often seen discussed, but I have not seen any reference to that special danger of a boiler bursting and sweeping away the machinery; such an accident, for instance, as that which happened some time ago at Messrs. P. N. Russell's works at the Dry Dock, and which I inspected. The boiler started endways, like a rocket, sweeping away machinery and heavy framings of metal. Even if there were two or three boilers, the bursting of one would probably displace and injure the others, so as to interfere with the efficiency of the engine for two or three weeks.

540. Then you think that, in looking for a new source of supply, we ought to obtain the water by gravitation? I think so.

541. Even although we find it necessary to go much further, and to be at a much greater expense? I think so.

542. The supply from George's River, I suppose, could not be got by gravitation, except by going to its head? Only by going considerably higher up the stream, and there, I think, you would lose some of the best feeders.

543. In this letter you say that you would be shortly in a position to send some rough calculations as to the probable cost of the works—Did you ever make those calculations? I did not. It was my intention at that time to have resided for several weeks at Rocky Point, in the immediate neighbourhood of the place to which I refer. This arrangement, however, was not carried out, and therefore I had not the opportunity of making the measurements which would have been necessary to the calculations.

544. If a dam were to be constructed at the point to which you refer, the water must be raised by pumping—Do you think it should be sent straight to Sydney, or *via* Botany? I am hardly prepared to say.

545. You did not consider the details of the scheme? No, I did not.

546. Had you any information as to the quality of the water in the various tributaries of George's River? I had only verbal testimony as to some of the feeders. I was informed that two or three of the tributary streams on the south side of George's River contained water of an excellent quality—that is, bright and clear, and that they were constant in their flow. The information had reference particularly to the quality of the water, as being bright, and clear, and tasteless.

547. But if any of the tributaries were otherwise, they would spoil the whole? Of course they would affect the contents of the whole reservoir.

548. On this tracing (*small tracing shewing George's River and its tributaries*) can you point out which are the principal tributaries—those supplying the most water? I cannot say which are those that supply most water. Those particularly mentioned to me were the Woronora Creek and (I think) Mill Creek.

549. As containing good clear water? Yes.

550. If a dam were constructed at the point to which you refer, would it rest on the sandstone rock? I cannot say; I could only tell that by boring.

551. *Mr. Moriarty.*] Which place are you speaking of? The place where it is proposed to make a dam across the river from Tom Ugly's Point. There are sandstone rocks on either side. Just at that point there is not much depth of water. What depth of mud there may be I cannot say. It is very much deeper a little way above and just below. There is a bank there. You can see the tow-rope of the punt lying on the bottom, nearly all the way across.

552. *President.*] Have you considered the question of making dams on sandstone rock—whether it would be easy to make them watertight? Do you mean by excavation?

553. Supposing that a dam were constructed at Tom Ugly's Point, and that it rested on the sandstone rock, full of fissures and crevices, would you expect it to be watertight? I think great precautions would have to be taken, but I do not think the difficulties are insurmountable. I think a dam could be made watertight under those circumstances, but it would probably increase the expense very considerably.

554. *Mr. Adams.*] Are you aware of any brackish tributaries to George's River? I am not aware of any, nor can I speak of the character of the tributaries from my own personal knowledge. I was informed, on what I regarded as good authority, that they were as before described, and therefore I wrote that letter to which you have referred, upon the spur of the moment. I saw that there was an opportunity of forming a very extensive reservoir, at a comparatively small cost.

555. *President.*] You wrote it more to keep the question alive? Yes, and to direct attention to what I thought might prove a practicable scheme. I do not profess to have gone minutely into the subject.

556. *Mr. Moriarty.*] Any scheme for bringing the water from the lower parts of George's River would still be open to the objection you have against machinery in general? Unquestionably; and it would be open to also another objection, namely, that of being accessible to an enemy's force.

557. I suppose you know that there are some manufactories on George's River, higher up, at Liverpool? Yes, there are the paper mills.

558. And the wool-washing establishments? Yes. At the time my letter was written, the paper mills had been commenced, but they were not in operation.

559. I imagine that that is a locality which would be likely to be used for the purpose of constructing manufactories, being convenient to the Southern Railway? Yes, it is not unlikely. It would be impossible, of course, to use George's River as a source of supply, with the wool-washing establishments and paper mills in operation. In the event of the river being used as a source of water supply, such establishments would have to be interfered with by legislation.

560.

560. You are aware that the tide flows up to Liverpool? Yes.

561. Do you think the soil is affected by the salt in such a way as to interfere with the quality of the water? I think not. My opinion is that a few floods would take it out, and that in the course of four or five years the water would be free from it; but I confess I should greatly prefer a scheme which would enable water to be brought to Sydney by gravitation.

G. A.
Mansfield,
Esq.
5 Nov., 1867.

562. Do you know anything of the country towards the head of the Woronora Creek? No.

563. You do not know whether the elevation is such as to render it practicable to bring the water from there by gravitation? No.

SATURDAY, 16 NOVEMBER, 1867.

Present:—

MR. MORIARTY,	|	MR. GRUNDY,
MR. ADAMS,	|	MR. WOORE.

PROFESSOR SMITH, M.D., (PRESIDENT), IN THE CHAIR.

James Murphy, Esq., called in and examined:—

564. *President.*] I understand, Mr. Murphy, that you have been Mayor of Sydney? Yes, J. Murphy, I was Mayor in the year 1860. Esq.

565. And for a considerable time you have been an Alderman? Yes, I have been an Alderman for several years. I was one of the first elected under the Act which legalized the present Corporation of the city. 16 Nov., 1867.

566. From your connection with the Municipal Council, I suppose you must have given a good deal of attention to the subject of the water supply to the city of Sydney? I have given some attention to that subject.

567. Do you think the present source of supply sufficient for Sydney? When the dams now being constructed are completed, I think the supply will be amply sufficient for some years to come.

568. Have you examined carefully the construction of those dams? Yes, but I do not pretend to be a judge in the matter. I have been to see them on several occasions. I do not think they have been carried out properly—I do not think they have been carried out according to the specification.

569. Do you think is the principle good? Yes, I think it is.

570. Do you think the dams can be made retentive on such a soil? We do not require them to be retentive altogether. We shall require the water to filter through the bed of the creek to supply the reservoir.

571. But is it not expected that these dams will preserve the excess of water in a wet season to make up the deficiency in a dry season? That is the purpose for which we intended them, and that is what we believe they will do.

572. But if they are not watertight, I imagine that they could not remain full for (say) three or four months? The supply will be equal to the leakage. There will be a continual supply, which will be, perhaps, even more than equal to the leakage.

573. Do you think that, even in the driest seasons, we may expect that there will be a sufficient current in the stream to supply the leakage in the dams? Yes.

574. Supposing the dams are sufficiently retentive, will they be sufficiently capacious to equalize the supply in wet and dry seasons? Yes, I think they will.

575. Do you think the present Waterworks are fitted for the supply of a much larger number of people than are at present supplied from them? Oh, yes! I think they could supply almost any number.

576. Could you give us an approximation as to how many more thousand people could be supplied by the present arrangement? No, I would not pretend to do that.

577. You see this is a question of the future as well as of the present, and we must calculate the probable increase in number that it will be necessary to provide for? I think the machinery and the supply will be sufficient to accommodate double the number that are at present supplied, providing the dams are properly constructed, and the water is stored which falls during rainy seasons.

578. Do you think it would be advisable to supplement these dams by watertight reservoirs in and about Sydney, of greater size than the present? I should think it would be necessary to do so, in order that there might be a provision in case of accident, such as a pipe bursting or anything of that kind, or an accident to the machinery.

579. Do you think, then, that the Botany supply is so abundant and trustworthy that it would not be worth while going to any other source? Not for some years to come; I should say not for twenty-five years. I risked an opinion, some time ago, that it would not be necessary to go elsewhere for water for fifty years to come. I have been out there during some very dry seasons, and I always found a very large stream of water continually running. When I was there, nine or ten days ago, there was a great quantity of water running away, and yet the engines were in full play.

580. What is the driest season you have known? I cannot say; for it is only during the last few years that we have thought anything of the water question, because previously we had an abundant supply. Until the last few years we were supplied from the Lachlan, and we did not turn our attention to Botany at all. I have no recollection of a drier season than we had last year, since my attention has been directed to the water question.

581.

- J. Murphy, Esq.
16 Nov., 1867
581. But was it not the case last year that the supply was frequently deficient? I think we got alarmed prematurely—we never were short of water. As a precaution, we discontinued watering the streets and we shut the water off at night. When it was shut off at night, we had an abundant supply during the whole of the dry season. I live myself in one of the highest localities, and I had an abundant supply of water every morning before 7 o'clock.
582. By shutting off the water at night, the reservoirs were kept constantly full? Yes.
583. If the water had not been shut off at night, would it have been possible to keep the reservoirs full? That is a question I could not determine. I am inclined to think that it would not have been.
584. But you think those measures were more precautionary than absolutely necessary? Most decidedly they were. The shutting off of the water at night made a considerable difference. There is a great waste of water in Sydney during the night—they allow the water supplied to the water-closets to be running away all night. In many establishments they let their taps be turned on all night, to wash out the drains; and sometimes they totally neglect them. We have known instances where they have been supplied with a meter (Mr. Manning's, for instance), and in one month the water was so much more than that supplied during another month that it was seen that it was impossible it could have been used. It turned out that some of the watermen turned on the tap to spite him, and thus allowed the water to run to waste. There is an immense waste of water during the night. Some of the Aldermen or water inspectors may at times discover these things during the day, but at night they cannot. You would hardly credit the saving effected in the supply by cutting off the water at night.
585. Are you aware of complaints having been made of the quality of the water when the supply was rather short. Yes, I recollect it.
586. Did you ever yourself observe any peculiarity in the taste of the water? No, not in the least. I thought it unadulterated.
587. But do you not think that there must have been some good ground for those complaints? I believe so, but to a very small extent.
588. Do you think the common opinion on the subject was correct,—that the sea-water must have got into the engine-pond? No doubt about it. I believe it was discovered. I did not see it myself, but I was told by one of the Aldermen that the leak had been discovered, and remedied immediately.
589. And an occurrence of that kind is not likely to happen again? No.
590. I think you said you had been down to the pumping-engines within the last fortnight? Yes.
591. And the engines were in full operation, were they? Yes.
592. And still there was a quantity of water running to waste? Yes, there was a great quantity running away.
593. Over the weir? Yes, a great quantity.
594. Were any of the upper dams closed at that time? No.
595. So that this was just the ordinary stream? I think the furthest one was closed, but it had only just been closed, and there was not much water in it.
596. You think then it was just the ordinary stream? Yes.
597. And that was more than sufficient to supply the engines? Yes; and I should imagine that quite as much was running away.
598. At that time the engines were just working sufficiently, I suppose, to keep the Sydney reservoirs full? Yes.
599. In dry weather, such as this, have the engines to work steadily day and night to keep the reservoirs full? No.
600. How many hours per day will they have to work to do this? That I cannot tell you. It is regulated entirely by the demand. They have information when the reservoir is full. Some days the engine has to work longer than on others, for instance, when there is a fire, or any accident of that sort. I believe there is no stated time. The engines work just as the supply is required.
601. Do you think that in the course of years it will be necessary to go to some other source of supply? It might be in the course of years, as the land round about the swamps gets cultivated.
602. Have you turned your attention to the question of a future supply of water to the city? No, not particularly. I am not acquainted with the country.

J. H. Atkinson, Esq., called in and examined:—

- J. H. Atkinson, Esq.
16 Nov., 1867
603. *President.*] I believe, Mr. Atkinson, you have had a long experience of the Botany Swamps? Yes, I have. Upwards of twenty years since; I first established a wool-washing place there.
604. And during that period, have you had constant opportunities of seeing the state of the swamps and the stream? Yes.
605. Have you observed any remarkable change in the character of the swamps? Yes, I have observed a very marked change, more particularly as regards the large dam at Waterloo. The head of water there is not half what it used to be.
606. That has a different drainage, I think, from the Botany stream? Yes, but that is most remarkable to me, having first located there. I afterwards moved on to the Lachlan Swamp, where the supply of water comes from.

607. Do you think the supply of water is getting less from the Lachlan Swamps? Yes. *J.H. Atkinson, Esq.*
Where the water was first pumped from, just by the Racecourse, is now nearly dry. There is a little water there after heavy rains, but the fact is the cattle have trodden down the springs and swamps. 16 Nov., 1867.
608. To what do you attribute the drying up of the swamps? To a succession of dry seasons, and also, as I have stated, the cattle grazing on the spot have a great effect on the character of the ground.
609. Were you acquainted with that district in 1849, which was a very dry year? Yes.
610. Do you remember the condition of the stream and the swamps then? Not particularly. There was a great deal more water then than there is now.
611. Even in that very dry year? Yes. I am alluding more particularly to the swamps nearer Sydney than the ones nearer to the bay. I have no distinct recollection of being at the bay in 1849, but my business called me daily to the other portions of the swamps.
612. Did you then experience any deficiency of water for your purpose, even in the driest seasons? No, not then.
613. If the same operations were to be carried on now, do you think you would have an equally good supply of water in dry seasons? No, certainly not.
614. Have you inspected the dams which are now being constructed in the course of the stream? No, I have not.
615. But from your knowledge of the surface of the ground, do you think that dams could be made there to hold water for any length of time? In 1849 (I think it was) I erected a large dam on the Lachlan Swamp, to give me sufficient water for wool-washing, and it cost about £1,200. We carted the clay to make it as strong as we could, but in many cases the water found its way underneath the dam, and we had frequently to repair it. The only danger I apprehended was from the undermining of the earthwork. The dam was built of earth puddled with clay. It was also made of clay at the bottom. Although we did this and puddled the sides, still the water got underneath.
616. On what did the lower clay rest? On the swamp—on the black, sandy soil.
617. Then you did not attempt to get down to any impervious stratum? We went a good distance down, I should say 8 or 10 feet below the bottom of the water, which was drawn off by means of a cofferdam. We made the best foundation we could. I think it was 8 or 10 feet below the level, when the water was out and the bed of the creek was dry.
618. But you could get no solid foundation? No.
619. And the water got below your puddle dam? Yes, on several occasions, and we had to use the best means we could to repair it. Whether some crawling things got under it or not I cannot tell.
620. Did the escape sometimes become very considerable? Yes, I remember that it escaped on one occasion under the take-away (the race which takes away the waste water). When the hands turned to at 5 o'clock, they found the water rushing through. On two or three occasions before that, we found leakages, and had to let the water off.
621. Then your experience has been against the supposition that retentive dams could be made? Yes, quoting that as my experience, and on that foundation.
622. Do you think, then, that the Botany stream can be trusted as a source of water supply to a city like Sydney? My opinion is that it cannot. But if it could, at extreme times the water is brackish.
623. Do you mean the water as pumped up to Sydney? Yes.
624. The water in the stream itself I suppose is never brackish? I have tasted it very much so, down towards Mr. Lord's.
625. I suppose that would be where it had been within the influence of the tide? I do not know to what influence it had been subject; whether it was an under-current or not. I know that in George's River the water called fresh above the dam is at low times impregnated with salt.
626. *Mr. Grundy.*] It finds its way through the dam? I do not know how to account for it; but I should hardly say that it finds its way through the dam there, because the foundation is solid.
627. *President.*] Then, even if retentive dams could be made, do you think the Botany stream is not to be trusted for a continuous supply? I am not prepared to say that. It depends upon the amount of water which could be retained in them. You might dam up the whole country round about, and get a large sheet of water which would last for many years, but that would interfere with private rights.
628. I believe you have a considerable knowledge of George's River? Yes, I know it very well.
629. Have you thought that would be a preferable source of supply to the Botany stream? Decidedly not. There is fresh water above the dam at Liverpool, but you could pump that all out with a centrifugal pump in about twenty days.
630. You think that in dry weather the supply is small? Yes; and, as I said before, sometimes the water is bad, although at other seasons it is good.
631. In dry seasons does the water become brackish? Yes, it has a taste of salt. I am inclined to believe that there are some salt springs in the neighbourhood. I know that in our paddocks the creeks leading into the river are quite salt.
632. *Mr. Woore.*] Does not Saltpan Creek run into it? That is below the dam.
633. *President.*] Might not this brackish quality be given by one or two tributaries? I have noticed it on a small scale in the paddocks leading to George's River from Sophienburg over the hills, and also at the extreme end where the source of the river is. There are small tributary creeks quite brackish. It is so strong that it is perceptible on the ground. 634.

- J.H. Atkinson, Esq.
16 Nov., 1867.
634. Are you acquainted with the principal heads of George's River? Do you mean the sources from which the supply of fresh-water comes?
635. Yes. In this map the principal tributary seems to be the Woronora Creek? It is to the left, towards the sea. That is the creek to which I have alluded, where in dry times I have found the salt so strong on the surface.
636. And that seems to be the largest feeder of George's River? Yes. In dry times there is very little water in it, and what is in it is bad.
637. Then you think that George's River would be no improvement on the present supply? No, there would not be sufficient in a dry time.
638. Have you thought of any other source of supply which could be made available with advantage? Yes; I have always thought we ought to get the water from the mountains, beyond the Nepean or the Hawkesbury. I have been across that country shooting for a few days together, and I have observed many places from which a supply could be obtained, more particularly from the Valley of the Grose. That, to my mind, would be the easiest of access for the operation.
639. Have you been up the Valley of the Grose for some distance? Yes; but it is now some years since I was there. I remember that it struck me at the time I was there, some fourteen or fifteen years ago. It was very strongly impressed on my mind, from having seen the Yan Yean works at Melbourne. We have the same means of securing the water, and the country is something like it.
640. Do you know if the bed of the stream rises rapidly as you ascend? No, I do not remember anything so particular as that. I remember a very cool, beautiful stream, from which I drank daily when we were out; it was beautiful water at that time, but I know nothing of it since.
641. You would conclude, I suppose, that the supply ought to be by gravitation, if we went there? Certainly.
642. So that we must get a sufficient elevation? I should imagine it would be suitable for that, but not being a surveyor I cannot tell. I do not remember to have seen any information in regard to the matter, but it strikes me that the land is high enough. It would be a great saving to do away with the pumping process.
643. Do you know the Warragamba at all? No; is it a tributary to the Grose?
644. It is the principal tributary to the Nepean? No. I am only speaking now from knowledge I acquired when shooting there for a few days.
645. *Mr. Adams.*] You said that when you made your dam on the Lachlan Creek, you proved the ground for some 7 or 8 feet? Yes.
646. Did you prove it by excavation only, or by pile? By both; by pile and excavation also. We took as much as we could out to fill with clay between the piles. That was the first forming of it. Then we banked it over, and puddled it on each side.
647. Did you feel satisfied when that was done, that you had done all you could to secure the bottom? Yes. We did what we thought would be best, without regard to expense. That dam cost me £1,200. It was eventually carried away *holus bolus* by a strong flood.
648. Where did you get the clay from with which you made that dam? I do not remember distinctly, but I think it was near the Botany Hills; it was eighteen years ago.
649. And did the dam hold water at first as well as it did afterwards, or did it improve and continue to hold water well until it broke away? I had no fault to find with the dam until it had been working two or three years, then we began to find a little water oozing underneath it.
650. You did not find it leak at first, and then gradually get tighter and better; your experience was rather the opposite of that? We had to find out where the leak was, and to repair it. At first there was not much leakage until the occasion I have described, when during the night the water burst through in a large volume underneath the race.
651. Am I to infer that your opinion of the ground is, that it will not by age tighten itself and make the dam more waterproof than it was before? My experience does not go to shew that.
652. *Mr. Moriarty.*] Was it a puddle bank? Yes, it was puddled on each side and facing, and there was a large quantity of puddle at the bottom. We got the best stuff we could from the swamp to mix up with the clay and made a sort of mortar of it. It was well rammed, but, as I have said, it was carried away by the flood.
653. You say that the dam did not subsequently become more tight than it was at first, and that there was just as much percolation through the sand underneath the dam and around it? Yes, at times.
654. In fact you found that it increased? Yes, on the occasion when it burst out in the night, there was a stream equal to that which could be supplied from a 6-inch bore. We imagined that it must have been a tortoise or something of that kind which made the hole—we could not account for it in any other way.
655. In your opinion, would the retention of water in dams constructed in such a sandy soil, have the effect of improving their water-holding properties, as a general rule? I think it would take a good many years to do that.
656. *Mr. Grundy.*] What depth of water stood in your dam? 11 or 12 feet.
657. That would be much more likely to work through the material of the dam than a pressure of 6 or 8 feet? I do not know whether it would or not. I think when the dam was quite full, that it was 11 or 12 feet.
658. *Mr. Moriarty.*] And was it usually up to the level? Yes; the supply was very great.
659. *Mr. Grundy.*] And the water got through, notwithstanding all the puddling? Yes.
660. But supposing you had not used clay? I do not think the dam would have held the water for six months.

661. Would the water have stood 6 or 8 feet above the level of the creek if the dam had been made without clay? No; there would have been less adhesive power. The weight of the upper portion of this dam of mine would naturally make it more solid. If it had not been so high, the pressure would have been lighter and the dam less solid. I am sure a dam made of that material without clay would not stand. Previous to constructing this big dam, we had to dam up water for our purposes in a small way, and our dams were frequently carried away. J.H. Atkinson,
Esq.
16 Nov., 1867.
662. How did you make your temporary dams? Of sods and the best stuff we could get.
663. And if a fresh came they were carried away? Yes.
664. As a thing of course? Yes; and yet we made them sufficiently strong for an empty cart to cross.
665. *Mr. Moriarty.*] And it was after the repeated failure of these temporary dams that you went to the heavy expense of constructing the large one? Yes.
666. Have you been much across the country about the head of the Woronora Creek? No, I know only the other side of the range.
667. The coast side? No, I mean towards the mountains leading across to the Hunter.
668. The north side? Yes.
669. I am speaking of the Woronora Creek running into George's River? Yes; there is no supply there of any consequence, except during heavy rains.
670. You do not know, perhaps, whether it is possible to construct large lakes there by means of dams? I do not know where you would get a supply from to make a lake. It all makes its way into George's River.
671. Was it high up the Woronora Creek where you saw the salt of which you spoke in a previous part of your evidence? No.
672. Was it near the tide? No.
673. Was it above the action of the tide? Yes.

Mr. John B. Carroll called in and examined:—

674. *President.*] I believe you reside on George's River, Mr. Carroll? Yes.
675. At what particular point? Koggerah Bay—the first bay on the right-hand side of George's River. Mr.
J. B. Carroll.
16 Nov., 1867.
676. That is called Townsend's Bay on the map? Yes, but it is generally called Koggerah—that is its native name.
677. Have you been long acquainted with George's River? Yes, it is nearly my native place; I have been living there since 1849.
678. And do you know the upper part of the river pretty well—the feeders of the river? I know the Woronora branch very well.
679. Do you know the other feeders? I know Saltpan Creek and other of the feeders, but I know more about the Woronora.
680. I believe you sent a letter to the *Sydney Morning Herald* on the subject of George's River as a source of water supply? Yes, I did, in consequence of one I had seen before that, recommending a dam to be put across at Rocky Point, in case it should be determined to take water from George's River to supply the city. I knew of a better place, and was therefore induced to publish that letter.
681. When was that letter published? I do not know exactly. It was some time ago—perhaps two years. It was published when the subject was exciting so much attention, and being discussed in the papers.
682. Do you still think that George's River would be a good source of supply for Sydney? I think the information I could give you on that subject would be more valuable if you at once determined to receive the supply from the George's River. All the lower part of George's River and the whole of the Woronora are of a sandstone character, but not so absorbent as the land about Sydney. The water would be good, but it would run off quicker. I think the George's River would be more valuable as a reservoir. It would be necessary, perhaps, to depend upon that more than upon the spring.
683. The last witness we examined told us that, in dry weather, the water in the Woronora Creek is brackish—Is that in accordance with your experience? It will be salt if the tide flows up.
684. But Mr. Atkinson spoke of a part not within reach of the tide? I have never found it anything but pure. From the nature of the soil, it must be so. It is a sandstone formation. Up above Liverpool there would be a forest soil, and the water would be brackish, the same as Cook's River.
685. Have you had an opportunity of observing the Woronora Creek in dry weather? I have seen it in an ordinary dry season.
686. What was the condition of the stream then? I think it would flow about a 2-foot stream.
687. Do you know if it ever dries up entirely, or ceases running? I do not think so.
688. In the driest time you have seen it, was the water quite good? Yes, it was always good when I tasted it.
689. But if it be that some of the tributaries of George's River above the dam at Liverpool are brackish, would not that be fatal to making George's River a source of supply? That brackishness would arise not from the salt, but from saltpetre that would come out of the soil. The water of all the forest ground is brackish, not with salt, I think, but with saltpetre. The water in Cook's River is not good, for the same reason. But the whole

- Mr. J. B. Carroll. whole of the lower part of George's River is of a different character—it is of sandstone formation, and the water is very pure and good. The water in all parts of my district is good and pure.
- 16 Nov., 1867. 690. But if you formed one great dam, you could not keep the brackish water out of it? Certainly not, if it was at the head.
691. How are the farms supplied about your place? Almost every farm has water on the surface. There is not a deep well in the district.
692. Then have you surface springs? Yes. In my place there is water flowing from the surface now, and through the beds of the garden.
693. Good water? Yes, pure water.
694. And does that not fail you, even in the driest seasons? It never fails. It runs in the driest seasons.
695. Are there swamps in the neighbourhood? There is a swamp half a mile from my place. That will go dry when the water will flow from my place. The water comes out of a clay soil, and not out of the swamp.
696. Do you know the nature of the country about the head of the Woronora Creek? Yes, I have seen it. There is some stunted timber upon it.
697. Is it a swampy country? No, it is very mountainous.
698. And is the valley of the creek rocky? The banks rise several hundred feet on each side. There are a few little flats just above the level of the tide. They appear to have been bays that have filled up with alluvial soil. There are many creeks in its course with permanent water running into the Woronora.
699. *Mr. Moriarty.*] Permanent water? Yes; there are streams, but with not a very large quantity in them.
700. *President.*] Do you remember the condition of those streams in 1849? I cannot say that I do.
701. And you cannot speak from your own experience in regard to the feeders of George's River above Liverpool? I cannot. I have never been in Liverpool. I have been within five miles of it.
702. And in regard to the Woronora Creek, you think it never stops running with good water? I do not think it ever stops running.
703. *Mr. Moriarty.*] I understand you to say that you had been nearly to the head of the Woronora Creek? Yes.
704. Do you think it would be possible to retain any considerable quantity of water, by constructing a succession of dams towards the head of it so as to form lakes? I think that would be easily done.
705. Is the formation of the country suitable for it? The banks are very steep on each side. It would be easy to construct dams across it.
706. Would they throw any considerable back water, do you think? It would require a succession of dams to hold any quantity.
707. Do you think any considerable quantity might be held by a succession of dams? I think you might retain a very large quantity.
708. Do you know of any position in particular on the Woronora Creek, where a considerable lake could be formed by dams of moderate size? I think it might be formed at any place about the head or near the head; for instance, where the road crosses at the head of it.
709. Which road? The old road to Wollongong—the Bottle Forest Road. It is thought that the whole of the Woronora and George's River was formed by a large crack in the sandstone.
710. Is that the Sydney sandstone? It is.
711. You are of opinion that a considerable quantity of water might be retained from a wet season to tide over a dry one, if a succession of dams were constructed on the Woronora? I have no doubt of it.
712. And that the water would be of good quality? It would be of good quality, for it is a sandstone country.
713. Have you any special acquaintance with the water, because we find on the Wollongong side of the coast the same formation, and you get the drainage there also of the same strata—the carboniferous shales and coal? The water has been always pure.
714. *President.*] How far does the tide rise in the Woronora Creek? To the crossing of the Illawarra Road.
715. And you think that from the head of the navigation the level of the creek rises rapidly? Yes, it rises considerably above the tide.
716. And I understand you to say that the creek flows through a narrow, rocky valley, with very precipitous sides? Yes; when you get above that, it is not so precipitous—there is more *débris*. It changes its character on getting to the head, and the rock is more broken; still the banks are very steep on either side.
717. Would you kindly oblige the Commission by procuring a specimen of water from the Woronora Creek above the influence of the tide? I will do so with pleasure.

WEDNESDAY, 20 NOVEMBER, 1867.

Present:—

MR. MORIARTY,	|	MR. GRUNDY,
MR. ADAMS,	|	MR. WOORE.

PROFESSOR SMITH, M.D., (PRESIDENT), IN THE CHAIR.

George Hill, Esq., called in and examined:—

718. *President.*] I understand, Mr. Hill, that you have for a long time been connected with the Municipal Council of this city? Yes, but not of late years. G. Hill, Esq.

719. And in former times you were Mayor? I have been Mayor. 20 Nov., 1867.

720. Have you given much attention to the question of the water supply of this city? During my mayoralty I paid great attention to it. There was a great scarcity in that year, which was the first of my mayoralty. I was three times elected. I think it was the third year after the election of a Municipal Council.

721. Sydney was supplied from the tunnel at that time? It was supplied from the tunnel alone.

722. Have you had any occasion to notice the condition of the Botany Swamps for a number of years back? How far do you wish to go back, because I can give you very distant dates?

723. I wish to know if you have observed any change coming over the condition of the swamps? There have been several changes. I have seen great droughts and heavy floods in the Colony. I think there has been a better supply of water during the last six or seven years than there was during the preceding six or seven years.

724. That is, since the Botany works were erected? Yes; since then we have had a better supply of water. But I think the seasons have been more general during the last five or six years than they were before. There were previously great droughts, and, as a consequence, great scarcity of water. I have seen the Nepean River so that I could walk over it without wetting my socks.

725. Do you remember how far back that was? No, but I suppose it must be twenty or twenty-five years ago.

726. What part of the river was that? About half a mile from the present Penrith Bridge. There is a crossing-place there, and on more than one occasion, and in more than one year following, I have gone across there without wetting my socks.

727. Have you examined the dams which are now being constructed in the course of the Botany stream? Yes; there is a series of dams there.

728. Do you think those dams will be sufficient to preserve the surplus of a wet season to make up for the deficiency of a dry? I think that is a question which would be better answered by a scientific man. I cannot say for certain whether those dams will contain the water when it is there. There is a good deal of peat in the swamp which would form a sediment; whether such sediment would be sufficient is another matter. If the bottom of the Lachlan is sand or peat, which it appears to be, I have no doubt the water will filter underneath the dam, unless some crust is formed on the peat which will enable it to hold the water.

729. Supposing that effective dams were constructed, do you think there is a sufficient supply of water in the Botany Swamps to serve even in dry seasons? I think there is sufficient to supply two cities like this, if you can retain it.

730. How much water per head of the population ought, in your opinion, to be supplied? That is a question I cannot answer. There is no doubt that the quantity required increases every week.

731. But, I suppose, unless efficient dams be prepared, the stream itself will not be sufficient to supply Sydney adequately with water? That would altogether depend on the seasons.

732. But you must have a permanent source of supply? You may fill your purse with sovereigns, and if there is a stream going out and none coming in, it will soon be emptied; but if at the same time there was something always coming in, it would never be emptied. If those dams would hold water, and the main dam would receive it as it was required, there would always be a good supply. With the dam alone, in a dry time, I do not think there would be sufficient water to supply the city.

733. Do you think it would be better to make provision for preserving the water that runs down the Botany stream than to go to another source of supply? That I shall have to answer at some length. If there should be reasonably moist seasons; and if the dams now in course of construction will retain the water, in my opinion there will be a sufficient supply for the next twenty years. And in the event of these dams not retaining water, there are other sources you could fall back upon and obtain an almost unlimited supply—I mean the two woolwashing dams belonging to Sir Daniel Cooper, in the neighbourhood of Botany. I believe there is an Act of the Legislature, which would enable the Municipal Council to take possession of those dams, for the purpose of water supply. Both those dams empty into Shea's Creek. There is also another property, belonging to Captain Masters, from which a good deal of water might be obtained. One was a grant to old Mr. Cooper, and the other to Andrew Byrne. That granted to Byrne is of the greatest importance. The first dam is fed from the swamp at the back of Baptist's garden, and also from a large swamp where the cricket ground is. The second is fed from that large area which leads up by the old Botany Road, and runs about east.

734. Even in dry seasons is there a plentiful supply of water in those dams? I have never

G. Hill, Esq. never seen them without a plentiful supply of water. I have heard complaints that they could not grind as much flour as they wished, on account of the scarcity of the water; but that was seldom. Both those dams are in the neighbourhood of Botany, and the water from them can be readily conveyed into the Lachlan Swamps, or into any of the dams. The main pipe that brings the water from Botany to Sydney comes over the head of the present dam.

20 Nov., 1867.

735. But are the streams to which you refer, not very much taken up by persons who carry on operations that injure the quality of the water? I will begin with the first stream. If I recollect rightly, Mr. Atkinson first settled down there, and was succeeded by Alderson & Sons. The second and third parts are taken up by two woolwashers, who hold a lease from the estate of Cooper. The place near the road is employed in wool-washing, by I do not know whom. It was let by Mr. Hayes, who died, and it is now re-let by his widow.

736 *Mr. Moriarty.*] The Waterloo Mills? Yes, the old Waterloo Mills. I now arrive at the second dam, which is taken up by a woolwasher at the bottom. It is not taken up above by any one. There is some person living at the head of the swamp, but what he is doing I do not know.

737. *President.*] Would it not be rather expensive to resume these streams? Of course you cannot do anything without expense; but I should say that the cost of conveying the water from both these dams into Botany would not amount to one-tenth of the interest on the money which would be required to bring the water into Sydney from any great distance.

738. But would it not be expensive to buy out the people that are carrying on operations along the stream? No. There is an Act which provides for an assessment, and no matter what value might be placed upon his property by the proprietor, it would be in the hands of the persons appointed to assess it, and it would be for them to determine the amount of compensation which ought to be given.

739. Do you know if those dams which have been erected for woolwashing purposes are retentive of water? I think so. They are common dams, made chiefly of clay. I have known them on one or two occasions to break out. I may as well mention, while I am on the subject of these two dams, that there is a drain cut from one to the other. There was a deficiency of water in the dam where the mill operations were carried on at the time of which I speak, and that deficiency was supplied from the further swamp. A drain was cut from one to the other, so that there is a free passage between them. I have seen both dams break away, but they have been repaired and hold water very well; but I think there is a good deal of drainage from the further one.

740. Below the dam? No; it appears to be more on the north side of the dam. As you go along the road, you pass over a bridge, and you see the water going in a north direction away from the point of the dam. Whether it is from the drain I speak of or from the embankment I am not prepared to say. I know there is a leakage there, and a considerable one; but independently of that, there is always a good supply of water.

741. Have you known a good supply to be in those dams in the driest seasons? I have always found a good supply there, and more particularly in the dam to the south (Byrne's grant).

742. Do you think is the water naturally good that flows that way? Are you speaking of those two dams?

743. Yes? I do not think anything could be finer, if they were cleared.

744. In fact, you think it as good as the water of the Botany stream? I do not think there is anything to surpass it in the world.

745. Is the area drained by that stream much built upon? Very much so, beyond the road westward.

746. Is it your opinion that, if the supply from those dams were added to the supply at Botany, there would be sufficient water to meet the requirements of Sydney for many years to come? Yes, but you must retain it first. It is a question whether those dams will be efficient—whether a sediment from the water will form a sediment on the peat, or whether the water will pass underneath.

747. If I understand you aright, you do not think it necessary to go to any distant source of supply—you think there is plenty of water near to Sydney, if it can be preserved? Plenty. If you saw the great body of water which flows after two or three days' rain, you would be satisfied that there would be no scarcity if you could only retain it.

748. *Mr. Woore.*] How many years have you had an intimate knowledge of the swamps generally? Ever since I was a child and able to get up on a saddle. I used to have cattle running on the coast before there was any establishment there, and I have known the swamps from that time to the present.

749. How many years can you recollect them? I think I was about ten years old when I had cattle on the coast, and I am sixty-five now.

750. What was the state of the swamps fifty years ago? I have seen the swamps with so much water in them that you might have taken your boat and pulled about from place to place, and after two or three dry years I have seen them dry. I have seen the head of the present Lachlan Swamp, that is now boggy, so dry that you could cross it on horseback.

751. As dry as it is now? I hope you do not call it dry now. I have crossed over on horseback a hundred yards above where the engine-house is on the road.

752. Do you recollect what year that was? No.

753. Do you recollect the years 1838 and 1839, when we had a great drought? I remember that time well, because I lost a great many cattle then.

754. Do you recollect the state of the swamp at that time? No, not exactly at that time; but I have seen it so that you could ride a horse over the narrow gut.

755. Could you do it generally? No; perhaps it would be twenty years before you could approach it again. I have seen it so two or three times. G. Hill, Esq.
756. Do you consider that the drought of 1838 and 1839 was greater than any you remember before or since? I think I saw as great droughts before that time. I have seen the country in an awful state on several occasions; but as to the dates I cannot recollect them. 20 Nov., 1867.
757. Do you remember 1814? No, I cannot recollect the dates. I have seen more than one great drought. During the great drought of which you spoke, I was punished severely on the Murrumbidgee. I have seen the Murrumbidgee at my station at Yanko, where the steamers now run past, so dry that I could walk over without shoes from stone to stone.
758. Do you recollect a great drought since that? There has been since no drought like it.
759. *President.*] Have you ever known the Lachlan stream to be dry? Never.
760. And in the driest time you speak of, do you remember the condition of the stream further down? The further down, the greater the stream.
761. But did that stream cease to run in the driest time you remember? Never. I am speaking now of the stream from the Randwick Road down to the water of Botany Bay. The stream at the gut I spoke of was running at the time I crossed, but the ground had narrowed itself to a small compass so that the horse could step over it.
762. *Mr. Moriarty.*] With regard to the creek from which you say a large quantity of water might be derived (that which takes its rise from the back of Baptist's Gardens) do you remember that, two years ago, the woolwashing establishment stopped for want of water? That, no doubt, may have been the case. I consider that a woolwashing establishment takes more water than the city. If you examine the operations of a woolwashing establishment, you will see a stream of water running as thick as three men's bodies. That running for twenty-four hours will consume an enormous quantity of water.
763. *President.*] Do you know the swampy ground to the east of the Botany stream, lying out on the Church and School Estate? Yes, well.
764. Do you think could a material supply be got from that quarter? I do not think it could be depended on.
765. Does it dry up rapidly? Yes, very; and I think it all filters into this stream. There is a dividing range. One portion of the water goes to the coast, and the other portion goes the other way. One portion empties itself into a creek below Masters' house, and the other into the Lachlan.
766. There are several small streams which drain into Botany Bay, between the engine-house and Bunnerong? I do not think any portion goes into the Lachlan; I think they all empty themselves into Botany Bay.
767. But you do not think they could be depended on for any material addition? I should not like to depend upon them myself, although a good deal of water might be got from them.
768. You would look more to the Waterloo dams? I have no doubt myself (although I may be wrong) about the supply which might be obtained from the Lachlan stream, providing the dams were made available. Retaining the water is the main thing.
769. Do you think that dams constructed on sandy soil can be made sufficiently retentive of water? I think so, judging from the two woolwashing dams erected on the Botany Road.
770. And you think that, even in a dry season, there would be more coming in than would leak out? A great deal more. The leakage is of no importance.
771. *Mr. Moriarty.*] Do you think that the present charge for water is a reasonable one, or that it is too high? I think that if it were properly levied, and confined to proper rooms, it would not be too high.

SATURDAY, 23 NOVEMBER, 1867.

Present:—

MR. MORIARTY,	|	MR. GRUNDY,
MR. ADAMS,	|	MR. WOORE.

PROFESSOR SMITH, M.D., (PRESIDENT) IN THE CHAIR.

William Speer, Esquire, called in and examined:—

772. *President.*] How long have you been connected with the Municipal Council of the City of Sydney, Mr. Speer? About eight years. W. Speer, Esq.
773. And during that time you were Mayor? I was Mayor in 1864, for one year.
774. Have you given much attention to the water supply of the City? Yes; I have given a good deal of attention to that subject. 23 Nov., 1867.
775. From your knowledge of the present source of supply, do you think it can be depended on to meet the requirements of Sydney? Previous to the dams now being erected I do not think it could have been depended on. During the year I was Mayor the water was very low in the dam at the engine-house. When the engine was in motion for about two hours it lowered the water so considerably that we were pumping in the mud. The same thing occurred last year, and I believe also in 1865.
776. On those occasions the stream did not deliver so much water as the engine could pump up? Exactly; and you could see a visible alteration in the dam at Botany, which I suppose covers three or four acres.
777. And on those occasions was the supply of water to Sydney insufficient? Yes, it was insufficient. Thus it was that the water was cut off from the gardens about the town. Occasionally

W. Speer,
Esq.
23 Nov., 1867.

Occasionally the water was stopped at night in the city; some of the manufacturers also got a short supply. Last year I believe was the worst I recollect. The water had to be stopped for a considerable time at night, and the citizens were grumbling that the streets were not watered with fresh water. There was not sufficient water at that time.

778. It would have been impossible to keep the reservoir full? Quite impossible. Three or four hours pumping of the engine would have brought you to the mud. In some instances salt-water was pumped in. On one occasion, when the aldermen went down they saw the salt-water running into the dam.

779. Do you know that as an actual fact? Yes, I saw it.

780. When was that? I do not recollect; it was some-time last year, probably it was about this time.

781. And after that was anything done to prevent the influx of salt-water? Yes, some clay was put on the face of the weir. The inflowing of the salt-water arose from the weir being too low.

782. *Mr. Moriarty.*] It was running over the top of the weir? The fresh-water was supposed to run over the weir; but when there was no fresh water running out the salt-water flowed in.

783. Over the top? Yes; another foot of material on the weir would have prevented it.

784. *President.*] You do not think it soaked through? No; it was running in at high-water. The engineer then put some clay on the top and prevented the water running over. I do not believe that any water gets in through the dam. It is well puddled.

785. Then, without some means of preserving the water in wet seasons, do you think that the Botany stream cannot be trusted as a means of supplying Sydney with water? Decidedly; there is no question about that at all.

786. Have you examined carefully the dams which are now being constructed on the Botany stream? I have.

787. Do you think they will be sufficient to preserve the excess of a wet season to make up the deficiency of a dry one? I do not think they will; but I am of opinion that they will materially add to the supply, because they will have the effect of keeping the ground saturated. The object in making them was not so much to store the water as to keep the ground saturated. The evaporation is very great in dry weather; but if the whole of the ground were kept thoroughly saturated a vast quantity of water would be retained in the area of the dams.

788. Then you do not expect the dams to be retentive? Decidedly not. That never was intended.

789. Do you think the chief utility of the dams will be to keep a large surface continually wet, and therefore more spongy? That will be their chief advantage. Some of the lower dams, no doubt, will also retain a considerable quantity of water; but in a very dry season, or after a series of dry seasons, such as we have had, I presume that there will be little water except what is under the surface. From what I have seen of the dams I am satisfied that they will be of immense importance in regard to the supply. They will add very much to it. My reason for arriving at that conclusion is this: it was understood when the dams were commenced that blue clay would be met very near the surface. This, however, was not the case. It was found, in some instances, as far down as 30, 40, and 50 feet; in others the sand was not gone through. It was found to be a regular quicksand. That is one of the reasons why some of the dams have given way—there being no bottom, except sand. I gather, therefore, from the nature of the ground, that the source of supply will be much enhanced by always keeping those dams full of water.

790. But supposing we had a recurrence of a long and severe drought, such as that described to have taken place in 1838 and 1839, and that in 1849—do you think these dams would enable us to tide over such a drought? I think not, because every day we require more water. It is as necessary to have a supply of water to flush the sewers of the city as it is to have a supply for other purposes. In fact, last year I think there was great danger of a plague breaking out, because the drains were not flushed through the summer months, when there was not an adequate supply of water. You could scarcely walk through the town, in some parts, owing to the stench. The drains must be flushed either with fresh or salt-water.

791. Then, even after the present dams are finished, you think they will not secure a good supply to Sydney during a long-continued drought? That is my opinion. I have no doubt that when the present dams are finished Sydney would be able (even if there were a drought for two years) to have water for ordinary purposes, but not for machinery or manufactories, or for flushing the sewers. Therefore, I calculate that the supply will be altogether insufficient.

792. Have you thought of any method of so increasing the supply in the Botany Swamps as to make it trustworthy, even in long droughts? I think nothing can be done excepting to keep those dams in order. It will take a year or two to consolidate them so that they will be able to stand any great pressure.

793. You think they will improve, then, by age? I think so. I think that in a year or two they will be consolidated by their own weight. They will require to be managed with great care when the next flood comes or else they will be swept away. Some of the dams were injured considerably during the late flood.

794. Do you think it will be necessary to supplement the Botany dams by watertight reservoirs in or about Sydney? I think the expense of that would be too great. You could not erect any watertight reservoir in or about Sydney that would hold more than a week's supply, perhaps, and the expense of that would be something enormous. I think the Crown-street reservoir cost about £30,000, and that will not supply Sydney for more than two days. I question whether it would give two days' supply. Storing water in that way does not seem to me to be practicable; the expense would be too great.

795. Then I understand your view to be, that the supply from the present source at Botany really cannot be trusted in serious droughts? That is my opinion, taking into account the requirements of the city, the manufactories now in operation, and those which are likely to spring up, and the flushing of the sewers, which I consider to be absolutely necessary.

W. Speer,
Esq.

23 Nov., 1867.

796. Have you formed an opinion as to the quantity which ought to be supplied per head of the population so as to cover all purposes? I have never considered that; but it will be very easy to get the fact from the Town Hall, because every gallon of water pumped in is registered.

797. Have you thought of any source of supply that would be more trustworthy and abundant than Botany? I have heard something about water being brought from beyond the Nepean, and George's River has been mentioned casually.

798. But of your own knowledge do you know of any other source? I am not aware of any; but I have no hesitation in saying this, from my own experience, extending over many years, that we require more water than Botany is able to give us. Where it is to come from I think you gentlemen will best form an opinion.

799. In going to a new source of supply, do you think it would be prudent to incur a great additional expense, except in order to get a supply by means of gravitation? I believe in the long run it would be cheapest to bring the water into the City by means of gravitation, for we can never tell what may happen to machinery. For instance, the whole of the engines at Botany might be broken. I should think that a supply by gravitation would be much preferable to any other mode, and that it would not be a constant source of expenditure. A very considerable supply, you are aware, comes from the Lachlan Swamp by gravitation. I suppose that half the city is supplied in that way. It is in course of contemplation to increase that supply by erecting a dam near the Randwick Road.

800. Do you know the stream of water which flows from the Waterloo dams? Yes.

801. Do you think that could be made of any use to supplement the present supply? I could not say anything in regard to that matter from personal observation. There is a difference of opinion on the subject. Some say that the water could not be used at all; others assert that it could. My own impression is that it could be used if a little expenditure were incurred.

802. But is it not occupied already by buildings, where operations are carried on that tend to contaminate the water? Yes; but I take it for granted that if it was considered desirable to use the water for the city these would be removed. The Water Act gives power to remove them.

803. That would be a great expense would it not? No doubt it would be a great expense, and before anything of that kind were attempted it would be better to ascertain if water could not be got from a more distant source, so as to furnish a permanent supply.

804. *Mr. Moriarty.*] Can you tell us the longest continued drought you either remember or have heard of in Sydney? I have known Sydney since 1843, and I think the late drought was the most severe one I recollect.

805. That is, during the last two or three years? Yes. I do not think the drought of 1849 was so severe on the water, because there was some rain on the coast, and a good thunderstorm is everything to Botany. It fills the dams and saturates the ground. There is no question that there was not a sufficient supply during the recent drought. When I was Mayor I took Mr. Martin and the Ministry of the day to shew them the deficiency of the supply.

806. Having in view the peculiarities of this climate—its liability to long and severe droughts—do you think it would be necessary, in a town of the growing importance of Sydney, to make sure of a year's or a year and a half's supply? Certainly.

807. Or, perhaps, for a two years' supply? I believe that the present dams, and the experience gained by putting them up, will enable the city to have a year's supply. I believe now, that if we had no rain for twelve months we should not be short of water, if the dams were finished and the water was in them. Under these circumstances I do not think we should, at the end of the twelve months, be so short of water as we were a year ago.

808. *President.*] But if the dams are not retentive? They will still keep back a considerable quantity of water. They were intended to act as filter beds rather than to keep back the whole of the water.

809. *Mr. Moriarty.*] Is it intended by the dams to preserve the water above the surface or under the surface? Under the surface.

810. Then it is not contemplated to keep large reservoirs on the surface? No doubt there will be kept above the surface as much as they will hold; but that was not contemplated in the beginning. The dams are not constructed to stand any great pressure.

811. Supposing that they do not hold water above the surface, it is anticipated that they will tend to the saturation of the ground under the surface? Decidedly; and from what I see and know of my own knowledge, if there were to be no rain for twelve months, from the manner in which the ground is saturated I do not think we should be so short of water as we were last year.

812. I think you said that when the dams were projected it was expected that you would meet with blue clay? Yes; it was thought that we should come to some stiff soil near the surface.

813. And has it turned out that there is clay? There is clay, but not in the place where we put the dams. It is there mostly sand.

814. Then the expectation of meeting clay has not been fulfilled? No; but there is clay in the neighbourhood. It was from the excavation that we gained the information that Botany is capable of furnishing a larger supply of water than we anticipated.

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815. Below the surface of the sand? Below the surface of the sand.
816. And you expect that that water will drain out on the surface as it runs down towards the engine-house? Some of it will drain out in the lower dam. There is a series of dams, but there is not much fall. Some of the water will not shew on the surface until it comes to the lower dam.
817. We have a copy of Mr. Bell's section here, shewing that each dam will hold about 8 feet of water—do you anticipate that they will hold that quantity? I should not like to see 8 feet of water in them now. I do not believe they would stand the pressure. After a year or so, when they become consolidated, they might be capable of holding that quantity. They are made on sand and loose stuff, and some of the piles are driven only into the quick-sand.
818. Then the expectation of keeping water in those dams—as shewn in this section—will not be fulfilled so far as regards the first year? It may not be. The lower dam was not consolidated when the flood came and washed it partly away. The same thing might occur to all the dams.
819. If there is a strong current running, and a filtration of water underneath the surface, would you not expect it in some degree to wash down the sand in those dams? No doubt that must be looked after. The great danger is the current underneath.
820. Under the piles? Yes; some of the piles have no hold at all.
821. *Mr. Grundy.*] Would not that be likely to neutralize the consolidation? No, not with judicious management when the rain comes on. It will be necessary then to keep the sluice open to prevent an unnecessary accumulation of water in the dams. For instance, if there is an appearance of three weeks' wet weather it would be a great mistake to attempt to fill the dams during the rain. The policy would be to let the water off till the rain went away, and then to close the sluices, and let the dams fill slowly.
822. *Mr. Moriarty.*] It is not calculated that by means of these dams those flood waters can be saved over a dry season? Some look to that, no doubt; but the flood waters cannot be saved. It would be necessary to dam up the whole of the country to save three or four hours very heavy rain. No dams could be formed to keep that water.
823. Not there? No; but when the rain is over, and the flood gone, then the sluices could be shut and the water caught gradually.
824. I believe that most of the land adjoining that on which these dams have been constructed has been alienated—that it is private property? Yes; it belongs to Sir Daniel Cooper.
825. Have the Corporation any control over it? Yes; according to the Water Act the Corporation can take possession of any lands required for water purposes by paying compensation, and it is specified in the Act how compensation is to be given. If the owner is dissatisfied he appoints an arbitrator, and the Corporation appoint another. They then appoint a referee, and settle the matter.
826. What I am alluding to is not exactly the space occupied by the dams, but the adjoining country which drains down into them—is not that private land? Yes. There is also a clause in the Act which provides that any nuisance can be put down on the watershed, whether it arise from a house or from a manufactory. Several nuisances have been abated.
827. But supposing the land were sold for building purposes, is there anything in the Corporation Act to prevent the erection of houses? No.
828. Then, in point of fact, the town might extend over that land? I do not think it, because as soon as it became a nuisance, the Corporation would have power to step in and stop it. If a nuisance is created, you have to prove that it is a nuisance, and then it can be abated.
829. *President.*] But before you can prove a nuisance and have it abated, it must be something obtrusive. I think what Mr. Moriarty alludes to is the ordinary contamination which would be caused by dwelling-houses which in themselves are not so offensive as to be indictable as a nuisance? We had a case of that kind near Paddington, where a man erected a piggery and a cottage on the stream. In that case it was not the piggery but the cottage which was the nuisance, and he had to remove it; so that if a dwelling-house were erected on the stream, and it proved a nuisance, you see it could be removed.
830. *Mr. Woore.*] But the nuisance must exist before it could be removed? Yes.
831. *Mr. Moriarty.*] Then how would it be in the case of a man who spent four or five thousand pounds in building a villa? The law says that a man who erects a nuisance will not be entitled to damages if that nuisance be removed.
832. But would that law apply to the case of the building of a gentleman's residence? Yes, if the residence were a nuisance. If, for instance, the water-closets were built on the banks of the stream.
833. But supposing it is in the centre of his own ground? If a nuisance were created, and it were proved to be a nuisance, it would be removed.
834. Is there any possibility of preventing the extension of the town over that part? Yes. When Mr. Cowper was in office the Minister for Lands (I think it was Mr. Robertson) had a great deal of the gathering ground surveyed and put up for sale. The Corporation remonstrated with the Government, and they withdrew the land from sale simply on that ground. The Corporation, I think, would not have objected if the Government had put up the land in 2-acre lots, with a proviso that there should be but one villa on each lot. But they had no restrictions in the sale.
835. But I am speaking now with regard to land which has been alienated without any of these conditions? All such land would come under the same clause. If anything is erected that is a nuisance it can be abated. The law is very strict in that respect.

836. *President.*] If you look at this map [*produced*], shewing the upper portion of the Lachlan Reserve, you will see that within the boundary indicated by an orange-coloured line there are many building allotments and buildings? Yes, a vast number of villas have been erected, but I do not think they are any nuisance.

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837. *Mr. Moriarty.*] I am not speaking of this place, which is under the control of the Corporation, but of the land which has been alienated down towards the Botany Swamps? There is nothing to prevent Sir Daniel Cooper, or anyone else, erecting any structure there; but if it becomes a nuisance, or is calculated to damage the water, the Corporation could step in.

838. But that would depend upon what was looked upon as a nuisance. Supposing the land were sold in 2-acre building allotments, would the Corporation interfere to prevent villas and other houses being erected? They could not interfere till the nuisance existed. The Corporation can only step in when there is a nuisance.

839. *Mr. Woore.*] It would be a very expensive thing to purchase? The expense would be thrown on those who created the nuisance. We should not purchase. There was a case in point at Paddington, where a house was built on private property, and the Corporation interfered on the ground that a nuisance had been created. I think the case went to the Supreme Court. We had the opinion of the Judges in regard to the matter, and the result was that the parties were compelled to abate the nuisance and pay the cost.

840. *Mr. Grundy.*] Could the land be made use of which is granted to Sir Daniel Cooper and others in this locality? It might be used for market gardens.

841. *Mr. Moriarty.*] But if they went in for high manuring, would not that be a nuisance? Yes; but it would have to be proved.

842. *Mr. Grundy.*] But would not compensation have to be granted? When the question was first taken up by the city, Mr. Lord and others, who had what were called water-rights, were paid large compensation. But in resuming land now there would be no payment for water rights, but only for the loss of the land.

843. *Mr. Moriarty.*] But in the meantime the land is Sir Daniel Cooper's? Yes.

844. And he can do what he likes with it? Yes.

845. It would depend, then, upon what the Corporation thought a nuisance? No, it would depend upon the law.

846. But the primary action would depend upon the Corporation? Yes.

847. We have here in this evidence [*Minutes of Evidence taken before the Select Committee on the Sydney Water Reserve, on 18th November, 1862*] the following:—Mr. Bell was asked by the Chairman: "What about No. 4 on the map? No. 4 on the map, including about 685 acres, contains the main Lachlan Swamp, from which the city has been supplied for so many years. There is one thing I was going to add before, and it is this, that on No. 3 the night-soil of the city has been deposited for several years past." He is then asked: "And is it still deposited there? Yes. *By Mr. Caldwell:* On the block marked No. 3? Yes." "*By the Chairman:* And have the citizens taken no means to prevent it? We have put up boards lately to prevent people throwing it on one part, but they have continued to do so. Have you taken no course to punish them? We have endeavoured to find them, but we have been unable to discover the guilty parties. *By Dr. Lang:* I suppose it is done in the night? Yes; but it has been deposited on No. 3 to a very great extent for a number of years past. To my knowledge it has been deposited there for the last seven years. The water which falls on No. 3 is very heavy during storm times. It finds its way across the Randwick Road and into the stream which runs from Lachlan Swamp to Botany."—Now, if that is done with regard to No. 3, which is immediately above the tunnel, would it be possible, while such a thing is known to be in existence, to prevent the sale of this land for building allotments, or to hinder persons from erecting villas or cottages on the land? There is no law which can prevent a gentleman from selling his land; but there is an absolute law which would prevent him from retaining a nuisance on his land. No person would be likely to buy land with such restrictions.

848. Would a villa be considered a nuisance? Yes, if any of its drainage should run into the watershed or the creek.

849. But must not all the drainage necessarily run into the creek? No; I do not go with Mr. Bell in his remarks concerning No. 3. Evidence has been taken with regard to No. 3, as to whether any of the water, except a little at the lower end, goes into the swamp. I think they are putting night-soil now about the old cemetery. A good deal has been put near to the Military Cricket Ground. That is low ground, and any nuisance there will find its way into the tunnel. But there is a ridge there which will prevent any drainage from going into the swamp. In regard to No. 3, if a nuisance were permitted on three-fourths of that area, it would, as a matter of course, find its way into the tunnel. The nuisance we caused to be abated was upon No. 4.

850. And was that land with which the Government had to deal? No, it was on private land. A person erected a house on the banks of the creek going down to the swamp. We found it a nuisance, and caused it to be stopped. The proprietor was not satisfied with the decision of the magistrates, and went to the Supreme Court.

851. Have you pulled down that house? Most decidedly. He erected a cottage and piggery. We could not stop him while he was building, because a nuisance must exist before the Corporation have any power to move.

852. Supposing this land were marked off into building allotments and sold—do you think it would be a nuisance if villas were erected and gardens made on the allotments? It is doubtful. The country is now wholly broken up.

853. But supposing they were built on the watershed? I would consider them a nuisance if they were built on the eastern side. On the western side I should not consider them a nuisance, because any drainage would flow into Shea's Creek.

854.

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854. That is another course of waters—I am speaking of the drainage into the Lachlan? Wherever a nuisance exists, and it can be proved to be a nuisance, the law is sufficient now to abate it. But if the Corporation wished to take the Waterloo dam, or anything of that kind, compensation would have to be given to Sir Daniel Cooper for his water rights and the loss of his land, in the same way that compensation was given to Mr. Lord. He got compensation for both, because he had a mill on the place and the mill was discontinued.
855. *Mr. Woore.*] I suppose the view taken was that the water increased the value of the land? Of course.
856. *Mr. Moriarty.*] Have the Corporation the same control below the creek as they have above? Yes, the very same.
857. And they would have to purchase this land? Most decidedly; and the mode of purchase is described by the Act.
858. If they wanted to sell this land in building allotments, and the Corporation said, "We cannot permit you to sell"? The Corporation could not say that; but I do not suppose any one would buy under such circumstances.
859. Practically, then, that land cannot be sold—it is as though it were in Chancery? Practically it cannot be sold for the erection of villas. A nuisance must, however, exist before the Corporation can move. No person would buy that land with the knowledge that they could not erect a house on the watershed.
860. Do you think that knowledge has tended to prevent the erection of buildings? I do not think so. It is such an out-of-the-way place that no person would go there to live. In the course of a number of years they may go down there, but I do not think they are likely to do so at present. There is plenty of other land about.
861. *Mr. Bell* says: "The water which falls on No. 3 is very heavy during storm times; it finds its way across the Randwick Road and into the stream which runs from Lachlan Swamp to Botany." He is asked, further, by the Chairman: "That is the surface-water?" and he replies: "Yes; so much so has this been the case that we have traced the night-soil from No. 3 allotment to the stream in the Lachlan Mills Estate"? That I recollect.
862. Is it now obviated? There has been no night-soil put there for many years on that part of the ground. I do not think any night-soil is now put on No. 3. That evidence must be pretty old. There was a place set apart for night-soil four or five years ago. At any rate, this was decidedly a sad nuisance.
863. Would you consider if a building were constructed on the lower part of this creek, on the watershed towards Botany, that it would also be a nuisance? Decidedly; but before the Corporation took action they would have to prove it to be a nuisance. Practically speaking, I do not believe Sir Daniel Cooper, or any one else, has power to sell this land. He might possibly put up villas on 2-acre allotments, so as not to become a nuisance; but to erect a village, or anything of that kind, would, in my opinion, be impossible under the present Act.
864. But supposing a man put up a villa on a 2-acre allotment, and went in for high farming? The manure would shew immediately.
865. And he would have to discontinue it? Yes. In those sandy soils the manure does not stay in more than a year. But the difficulty would be to prove the nuisance with regard to manure or anything of that kind.
866. *Mr. Grundy.*] I think you stated that you considered the water supply of Botany insufficient to meet the requirements of the city. No; not in an ordinary season.
867. But you consider it insufficient for emergencies? Decidedly. It would be insufficient if we had a drought similar to that which terminated last year.
868. Since that time you have given an opinion that the dams at Botany are better than you anticipated they would be? Yes; I formed that opinion from information gained during the driving of the piles, and I think the public have gained the information too. It has been ascertained that the bed of the creek contains a larger quantity of water than was anticipated.
869. But, notwithstanding that more favourable opinion, you still adhere to the opinion that, in case of an emergency, the supply from Botany would be insufficient to meet the requirements of the city? Yes. It is not safe to have a city like Sydney, with its suburbs, depending upon such a supply. Balmain now is applying for water, and very shortly we shall have a similar application from the North Shore. The Corporation is bound, in accordance with the provisions of the Act, to supply all these places with water when they desire it. The Water Act applies to the city and suburbs. There is no question but the water will be laid on at the North Shore before long. The only obstacle the Corporation can throw in the way is the want of money; but whenever the inhabitants of the North Shore petition the Corporation for a supply of water, the Corporation are bound to get the money and furnish the supply.
870. And you think that, with the assistance of the dams in a dry season, the supply would be insufficient? No; it would after a series of dry seasons. I have said that if there were no rain for twelve months there would be a sufficient supply at Botany.
871. But for a series of dry seasons? It is not sufficient. The wants of the city are great and constantly increasing. The more the sewerage is extended the greater the quantity of water required to flush and cleanse them. I consider that one of the greatest draughts upon the water is the large quantity required to keep the sewers clean.
872. *Mr. Woore.*] You have no knowledge of the drought of 1837 and 1838? No; I was not in the colony at the time; but from what I have heard it must have been very severe. There is a vast quantity of water in the soil now. I have observed places full of water now which have not contained water for a number of years. The ground is thoroughly saturated. The little drought we have had has only affected the surface. There is a vast quantity

quantity of water at Botany now and in the swamps. In the years 1864, 1865, and 1866, it was not so, because we had scarcely any rain. The ground never got thoroughly saturated, and that accounts, as a matter of course, for the short supply last summer and the summer before.

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873. *President.*] Do you think that the North Shore could share in the Sydney supply? Yes, there is no question about that.

874. How would you propose to take the water across? In the ordinary way—across the harbour in pipes.

875. How would you carry the pipes across the harbour? We should place them along the bottom by means of the diving apparatus. It would of course be necessary to prevent vessels anchoring within reach of the main. There would be no difficulty in doing that, and it must be done, because the North Shore is a place where there is no proper supply of water. If an application came in now how could it be refused?—You could put a pipe over to the North Shore cheaper than you could lay it in George-street. But the question of water is one not for the City but for the Colony, and it ought to be taken up by the Government. If the supply be obtained from the Nepean or that neighbourhood, the whole of the intervening country could be supplied, and irrigation, to a great extent, might be carried on; because the nature of the country is such that dams could be formed at a very cheap rate. The whole question is one for the Government; no Corporation can attempt it.

WEDNESDAY, 27 NOVEMBER, 1867.

Present:—

MR. MORIARTY,	|	MR. WOORE,
MR. ADAMS,	|	MR. GRUNDY.

PROFESSOR SMITH, M.D., (PRESIDENT), IN THE CHAIR.

Thomas Buckland, Esq., called in and examined:—

876. *President.*] I understand that you are well acquainted with the Botany Swamps? T. Buckland, Esq. Yes, I have been acquainted with them for some years.

877. Have you known the swamps during any period of severe drought? Yes.

878. Could you name the periods of those droughts? Yes, I recollect the great drought of 1839, which I think was the most severe one we have ever had.

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879. Do you remember the condition of the Botany stream at that time? Yes.

880. Could you give us any idea of the quantity of water which flowed down it during that driest time? At the driest time that occurred in 1839, the stream that was then running down through the Lachlan, commencing at what we term Bridge-end, would not be a volume of more than 6 inches of water; that is to say, where the division takes place between the Water Reserve and Terry's Grant, at the place where Armitage's woolwashing place was and the old factory. The volume was much larger when you got down towards the "neck," what they now call No. 4 Dam. We considered the "neck" to be the place where the whole of the water could be intercepted at least expense. That was the point where the late Daniel Cooper originally intended to intercept the stream. At the time of which I speak, in 1839, the stream was running there in a volume about two-thirds the size of my body.

881. And that was before the drought broke up in 1839? Yes.

882. So that that would have been about the worst period? Yes. Why we went to look at it at the worst period was this:—We were trying to do something with the Waterloo Mills. We had serious thoughts of breaking them up, and going over to the Lachlan.

883. Do you remember the dry season of 1849? Yes, I remember the season; but I did not take the same interest then in looking at this stream, because in 1839 I had a special object.

884. Could you tell us what proportion the stream bore at that time to its average size? I should say it had gone down to about one-fifth of its average size. By its average size, I mean the size it runs (say) two months after rain. It has changed very much of late years. In former times the stream did not attain its magnitude immediately after rain, as it does now. If you look at the stream now just after a heavy rain, you find it at a full head; formerly it would require three or four days' rain to bring it to a full head.

885. To what do you think is that owing? To the hardening of the ground. In regard to this subject, I may say that I sat down last night and put my ideas together in a connected form; and after you have asked me such questions as you consider necessary, with your permission I will read over my observations.

886. Perhaps if you would read them over first it might save time? They are rather roughly thrown together, for I commenced them pretty late last night. They contain suggestions as well as observations, and you must pick the wheat from the chaff, if there is any wheat in it:—

"In addition to the present Water Reserve, all should be reserved eastward of Constitution Hill to Randwick Hills; fences should commence from the crown of the hill, and across the flat to the spur of the range that divides the Lachlan and Waterloo watersheds; the fence to be continued along the range, until it reaches a point in a line with the northern boundary of Holt's grant. Here the whole of the land between Holt's grant and the Lachlan stream should be reserved, to include the valley and swamps, which, although they

T. Buckland, Esq. they have no running outlet, percolate through the sand flats south-westerly, and reach the stream below Kellett's Bridge (No. 2 Dam).

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"On the eastern side of the stream the land should be fenced in from the hill over and between the sand-crossing No. 5 and the neck No. 4, to the south-west spur of the Randwick Hill; a line between the two points, diverging a little to east, southerly would include all the rainfall that naturally belongs to the Lachlan stream; the extreme eastern water drains off to two round swamps, and to the Man-of-war Waterhole; the rest to Bunnerong and the Veteran's. Having securely fenced in with a close fence the land indicated, a trench should be cut between the sand and the swamps, in order that the water in the higher land should soak into the swamps *under* the surface, instead of running rapidly *over* the now hardened edges, and thence at once into the channels which lead the water into the main stream. On no account should any leading drains be left open for the purpose of drawing the water out of the swamps into the main stream, except as a last resource in times of great drought. It is by this means the watershed has been very much injured and the swamps contracted; it causes the ooze to dry up and harden. Once thoroughly dried, it will take many months of extremely wet seasons to restore it, and in many instances it has never recovered its full capacity to retain water. The consequence of this hardening of the ooze is, that a moderate thunderstorm, which brings perhaps a few hours' rain, instead of filling the swamps, merely causes a rushing of water *over* the surface into the main stream and out to sea, instead of being held and stored in the swamps. The aim of the conservators of the Sydney Water Supply should be, to cause the swamps to *retain*—not to *discharge*. The bed of the stream and the circumference of the swamps have been narrowed by several causes, but chiefly as follows: when there is a continuous rainy season, and the water stands very high in the swamps for a considerable time, the herbage round the sandy edges dies off, but the seeds and germs of plants are covered up by the deposit which the water leaves as it drains off. Formerly these plants sprang up and formed a thick fringe round the edges, which gave shade to, and prevented the evaporation of the water which, for a long period after rain, gradually drains out of the high ground into the swamps; but since cattle, horses, and sheep have become so numerous, and the destruction of the brush from the hills so complete, the edges of the swamps and the sand near it are so much tramped over and disturbed, and sand is drifted in such quantities, that instead of the plants springing up again after every rainy season, the very reverse is the fact, for the edges remain barren, and are deducted from the capacity of the swamp every year. There is a striking instance of the effect thus produced, between the high range dividing Lachlan from Waterloo and the low ridge which encloses the Lachlan stream. There was once a succession of waterholes in wet weather, and of rush swamps in all seasons, but from the causes before mentioned, the whole valley is becoming a sand-drift. Dam No. 6 receives the water from this valley. The great cause of evaporation has been the destruction of the brush from the hills. The first and most important result is, that it allows the dry, hot winds to sweep over the surface of the waters; in the next, it allows the water gathered in the hills to evaporate instead of gradually percolating into the swamps. The wind is a more powerful agent in causing evaporation than the sun. Instance the Man-of-war Waterhole. It stands longer than any other, because it is backed up on three sides with good high scrub, although open to the full effect of the mid-day sun.

1. Enclose the reserve as indicated before, preserve the herbage by severe penalties, and find a Magistrate that is not afraid to convict and punish offenders (if you can); plant thick lines of fig and stone pine trees *across* the course of the west and north-west winds.

2. Intercept the fall of every considerable swamp, to increase their capacity for gathering and storing. Inexpensive flood-gates, to discharge water when required, may be erected at the outlet to the main stream.

3. Plant all bare, sandy patches with cactus cuttings, which can be got by cart-loads, and just stuck in the sand. A load or two of turf thrown into the centre of each patch will be sufficient. As the wind blows it to and fro, the cactus plants catch it, and as rubbish gathers round, it will soon take root and relieve you from all further trouble.

4. A dam should be erected along the north-east side of the Randwick Road. All the water that would run through Busby's bore should be used in the city, to save the cost of pumping; as I believe the reserve above the Randwick Road could be dammed up to supply the city six months out of twelve, and thus allow all the swamps below to increase in capacity. I propose that a tread-wheel should be erected, to force water to the Crown-street and Paddington reservoirs; and this could be worked by gangs from the Gaol, at a small expense, saving coals at Botany and wear and tear of engine, besides being a stand-by if the fortune of war deprived us of the Botany supply. The management of the water supply being of great importance, should be a special duty entrusted to one man, under the control of the Mayor and Corporation.

I feel perfectly assured that if, years ago, I had received authority and means to carry out the suggestions I have now made, no scarcity of water such as we have seen would have occurred. It will now take some years of judicious management to restore the water supply to its original quantity, but I believe it can be done, and then the gathering capacity of the reserve will be sufficient for the next generation, and the dams, when all erected, will store it; that is, if they are backed at an angle sufficiently obtuse to resist the weight which can be accumulated against them. Nos. 4 and 6 I should have made much higher than is proposed.

The Corporation are, I think, extending their mains too far into the suburbs. Where the populations surround good localities for such a purpose they should erect dams themselves. I believe the principle on which the dams are erected is a good one. I do not think the details have been well carried out."

In

In addition to what I have read, I may state that, since Atkinson's establishment was broken up, the people, in taking away the material, used the track on the opposite side. Others saw the track in use, and made a short cut of it to Randwick Hills. In consequence of this, the sand on the opposite side is broken up very much. A good deal of it has gone into the stream, and within the last twelve months it has spread over not less than seven acres of land. But there is in the line of the stream still the swamp underneath. I was nearly bogged the other day. The effect of this sand being there will be, that the rain will run off over the hardened surface, and go at once into the sea.

T. Buckland,
Esq.
27 Nov., 1867.

887. Then, do you think, if the various precautions you have described were taken, that the Botany Swamps would furnish a sufficient supply to Sydney? It is a very hard thing for an unscientific person to give an answer to such a question, except upon data accumulated by scientific men. But speaking from my general knowledge of the rain I have seen fall and run away from that place, I believe there is sufficient to supply a city with half as many more inhabitants as we possess. But we must very speedily take into consideration the proposition of supplying all the suburbs, and those suburbs will soon contain as many people as the city now contains. I think we may fairly calculate that, in the next thirty years, there will be 300,000 people in Sydney and the suburbs. Then comes the question whether we shall be able to supply them. With the present capacity for consuming water, I believe, we can continue to supply Sydney for fifty years.

888. Do you think that those dams on the stream can be made thoroughly retentive of water? I think they can be made sufficiently retentive, seeing that they have a stream below to catch the percolation. We have found that a common sand-dam, if you give it a pretty good base, and throw plenty of clay upon the up-stream facing, will be sufficiently retentive to stop the bulk of water. We find that is not sufficient to stop the water altogether, unless we "centre" it, that is, cut out the centre and puddle it with clay. This is not very expensive. After you have stopped the water with a base of sand, with a layer in front of clay, and bog earth and rushes, you can go down to any depth you like along the centre of the dam, and put in a clay centre that will stop the water sufficiently well for all practical purposes. In some places it would be difficult to find the bottom.

889. Do you think that, even in the driest seasons, the running stream would be equal to the percolation? I think it would be more than equal.

890. Even in the driest season to be expected? Yes.

891. In your opinion, I suppose, it would be necessary to preserve the surplus of a wet season to supply the deficiency of a dry one? Yes; because the water would spread over such a wide surface, that the evaporation would be enormous through a long succession of drought. In the year 1839 we walked over some of our deepest swamps on the Waterloo Estate, and they have never from that date, where the population is settled, recovered their retaining qualities. Of course we have not encouraged them to do so, because we wished to dry them up.

892. Do you remember the state of the supply from the tunnel in 1839? No, I did not notice that much.

893. Is it not the case that the stream, in a great part of its course, flows through private property? Yes.

894. And is that property not liable to be built upon? Yes, very liable. I am only waiting until Waterloo is populated sufficiently, and then I will commence on the Lachlan.

895. If that land is built on extensively, would there not be serious risk of the water being contaminated? It is sure to be contaminated, and that is the reason of this proposition to reserve.

896. Then a good deal of the land would have to be resumed, or bought back? Yes; I have marked on this map (*produced*) the line I propose to fence and the land I think should be resumed.

897. Does the line you have marked include much private property? Yes, it includes a great deal.

898. Then the resumption of that property would be a serious item of expense? Yes, it would.

899. But in your opinion, that property ought to be resumed? I think it should.

900. Could you give us any rough estimate of the approximate value of the property which, in your opinion, ought to be resumed? I shall be able to do so in a few days.

901. Will you be kind enough to give us a memorandum afterwards? I will. I am going out to value it in a day or two.

902. Do you think that any of the swamps to the eastward of the Botany stream could be drained into it? No, not further than the lines I speak of. Those diverging to the east a little can be brought in; but after that, the fall is to the Veteran Swamps and Bunnerong. There is a stony ridge where the Government cut out a little stone for the Bunnerong Road; that is almost the turning point of the two waters, one flows out to the Round Swamps and the Randwick Hills, and the other to Bunnerong and the Veteran Swamps. I do not see how it could be brought in, unless it were down towards Botany, and that of course would be too near the sea.

903. How would you propose to preserve the excess of water that comes through the tunnel—do you think it ought to be preserved in large reservoirs in Sydney? I think that when they have a large supply of water, they might very judiciously discharge some of it into the upper reservoirs above Busby's bore; but I understand that that would be rather difficult to do.

904. Do you think a retentive dam could be made below the tunnel—between it and the Racecourse—so as to dam back the excess of water? I think it could.

905. And you think that then it ought to be raised to a reservoir on a high level in Sydney?

T. Buckland, Esq.
27 Nov., 1867. Sydney? It might be put into the two reservoirs now in existence. If the question of pumping did not interfere, there is one magnificent place for a reservoir near where Logue's stables at Waverley drain into the Water Reserve, and another one trends out towards the Clergy Daughters' School. The place I speak of is just beyond where Mr. Hooper planted all those stone pine trees.

906. You think that is a good position for a dam? It is a magnificent place. It is very deep, and surrounded by barren rocky soil of no value to any one. The only question is, as to the difficulty of pumping the water back.

907. There is a little knoll here; I suppose that would be a place for a dam? * There is a patch of rocks, rather inside the road, to the eastward.

908. *Mr. Moriarty.*] I think you said that some parts of the swamps have never recovered since 1839? I was then speaking of the Waterloo Swamps—not the Lachlan.

909. Seeing the increase of population in that direction now; do you think anything can be looked for from the Waterloo, in regard to a supply of water to the town? Not from the Waterloo Swamp—that is all taken up. We have it covered with tanneries and wool-washing places, and fellmongering establishments, and all those kinds of things.

910. Then that place is out of the question, as regards a supply of water to the city? Yes.

911. Even if those establishments were bought up? You would have to pull the houses down. We have there 1,200 tenants and sub-tenants.

912. Then you have too large an interest for such a course? Yes, our interest is too great. The yearly rental assessed upon by the Municipal Councils is, I think, Waterloo £19,700, Redfern £27,767. A sufficient portion of Redfern drains into the Waterloo stream to make up for that portion (if any) of Waterloo that drains elsewhere.

913. Do you think that the same process of town extension is going on, and likely to go on, over the lower parts of the Lachlan Swamps—I mean from the Randwick Racecourse downwards? As soon as the people are thick enough on the Waterloo Swamps, I intend to commence letting land around the Lachlan stream. I intend to offer such inducements as will draw population—

914. And you think they will go? They will go, of course, from the inducements I shall offer.

915. And that part of the country will become injured as a source of water supply? Yes. I shall serve the lower part as the Government have served the upper—erect houses, build water-closets, and so forth.

916. But the Corporation can put a stop to it? By getting the Government to resume the land under the Water Act. There is a reservation in the grant of 10 acres at any one place, and of spars which may be cut for men-of-war; this, however, amounts to little, seeing that there is no timber on the ground bigger than your thumb. Under the Water Act, so far as between the Government and the grantee, the Corporation must call upon the Government to resume portions of the land, and they can do so.

917. More than the 10 acres? Yes, they could resume the whole of it.

918. And pay for it in the ordinary way? The Corporation would have to pay for it, but they cannot resume it without action on the part of the Government.

919. *Mr. Woore.*] According to the reservation in the grant, can the 10 acres be resumed in any particular part? They can.

920. *Mr. Moriarty.*] But it would be necessary to resume some six or seven thousand acres, would it not? No, not so much as that. I think it would be necessary to resume about 600 acres of our land, and about 200 acres of the Church and School Lands.

921. *Mr. Adams.*] What you describe would embrace six or eight hundred acres? Yes.

922. *Mr. Moriarty.*] You would require to reserve a portion to the west side of the Lachlan Creek? Yes.

923. And some on the east side? Yes, on the east to the Randwick Hills.

924. And about what extent of acreage will that be? I think about eight or nine hundred acres.

925. And from that down to the Botany Waterworks would have to be reserved, would it not? You would have to go into Mr. Lord's ground, but that is narrowed very much after you get down to Kellett's Bridge. I think a very narrow strip there would be sufficient.

926. What extent of land would you have to reserve down there also? I could not tell that. It would depend upon whether the land falls towards Kellett's garden or to the stream; but, in any case, you would not have to reserve one-fourth as much there, in consequence of the nature of the ground.

927. You are, however, of opinion that the whole drainage area of that creek must be reserved to keep the water pure? Yes; unless that is done you cannot keep the water pure.

928. Unless that land is immediately resumed, the same process of deterioration which has been going on will soon commence on it? Yes; if I had tenants I should let our portion of the land to-morrow.

929. I think you said that you thought the dams now in course of erection would be sufficient to store a large quantity of water? Yes.

930. Do you think they will store the water above the surface, or merely assist in preserving the water in the soil under the surface? I think they will do both.

931. You think that they would hold water above the surface? Yes, I think they would hold water above and below the surface. But I propose to intercept the water at the edge of each of the swamps where it goes into the stream. You might erect very inexpensive flood-gates, to allow the water to go into the stream when you require it.

932.

* This question refers to the proposition to erect dams at the east side of the Randwick Road, and has no connection with 907.

560. You are aware that the tide flows up to Liverpool? Yes.

561. Do you think the soil is affected by the salt in such a way as to interfere with the quality of the water? I think not. My opinion is that a few floods would take it out, and that in the course of four or five years the water would be free from it; but I confess I should greatly prefer a scheme which would enable water to be brought to Sydney by gravitation.

G. A.
Mansfield,
Esq.
5 Nov., 1867.

562. Do you know anything of the country towards the head of the Woronora Creek? No.

563. You do not know whether the elevation is such as to render it practicable to bring the water from there by gravitation? No.

SATURDAY, 16 NOVEMBER, 1867.

Present:—

MR. MORIARTY,	|	MR. GRUNDY,
MR. ADAMS,	|	MR. WOORE.

PROFESSOR SMITH, M.D., (PRESIDENT), IN THE CHAIR.

James Murphy, Esq., called in and examined:—

564. *President.*] I understand, Mr. Murphy, that you have been Mayor of Sydney? Yes, J. Murphy, I was Mayor in the year 1860. Esq.

565. And for a considerable time you have been an Alderman? Yes, I have been an Alderman for several years. I was one of the first elected under the Act which legalized the present Corporation of the city. 16 Nov., 1867.

566. From your connection with the Municipal Council, I suppose you must have given a good deal of attention to the subject of the water supply to the city of Sydney? I have given some attention to that subject.

567. Do you think the present source of supply sufficient for Sydney? When the dams now being constructed are completed, I think the supply will be amply sufficient for some years to come.

568. Have you examined carefully the construction of those dams? Yes, but I do not pretend to be a judge in the matter. I have been to see them on several occasions. I do not think they have been carried out properly—I do not think they have been carried out according to the specification.

569. Do you think is the principle good? Yes, I think it is.

570. Do you think the dams can be made retentive on such a soil? We do not require them to be retentive altogether. We shall require the water to filter through the bed of the creek to supply the reservoir.

571. But is it not expected that these dams will preserve the excess of water in a wet season to make up the deficiency in a dry season? That is the purpose for which we intended them, and that is what we believe they will do.

572. But if they are not watertight, I imagine that they could not remain full for (say) three or four months? The supply will be equal to the leakage. There will be a continual supply, which will be, perhaps, even more than equal to the leakage.

573. Do you think that, even in the driest seasons, we may expect that there will be a sufficient current in the stream to supply the leakage in the dams? Yes.

574. Supposing the dams are sufficiently retentive, will they be sufficiently capacious to equalize the supply in wet and dry seasons? Yes, I think they will.

575. Do you think the present Waterworks are fitted for the supply of a much larger number of people than are at present supplied from them? Oh, yes! I think they could supply almost any number.

576. Could you give us an approximation as to how many more thousand people could be supplied by the present arrangement? No, I would not pretend to do that.

577. You see this is a question of the future as well as of the present, and we must calculate the probable increase in number that it will be necessary to provide for? I think the machinery and the supply will be sufficient to accommodate double the number that are at present supplied, providing the dams are properly constructed, and the water is stored which falls during rainy seasons.

578. Do you think it would be advisable to supplement these dams by watertight reservoirs in and about Sydney, of greater size than the present? I should think it would be necessary to do so, in order that there might be a provision in case of accident, such as a pipe bursting or anything of that kind, or an accident to the machinery.

579. Do you think, then, that the Botany supply is so abundant and trustworthy that it would not be worth while going to any other source? Not for some years to come; I should say not for twenty-five years. I risked an opinion, some time ago, that it would not be necessary to go elsewhere for water for fifty years to come. I have been out there during some very dry seasons, and I always found a very large stream of water continually running. When I was there, nine or ten days ago, there was a great quantity of water running away, and yet the engines were in full play.

580. What is the driest season you have known? I cannot say; for it is only during the last few years that we have thought anything of the water question, because previously we had an abundant supply. Until the last few years we were supplied from the Lachlan, and we did not turn our attention to Botany at all. I have no recollection of a drier season than we had last year, since my attention has been directed to the water question.

581.

755. Could you do it generally? No; perhaps it would be twenty years before you could approach it again. I have seen it so two or three times. G. Hill, Esq.
756. Do you consider that the drought of 1838 and 1839 was greater than any you remember before or since? I think I saw as great droughts before that time. I have seen the country in an awful state on several occasions; but as to the dates I cannot recollect them. 20 Nov., 1867.
757. Do you remember 1814? No, I cannot recollect the dates. I have seen more than one great drought. During the great drought of which you spoke, I was punished severely on the Murrumbidgee. I have seen the Murrumbidgee at my station at Yanko, where the steamers now run past, so dry that I could walk over without shoes from stone to stone.
758. Do you recollect a great drought since that? There has been since no drought like it.
759. *President.*] Have you ever known the Lachlan stream to be dry? Never.
760. And in the driest time you speak of, do you remember the condition of the stream further down? The further down, the greater the stream.
761. But did that stream cease to run in the driest time you remember? Never. I am speaking now of the stream from the Randwick Road down to the water of Botany Bay. The stream at the gut I spoke of was running at the time I crossed, but the ground had narrowed itself to a small compass so that the horse could step over it.
762. *Mr. Moriarty.*] With regard to the creek from which you say a large quantity of water might be derived (that which takes its rise from the back of Baptist's Gardens) do you remember that, two years ago, the woolwashing establishment stopped for want of water? That, no doubt, may have been the case. I consider that a woolwashing establishment takes more water than the city. If you examine the operations of a woolwashing establishment, you will see a stream of water running as thick as three men's bodies. That running for twenty-four hours will consume an enormous quantity of water.
763. *President.*] Do you know the swampy ground to the east of the Botany stream, lying out on the Church and School Estate? Yes, well.
764. Do you think could a material supply be got from that quarter? I do not think it could be depended on.
765. Does it dry up rapidly? Yes, very; and I think it all filters into this stream. There is a dividing range. One portion of the water goes to the coast, and the other portion goes the other way. One portion empties itself into a creek below Masters' house, and the other into the Lachlan.
766. There are several small streams which drain into Botany Bay, between the engine-house and Bunnerong? I do not think any portion goes into the Lachlan; I think they all empty themselves into Botany Bay.
767. But you do not think they could be depended on for any material addition? I should not like to depend upon them myself, although a good deal of water might be got from them.
768. You would look more to the Waterloo dams? I have no doubt myself (although I may be wrong) about the supply which might be obtained from the Lachlan stream, providing the dams were made available. Retaining the water is the main thing.
769. Do you think that dams constructed on sandy soil can be made sufficiently retentive of water? I think so, judging from the two woolwashing dams erected on the Botany Road.
770. And you think that, even in a dry season, there would be more coming in than would leak out? A great deal more. The leakage is of no importance.
771. *Mr. Moriarty.*] Do you think that the present charge for water is a reasonable one, or that it is too high? I think that if it were properly levied, and confined to proper rooms, it would not be too high.

SATURDAY, 23 NOVEMBER, 1867.

Present:—

MR. MORIARTY,	|	MR. GRUNDY,
MR. ADAMS,	|	MR. WOORE.

PROFESSOR SMITH, M.D., (PRESIDENT) IN THE CHAIR.

William Speer, Esquire, called in and examined:—

772. *President.*] How long have you been connected with the Municipal Council of the City of Sydney, Mr. Speer? About eight years. W. Speer, Esq.
773. And during that time you were Mayor? I was Mayor in 1864, for one year.
774. Have you given much attention to the water supply of the City? Yes; I have given a good deal of attention to that subject. 23 Nov., 1867.
775. From your knowledge of the present source of supply, do you think it can be depended on to meet the requirements of Sydney? Previous to the dams now being erected I do not think it could have been depended on. During the year I was Mayor the water was very low in the dam at the engine-house. When the engine was in motion for about two hours it lowered the water so considerably that we were pumping in the mud. The same thing occurred last year, and I believe also in 1865.
776. On those occasions the stream did not deliver so much water as the engine could pump up? Exactly; and you could see a visible alteration in the dam at Botany, which I suppose covers three or four acres.
777. And on those occasions was the supply of water to Sydney insufficient? Yes, it was insufficient. Thus it was that the water was cut off from the gardens about the town. Occasionally

In addition to what I have read, I may state that, since Atkinson's establishment was broken up, the people, in taking away the material, used the track on the opposite side. Others saw the track in use, and made a short cut of it to Randwick Hills. In consequence of this, the sand on the opposite side is broken up very much. A good deal of it has gone into the stream, and within the last twelve months it has spread over not less than seven acres of land. But there is in the line of the stream still the swamp underneath. I was nearly bogged the other day. The effect of this sand being there will be, that the rain will run off over the hardened surface, and go at once into the sea.

T. Buckland,
Esq.
27 Nov., 1867.

887. Then, do you think, if the various precautions you have described were taken, that the Botany Swamps would furnish a sufficient supply to Sydney? It is a very hard thing for an unscientific person to give an answer to such a question, except upon data accumulated by scientific men. But speaking from my general knowledge of the rain I have seen fall and run away from that place, I believe there is sufficient to supply a city with half as many more inhabitants as we possess. But we must very speedily take into consideration the proposition of supplying all the suburbs, and those suburbs will soon contain as many people as the city now contains. I think we may fairly calculate that, in the next thirty years, there will be 300,000 people in Sydney and the suburbs. Then comes the question whether we shall be able to supply them. With the present capacity for consuming water, I believe, we can continue to supply Sydney for fifty years.

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904. Do you think a retentive dam could be made below the tunnel—between it and the Racecourse—so as to dam back the excess of water? I think it could.

905. And you think that then it ought to be raised to a reservoir on a high level in Sydney?

932. Then, the success of that project depends upon the dams holding water above the surface in sufficient quantity to tide over a dry season? It depends upon the dams being sufficiently strong to bear the pressure of water in wet seasons; otherwise, the whole of the water will go into the sea as before.

T. Buckland,
Esq.

27 Nov., 1867.

933. Do you think the only danger is that of the dams being unable to resist the pressure? I am not afraid of anything else.

934. Do you not think any serious difficulty is to be apprehended from a leakage under the sand? I have had a good deal to do with dams, and we have generally got rid of a difficulty of that kind by shovelling over the up-stream side the dust of clay. The weight of the stream keeps driving the clay among the sand and bog-earth until at last they form a cement, which stops the percolation; but to stop it altogether, I have never found any other way effectual except centring.

935. The only water you can expect to retain in those swamps is in the area covered with water? Yes; many of them have 10 or 12 feet of bog-earth, and wherever that is filled with herbage you will find little cells of water.

936. But do you not think that, when the water is dammed back 7 or 8 feet, it will be apt to work round the slopes of the hills underneath the bog?* That theory never struck me before. The question with me was, whether the water would not percolate through the flats beyond the edges of the water dammed up. If there should be white clay, like that found at the Upper Waterloo Dam and Maroubra, it would stop the percolation I speak of.

937. And if the clay is not there, the percolation will not be stopped? I should think not. There are other places where there is sandstone. I know one place where there is sandstone, and I have given persons encouragement to find another, if they can. I know there is white clay in some places.

938. *President.*] How deep have you had to go in any case to get to a hard impervious stratum? In no case, where we have sunk, have we gone down to the hard stuff; we have trusted to the weight we could put upon it, and to the centring with clay.

939. Then how deep have you gone with that clay core? Where we have had a dam holding about 4 feet of water, we would perhaps go down to the level of the bottom of the dam, and not seek to go lower.

940. But you did not make your dam retentive in that way? No, not quite. I think it was four or five years before we got the upper dam at Waterloo quite tight.

941. *Mr. Moriarty.*] But that was made with a large body of clay, was it not? It was made first with sand, and then in the way I speak of. They covered the surface of the sand with clay. When it burst away, we had a lot of navvies who came out from Lancashire, and they made the centring good, and covered the dam with clay.

942. *President.*] Looking at the whole question, do you think it would be better to perfect the present supply, or to go to some distant point for a new supply? I think the city is already saddled with a debt which would render it very imprudent for them to go into an undertaking of such magnitude as I understand it would be to fetch the water from some other sources of supply. I am told that it would be a question of something like a million of money, to supply the city from any one of those other sources. I think it would be well for the present generation to do that which will supply the present generation and the one which will immediately succeed it, and leave it to the great population we trust will follow us here in years to come, to enter upon an undertaking of the magnitude which I understand is involved in the project to which I have referred.

943. But even for present needs, I think you advise that all the private property within the watershed should be resumed? Yes.

944. And that would cause a considerable outlay? Yes.

945. On the other hand, if we were to go to a new source of supply, a quantity of land now in the hands of the Government could be then sold? Yes.

946. You do not think the proceeds of this land will balance the great additional expenditure which will be rendered necessary in going to a new source of supply? Not if the expense is anything like that which I have heard indicated.

947. *Mr. Moriarty.*] You mean if the expense is anything like a million? I have heard it said that it will take a million of money to supply this city, by hydraulic pressure, from some of the sources which have been named.

948. Upon what number of inhabitants have you made your estimate? I suppose the present inhabitants to be about 100,000 for the city and suburbs.

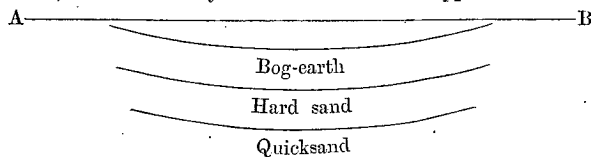
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950. *President.*] The number supplied is about 70,000? I estimate that 50 per cent. upon our present supply may be produced by carrying out the plans now in progress.

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do you know? I have always seen it full of water. It has many falls, from which it derives its name. The Rev.
W. B. Clarke.

1040. Is the water good? It is beautiful water.

1041. Can you give us some information about the general character of the Cordeaux? The Cordeaux River rises a long way further south; its sources are on the range at the back of Mount Kembla, which runs on to Keera. The head there has several branches; there is one branch with several feeders a little to the southward of Kembla; then there is a branch that comes in straight from the range; and there are several others. I can give you all those points. The heights vary from 1,163 feet to 1,247 feet, 1,600 feet, and 1,680 feet. There is a creek called Cordeaux Creek, whose head is 1,400 feet above the sea.

3 Dec., 1867.

1042. Is the character of the country the same as that which you have already described? Yes, generally sandstone and swamps. The Cordeaux rises in the same part of the dividing range as American Creek.

1043. Where does American Creek go? It goes down to the coast. The ridge there is about 1,252 feet high. Its elevation increases to the southward and a little to the northward, so that the highest point of all where the creek comes in is about 1,322 feet. To show that this is not a bad level, I may say that Mr. Shone made it 1,321·47.

1044. Do you happen to know the level of the junction of the Cordeaux and Nepean? Yes; 428 feet.

1045. Can you tell us the level of the junction of the Bargo and the Nepean? No; for this simple reason,—I wasted a whole day in trying to get to it, and could not.

1046. Do you think there is much fall between the junction of the Cordeaux and the junction of the Bargo? The level of the Bargo, where it crosses the main road, is about 780 feet. Myrtle Creek, which enters the Nepean less than a mile below the Bargo, is a mile above its junction, about 630 feet above the sea; and the Cordeaux junction is about 428 feet at the Pheasant's Nest; so that the difference is considerable, especially as the Nepean, further on, at the junction of the Cataract, is probably about 215 feet.

1047. *Mr. Woore.*] Do you recollect the crossing of the road from Lupton's down through East Bargo? I know the place; I have been part of the way. But the Bargo River rises on the western side of Lupton's.

1048. *President.*] The junction of the Bargo and the Nepean is one of the places suggested to us as a probable source of supply? I have been close to it. There is a good deal of water. It is a tremendously rocky place, with cliffs.

1049. A deep, narrow gorge, is it? Yes; it is a steep, deep place. I went from Myrtle Creek with a view of going to that very point, but we did not find our way to it. I got out on the top of a stony ridge from which I could see it, but I did not get to it. I do not think you could do anything with a place like that.

1050. What is the nature of the Bargo? The Bargo River comes down through sandstone, but there is a good deal of shale in it; all about Lupton's there is shale, and right across to the railway. The great mass of the Bargo water comes down through sandstone, and I should think it is very pure.

1051. Is it a permanent stream? There are large pools of water, but in places it is very shallow and confined, as in all our rivers.

1052. There are not many swamps in it, I think? There are swamps, but they are on high ground.

1053. *President.*] Have you visited the Couridjah Lagoons? I have seen them, of course, but I have never examined them.

1054. Do you think much country drains into these lagoons? Not very much, I should think. You follow one ridge, and the railway is close upon another. It is a striking place; but the question is, whether the lagoons are at a sufficient height for your purpose. I think I could give you the height of them.

1055. We will now pass on to the Warragamba, which is another suggested source of supply. Do you know the level of the mouth of the Warragamba? I think it is somewhat higher than the water at Penrith, the bed of which latter is under 60 feet, at all events.

1056. Have you gone up the gorge of the Warragamba any distance? Yes, as far as I could go.

1057. How far did you go? Three or four, or perhaps five miles. You find the rocks there have fallen into, and block up the river. You can get out of the boat and walk over the blocks. I know that beyond there are large reaches of water.

1058. What is the character of the valley beyond the head of the navigation? It is one great gorge, which runs out from the Wollondilly, where it is joined by Cox's River, and has in it an open place where there are many acres of good feeding ground. It then passes into a gorge again, and runs in places as straight as you can draw a line.

1059. How far does this rocky gorge extend from the mouth upwards—does it go to Burragorang? If you could get a boat over the rocks, you could probably go to the junction of the Cox.

1060. Can you tell us the level of the junction of the Cox and the Warragamba? I cannot tell you to within a few feet. It is under 250 feet.

1061. What is the height of the junction of Nattai Creek and the Wollondilly, in Burragorang? I should think it is not much under 300 feet, if at all. My observations make it more.

1062. Have you ever estimated the drainage area of the Warragamba? No; but Sir Thomas Mitchell marked the area of the Hawkesbury basin on one of his maps, and it is included in that.

1063. Does the Cox supply a large quantity of water to the Warragamba? It must do so.

1064. Do you know the valley of the Grose? I do not know the whole of it; I know some parts of it.

1065.

to form a creek? There must be a point below, where you would have to form dams. It is a question whether it would not be desirable to make a survey of all the creeks. The Rev.
W. B. Clarke.

1088. Acre for acre, do you not think that country, on an average, receives more water than almost any other part of New South Wales, considering its elevation and its proximity to the coast? No doubt it must receive an immense quantity of water, because it is like a vertical wall intercepting the clouds from the south-east, east, and north-east. 3 Dec., 1867.

1089. Have you formed any idea of the proper quantity of water per head which a population like this ought to receive? I have not turned my attention to it; but, long before you began your work at Parramatta, the question was worked out. Now that you are looking for water, I should like you to avoid shales. The water on the North Shore lies on the top of sandstone, but there are beds of shale in hollow places. I am living on one of these beds of shale. We have gone down, in making a well, 30 feet through these shales, and have come to water. We had perhaps two or three hundred gallons in two or three days, but it was so bad in its taste and smell that it was utterly useless. It is just the same in Campbelltown and Liverpool—you cannot drink the water.

1090. But might not a river flow through a district containing shale, and not be much contaminated? That depends much upon whether there are salt and iron in it. Unfortunately, the shale on the North Shore is full of sulphide of iron. The water in such cases is covered with ferruginous scum all over the surface. With the microscope you can see the iron lying in it. It is the same with all those shales throughout the whole of the county of Cumberland. It is so at Parramatta and at Toongabbee—much of the water is perfectly salt.

1091. And there is no shale in the district you indicated, about the Cataract and the Woronora? I have not seen any at the spots I have spoken of. There is shale higher up, just as at the tunnel at Gibraltar, and above the Pheasant's Nest. That ends about Appin. Just when you descend King's Fall, you pass off the shales. The shales continue across the whole country, until you come to the escarpment of the Blue Mountains. You find blue shale at the bottom, and yellow shale above, and calcareous grit impregnated with saline matter. You cannot get good water in such a country.

1092. One witness has told us that the Woronora Creek has a saline taste in dry weather—Do you think that is likely? I have no doubt there are patches of shale along the lower part of the Woronora. The Bottle Forest Road runs partly through a series of hardish shale, with ironstone in places on the surface. Wherever you find that, you may depend upon it that there is some of this saline stuff in it; but, as Mr. Moriarty suggested, to a certain point below the heads of the rivers, there would be perfectly pure water.

1093. The water should be cut off before it comes to the shales? Yes. Supposing you had the means of getting water from the Nepean, it must be remembered that in that river the water is not all pure. It is pure in the sandstone part of it; but in some parts of it, as Professor Smith has already proved, there is a great quantity of magnesia. A part of the Warragamba water passes through a series of old rocks, granites, porphyries, and coal measures, and finally, about the junction, a portion of shale. The shales go up, at the back of the sandstone gorge, to Penrith. They extend from the railway station in Sydney, right across the country, with some interruptions.

1094. From the nature of the country drained by the Wollondilly, do you think the water would be of sufficient purity to furnish a supply to Sydney? Of course you must take it with some little exceptions. I think it might be. At any rate, those parts of it that are drained out of this sandstone country would be pure; but we know that, upon the top of the ridge which supplies some of these feeders of Burragorang, you will have shale. The Oaks district has much shale. The Werriberri, which rises there, runs into the Warragamba, where it becomes inaccessible. The top of the ridge is all shale for many miles. As soon as you are over it, you get into these sandstone ravines again. You go abruptly off the sandstone, at the corner of Inglis's fence, and on to the shale which continues to Sydney.

1095. Supposing it were possible to lead the water from the Warragamba to Sydney by means of an open canal, do you think the shale of which the country is formed would have any effect on the water passing through it? Of course it would.

1096. Do you think it would so affect it as to spoil it? Yes. At Castle Hill, just on the other side of Parramatta, you have these same shales (I am speaking now of the blue shales at the bottom) resting on the sandstone. When there has been much evaporation, after a heavy rain, I have seen the ground where the shale is, at Castle Hill, white with salt—it has been so thick that you could scrape it off. I believe it would be precisely the same anywhere else where the shale is exposed to the influence of the sun, under similar circumstances.

1097. *President.*] Are you aware whether there is any quantity of salt on the Cataract River near Nepean Towers? I have seen several places where there is salt, but I do not remember the distinct point spoken of.

1098. Does the salt originate there from shale also? No, I think it forms in the sandstone. You will find salt at the head of the Bundanoon Creek, and in many places there are stalactites and salt. You will find cavities in the sandstone where salt is deposited.

1099. *Mr. Grundy.*] If the water were brought from the Warragamba by an open cutting, what would be the effect on the water? I think it would be deteriorated. It is a known fact now that, in the interior, when they dig wells they come to salt water, and yet often find pure water below it, and they are obliged to have a portion of the soil carried away.

1100. *President.*] Would not the water of a running canal soon wash the soil sufficiently to free it from the salt? But it would always be liable to crumble and disintegrate.

932. Then, the success of that project depends upon the dams holding water above the surface in sufficient quantity to tide over a dry season? It depends upon the dams being sufficiently strong to bear the pressure of water in wet seasons; otherwise, the whole of the water will go into the sea as before.

T. Buckland,
Esq.

27 Nov., 1867.

933. Do you think the only danger is that of the dams being unable to resist the pressure? I am not afraid of anything else.

934. Do you not think any serious difficulty is to be apprehended from a leakage under the sand? I have had a good deal to do with dams, and we have generally got rid of a difficulty of that kind by shovelling over the up-stream side the dust of clay. The weight of the stream keeps driving the clay among the sand and bog-earth until at last they form a cement, which stops the percolation; but to stop it altogether, I have never found any other way effectual except centring.

935. The only water you can expect to retain in those swamps is in the area covered with water? Yes; many of them have 10 or 12 feet of bog-earth, and wherever that is filled with herbage you will find little cells of water.

936. But do you not think that, when the water is dammed back 7 or 8 feet, it will be apt to work round the slopes of the hills underneath the bog?* That theory never struck me before. The question with me was, whether the water would not percolate through the flats beyond the edges of the water dammed up. If there should be white clay, like that found at the Upper Waterloo Dam and Maroubra, it would stop the percolation I speak of.

937. And if the clay is not there, the percolation will not be stopped? I should think not. There are other places where there is sandstone. I know one place where there is sandstone, and I have given persons encouragement to find another, if they can. I know there is white clay in some places.

938. *President.*] How deep have you had to go in any case to get to a hard impervious stratum? In no case, where we have sunk, have we gone down to the hard stuff; we have trusted to the weight we could put upon it, and to the centring with clay.

939. Then how deep have you gone with that clay core? Where we have had a dam holding about 4 feet of water, we would perhaps go down to the level of the bottom of the dam, and not seek to go lower.

940. But you did not make your dam retentive in that way? No, not quite. I think it was four or five years before we got the upper dam at Waterloo quite tight.

941. *Mr. Moriarty.*] But that was made with a large body of clay, was it not? It was made first with sand, and then in the way I speak of. They covered the surface of the sand with clay. When it burst away, we had a lot of navvies who came out from Lancashire, and they made the centring good, and covered the dam with clay.

942. *President.*] Looking at the whole question, do you think it would be better to perfect the present supply, or to go to some distant point for a new supply? I think the city is already saddled with a debt which would render it very imprudent for them to go into an undertaking of such magnitude as I understand it would be to fetch the water from some other sources of supply. I am told that it would be a question of something like a million of money, to supply the city from any one of those other sources. I think it would be well for the present generation to do that which will supply the present generation and the one which will immediately succeed it, and leave it to the great population we trust will follow us here in years to come, to enter upon an undertaking of the magnitude which I understand is involved in the project to which I have referred.

943. But even for present needs, I think you advise that all the private property within the watershed should be resumed? Yes.

944. And that would cause a considerable outlay? Yes.

945. On the other hand, if we were to go to a new source of supply, a quantity of land now in the hands of the Government could be then sold? Yes.

946. You do not think the proceeds of this land will balance the great additional expenditure which will be rendered necessary in going to a new source of supply? Not if the expense is anything like that which I have heard indicated.

947. *Mr. Moriarty.*] You mean if the expense is anything like a million? I have heard it said that it will take a million of money to supply this city, by hydraulic pressure, from some of the sources which have been named.

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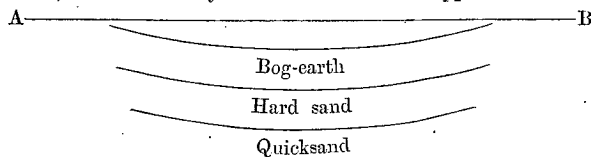
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and asked, if the water was dammed up to AB, would it not work down to the quicksand and escape.

T. Buckland, Esq. 952. There are about 70,000 people in the city and 30,000 in the suburbs, so that if the present works are carried out successfully, you will have enough water to supply the present city and suburbs? I think the present supply may be increased and stored to the extent of a supply equal to one-half as much more as is now given.

27 Nov., 1867. 953. But that will depend upon the quantity of water stored by these dams? And in the swamps.

954. By the dams and in the swamps? Yes. I do not propose to rely on the water you have got stored in those dams in open ponds, but on the swamps being kept full of water. That is why I propose that the water should be intercepted. Their retentive property has been injured by cutting drains. The men engaged in woolwashing will never cut a drain if they can help it. They will not touch the ooze, for they find that the moment you cut a drain you lessen the supply. I saw, the other day, that a number of "fishbone" or diagonal drains (as they call them) had been cut. This was the worst thing that could have been done to injure the water supply.

955. They allow the flood water to discharge immediately? Whenever there comes a rain, the water runs at once into the stream.

956. Do you think the dams which have been constructed are made on a good principle? I think the principle is good.

957. As to whether they are efficient, that will be a matter of experience? And of detail too. We never expect to get a dam very tight at first—we have always a number of little errors to make good.

TUESDAY, 3 DECEMBER, 1867.

Present:—

MR. MORIARTY,
MR. ADAMS,

MR. GRUNDY,
MR. WOORE.

PROFESSOR SMITH, M.D., (PRESIDENT), IN THE CHAIR.

John Lucas, Esq., M.L.A., called in and examined:—

J. Lucas,
Esq., M.L.A.

3 Dec., 1867.

958. *President.*] Mr. Lucas, we should like to hear, first of all, your opinion in regard to the capability of the Botany Swamps as a source of water supply—Do you think they are to be trusted for a permanent supply of water to Sydney? I do not. I think they are fast filling up, from the drifting of the sand from the neighbouring hills. I do not think the supply from the Botany Swamps will be sufficient to supply Sydney five years hence.

959. Have you known the swamps very long? Yes, I may say that I have known them for thirty-five years.

960. And your experience leads you to the conclusion that they are filling up? Yes, in consequence of the drifting of the sand from the neighbouring hills, and also from the growth and accumulation of decomposed vegetable matter.

961. Did you know the Botany Swamps during the great drought of 1838? Yes; in fact, I have been passing over the Botany Swamps frequently for the last thirty-five years.

962. Have you any remembrance of the condition of the swamps at the time of the drought? No, I cannot say distinctly in what condition they were then; but I am convinced of this,—that the supply of water from the Botany Swamps is not nearly so plentiful now as it was five or six years ago. I think that every year the supply is contracting considerably. I was out there the other day, on the invitation of the Mayor. Mr. Hume recommended to one or two of the Aldermen that I should be asked to go out and look at the dams. I have some knowledge of the construction of dams, and I went out. From my observation of the swamps on that occasion, I still concluded that they were fast drying up; and I do not think the dams they have made there will have the effect of preserving much water.

963. You think the dams will not be retentive? I do. I believe they will not be retentive.

964. Do you think it would be possible to make retentive dams upon such a soil as you have there? No, I think not. In my opinion, the water would percolate underneath the dams. I think the water would find its way below the level on which it would be possible to form dams to retain the water. There would be an underflow which would empty the dams very soon. You may judge from the nature of the soil 30 or 35 feet down. I think a great quantity of water also finds its way over that level and even under the dam at the Waterworks.*

965. And escapes into the sea? Yes; there is an under-current.

966. Another method has been suggested by which the surplus water may be preserved; that is, to construct large reservoirs in or about Sydney—Do you think it might be preferable to do that, rather than to go to a distance to a new source of supply? I do not think the watershed about Sydney would be sufficient to supply the city of Sydney with water ten or fifteen years hence, and particularly if the population increases as it has done since

* As a proof of the under-current and escape of water into Botany Bay: About 150 yards from the Waterworks, and at high water mark (indeed, very high tides run into it), there is a well of pure fresh water, which rises and falls with the ebb and flow of the tide. This well must be supplied from the Botany Swamps, and as the tide rises, it backs up the fresh water to its own level; and as the tide recedes, the fresh water percolates through the sand between the well and the bay. There is another well near Mr. Lord's residence over which the tide exercises the same influence. There is fully a mile along the beach of the same character of soil, about the middle of which our Waterworks are. There cannot be a doubt that a great quantity of water finds its way through the sand, into the sea; and as the water is stored up by the dams, there will be a greater pressure and consequently a greater escape.

since 1850. No matter what the expense might be to the Government or to the City Council, I believe, after all, it will be necessary to go to some portion of the Nepean for a supply. That was my opinion when the former Commission was appointed. I was acquainted with Mr. Robey, and had several conversations with him on the subject. Even at that time I thought it was a mistake to bring the water from Botany, and that it would be better to go to the Nepean.

J. Lucas,
Esq., M.L.A.
3 Dec., 1867.

967. That was before the present works were commenced? Yes.

968. Then have you formed an opinion as to what the best source of supply would be? Yes, I have for some time formed an opinion that the best source would be the head of the Nepean or Cowpasture River, some few miles above the present site of the Menangle Bridge. I think there you would get a very large supply—sufficient to drown Sydney, I may say—and which might be brought into the city by its own gravitation. I find that, at the Penrith Bridge, the rails are 94 feet above the level of the sea. The water of the Nepean, at Penrith, stands 50 feet below the rails on the bridge, so that the water of the Nepean River would only be 44 feet above the level of the sea. I have also been several miles up the Wollondilly River, and I find there very little difference in the level for several miles up.

969. The bed of the river rises very slowly? Yes, for some miles up; in fact, I have been some three or four miles in a boat.

970. Beyond the head of the navigation? Yes.

971. And the rise is very gradual? Yes; for 4 miles above the basin I do not think the rise is 4 feet.

972. And you would therefore infer that the low level precludes that as a source of supply? Yes, unless the water be pumped up, the same as the present supply, which I think very expensive. It would be much better and cheaper if you could get a supply which will come to Sydney by its own gravitation. I find that the Menangle Bridge is 259 feet above the level of the sea, which would give a difference of 165 feet.

973. I see it stated in your memorandum that the water at Menangle is 60 feet below the rails? Yes; I do not look much to that, however, because the bed of the river gradually rises from Menangle.* A few miles off I think you would be able to get an elevation of 200 feet above the Menangle Bridge; and from what I know of the nature of the country, I am convinced that you could keep back any quantity of water there. You could get sufficient, not only for the ordinary uses of the inhabitants of the city, but also for manufactories and other purposes for which water might be required.

974. Do you think a large dam would be necessary there, or would the stream itself be sufficient? I think it desirable that there should be a dam to keep up a good supply of water under any circumstances, if you can find a good situation for its construction. In this country I have known droughts for three or four years together, and I think it most desirable that a large quantity of water should be kept back, if you can get suitable positions to make dams.

975. Have you known the Nepean in any season of great drought? I have.

976. What was the condition of the stream? I have known the Nepean without any perceptible run. Nevertheless, there has always been an under-current, particularly where the falls are. Those falls are formed by what we call "lapstones" and sand. Under these there is, no doubt, a great flow of water.

977. Where is that fall to which you allude? There is one just below the bridge; there are several between that and Richmond.

978. At the point you indicate, a little way above the Menangle Bridge, do you think the nature of the soil and subsoil is favorable to the construction of dams? I think you should go up somewhere about the junction of the Bargo and Cowpasture Rivers.

979. Is the nature of the soil there favorable to the construction of watertight dams? I think so—I think the soil is chiefly what you require. There is some clay—the best material you can possibly have to make a dam watertight; I do not think you can have better material for a dam than sand, so long as you have a block of clay in the centre.

980. Could a large dam be formed near the junction of the Bargo and Cowpasture Rivers, without flooding useful country? I have no doubt of it; and not only that, but I think also, without having to pay much compensation. I think the land about there is of a very inferior kind, but it is a very good watershed. It is one having advantages not to be found in any other part of the county of Cumberland. In my opinion, all the impurities in the water of the Nepean at Penrith are gathered after the river leaves the Menangle Bridge. I know several parts of the county of Cumberland, where there are salt-water creeks. The brackish water is made additionally impure by dead animals.

981. Have you seen the Nepean in a state of flood? Yes.

982. Does the flood bring down much sand and gravel? The water is very thick.

983. Would the material brought down in floods not be liable to fill up the dam? It would be apt to fill up a dam there; but I believe all that sand and gravel is collected in the county of Cumberland.

984. Do you know the Woronora Creek? Yes, I know it well.

985. Do you know it to its head or source? Yes; my father had a mill there.

986. What sort of a stream is it in ordinary dry weather? I have seen it very nearly dry. In fact, during the time we had the mill there, I believe there was not sufficient water to drive the machinery.

987. What is the quality of the water? Very good indeed; it comes over a sandstone country.

988. What year was that when there was not sufficient water to turn the mill? I think it was in 1828. We had to give up.

989.

* The water at Menangle is 155 feet above that at Penrith.

J. Lucas, Esq., M.L.A. 989. In what sort of country does the Woronora Creek take its origin? In a sandy barren country.

990. Are there any swamps in the vicinity? There are a few, but none to speak of. I think, if I remember right, the creek turns up in a south-westerly direction.

3 Dec., 1867.

991. Do you know if there is any place near the head of the Woronora Creek favorable to the construction of a very large dam or artificial lake? I do not. But if there were, the expense of bringing the water to Sydney would be very great. You would have to form an aqueduct to bring it over George's River, and I do not think you will get sufficient elevation to bring it in by its own gravitation. It is next to impossible to form a dam there sufficient to supply the city of Sydney.

992. Then I understand your opinion to be that the most likely spot is near the junction of the Bargo and the Nepean? I do hold that opinion.

993. *Mr. Woore.*] The place you refer to, I think, is commonly called the Pheasant's Nest? It is somewhere about there. I think that would be best, because there you could get a sufficient fall to bring the water into Sydney by its own gravitation. It is desirable to do away with machinery as much as possible in connection with the water supply, for we all know that machinery is continually breaking and getting out of order. But besides that, it is a very great expense. I do not know precisely what are the working expenses of the machinery used to supply Sydney, but I believe they amount to £5,000 or £6,000 a year. It would be desirable, of course, to get rid of that; a sum so great would pay interest on a very large amount of money.

994. By what means do you think it would be advisable to bring the water into Sydney? I think it would be well to bring the water in by pipes. I should prefer two pipes, so that if any accident occurred to one pipe the city could be supplied from the other.

995. You think it would not be possible to bring it in by an aqueduct? I do not know any part of the county of Cumberland where it would be possible to bring it in by its own gravitation by an aqueduct.

996. *Mr. Moriarty.*] You think it would not be possible to bring the water by an open canal from Menangle to Sydney? I think it would not. The formation of the country would prevent anything of that kind without going to very great expense—an expense, in fact, which would be much larger than would be required to bring the water in by pipes. No doubt the friction of the water ascending and descending would affect the flow considerably. Still, if two pipes would not bring it, I would put in three.

997. You propose to leave the Menangle at a height of about 249 feet above Sydney? It is 249 feet where the bridge is, but I think you could get an elevation of 200 feet above that even. If so, there would be no question about bringing in any quantity of water, because the force of the water would counteract the resistance caused by the friction.

998. You would preserve the water, then, by constructing dams in the river itself? Yes, or on any part of the country suitable for it. Speaking from memory, I may say that I believe there are many places there which are now dry land where large reservoirs could be supplied even better, perhaps, than in the river.

999. You think that possibly it might be better to construct the dams and the retaining reservoirs on some of the adjoining creeks or tributaries to the river than on the river itself? In every place where a dam could be constructed to feed the main reservoir, I would construct a dam.

1000. But would you have the dam on the river, or on some subsidiary creek? If there was a place near, away from the great force of the water in flood times, perhaps it would be more desirable to have the dam in one of the neighbouring beds; but, of course, that would be a matter for further consideration. Speaking from memory, I may say that I believe there are several places there where large reservoirs could be made.

1001. The principle of course, then, on which you would recommend that the supply should be established, would be this: to hold over in a wet season a supply sufficient to enable us to tide over a dry one. I would recommend that a supply should be secured sufficient to enable us to tide over several dry seasons.

1002. What length of time would you consider it necessary to have a reservoir sufficiently capacious for? If possible, I would have a reservoir of sufficient capacity to furnish a supply for seven years. I believe you will find plenty of positions where you could preserve sufficient water to supply the wants of the city for so long a period.

1003. *President.*] How much water do you think ought to be supplied per head of the population per diem, for all purposes? I think in a hot climate like this, certainly not less than 15 gallons.

1004. *Mr. Moriarty.*] Sydney at present is supplied with 40 gallons per head per day, and that is described to be insufficient? But a large portion of the present supply is taken for watering the streets and for machinery. My answer refers to the ordinary requirements of private houses and establishments. The supply of water to the Sugar Company is immense. I believe they pay £600 a year to the Corporation for water. The Mint also is supplied by the same pipe, and it uses £600 worth per annum. Excluding the watering of the streets, and the water required for machinery and manufactures, I think for private houses the quantity required would be about 15 or 20 gallons.

1005. But taking the whole of the requirements of the town into consideration, the watering of the streets, the flushing of the sewers and water-closets, and the supply required by manufactories, what quantity would you say ought to be supplied in a climate like this? It is impossible to say what will be required by manufactories; they are now only in their infant state. In a few years I think four times as much water will be required for manufacturing purposes as is now used.

1006. Then you think that in a few years 80 gallons will be required? I believe it is impossible for any person to form an idea of what will be required.

1007. But in an inquiry like this, we must base our estimate upon the probable requirements of the city? It is impossible for any person to form any idea of what will be required for manufacturing purposes in this city. I believe that ultimately manufactories will have to spread along the upper portion of George's River and the Nepean, and to be established in those inland towns which have fresh-water rivers running through them. This will be brought about partly by the supply of water, and partly in consequence of the value of land being so great in the immediate vicinity of the city; and particularly as we have railways by which the results of the different industries can be brought into the city. As I have already said, my lowest estimate of what would be required for domestic purposes would be from 15 to 20 gallons for each individual. I should not think of estimating the quantity required for manufactories at less than four times that amount.

J. Lucas,
Esq., M.L.A.
3 Dec., 1867.

1008. That would give 80 gallons per head? Yes.

1009. Would you propose to bring the water into the city by pipes? Yes.

1010. Have you made an estimate of the size of the pipes which would be necessary? No, I have not entered into any details, but I think it would be desirable not to have the pipes too large. I would sooner have more pipes.

1011. You must remember that the friction would increase in inverse ratio? I do not think it would be desirable to have pipes above 20 inches, but I certainly would have two pipes. If they were not sufficient, we might have three or four.

1012. From your knowledge of the country about the head of the Woronora, do you think it would be possible, by a series of dams such as are constructed in many of the rivers of France, to prevent flooding, and by joining the watercourses on either side, to form a series of small lakes, which in the aggregate would hold water sufficient to supply the city? It may be feasible, but I think it would cost more than bringing the water from the Nepean. Not only would it be more expensive, but I think the level would be too low, and that it would be necessary to pump the water up to supply the city.

1013. But we are told that we can get water at a height of 600 feet? If so, you would not get water out of the tributaries.

1014. Further back, we are told, it rises to 1,300 feet? Yes; but then the water goes down into Wattamalla and descends into the sea. It is impossible for you to collect the water from there, and if you go very high you can collect no water from the tributaries. You would have to pump the water from Mill Creek, Dead Man's Creek, and Willman's Creek. But I do not know anything of the elevation above Bottle Forest.

1015. Your experience of the Woronora Creek is, that the water is always good? It is always good water, but I believe there is a very small supply.

1016. *Mr. Woore.*] Supposing it were possible to make an aqueduct across the northern part of the county of Cumberland which would give a supply of water for irrigation, do you think it would improve the value of the land? There can be no doubt about that, in regard to any property within such a distance that advantage could be taken of the water. It must increase the value of the land to an enormous extent, because we know very well that the whole of the county of Cumberland is dry.

1017. Could you say to what extent an unlimited supply of water would improve the value of the land? No.

1018. Do you think it would increase it in value tenfold? In some places it would, but in other places it would improve it only in a slight degree. I think it would increase the value of any land through which it passed, unless it passed through small properties in such a way as to destroy them. I believe it would increase the value at least fourfold.

1019. I am speaking of the increased value a supply of water would give to lands adjoining the aqueduct. It would not make much difference how far the land was from the aqueduct, would it, supposing they got a plentiful supply of water? Yes; if it cost one man £500 to draw water from the aqueduct, and another only £10, the value of the latter would be increased in a much greater proportion than the former.

1020. But supposing the water were delivered by gravitation, it would make no difference whether the land was near to the aqueduct or a mile or two from it? I cannot see that; I think the increase in value would depend upon the distance of the land from the aqueduct.

The Rev. W. B. Clarke called in and examined:—

1021. *President.*] Mr. Clarke, the Commissioners wish to avail themselves of your very extensive knowledge of the country, to get some information respecting the various rivers that have been suggested as possible sources of water supply. First, I would like to ask you your opinion of the Botany Swamps—whether they are to be depended on for a permanent supply of water? I have not examined the Botany Swamps in a way that would enable me to give a satisfactory answer to that question, which amounts to this,—whether the reservoir you have there will hold sufficient for the purposes required.

The Rev.
W. B. Clarke.
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1022. Do you think is the drainage area sufficient for the purpose of supplying such a city as Sydney? I cannot say. If there are complaints now of insufficiency of water, and the population increases to any extent (as no doubt it may), in all probability the drainage area would not be sufficiently large.

1023. Have you observed the condition of the Botany Swamps during periods of great drought? No.

1024. Then, leaving the present source of supply, another possible source that the Commissioners have had their attention directed to is the Woronora Creek—Do you know the source of that creek? I know the sources of all the creeks that run down into the same body of water in which the Woronora disembogues, but I do not know that so well as the rest of them.

The Rev. 1025. In what sort of country does the Woronora Creek take its rise? From swampy land
W. B. Clarke. over sandstone, the same as the others.

3 Dec., 1867. 1026. Is there a table-land? The range is tolerably level. There are depressions in it, but it has a sort of uniform level. On the slope to the westward there are swamps; for instance, between Appin and the top of the ridge descending to Bulli there are six large swamps.

1027. Do not you think that a stream arising from swamps is more likely to be permanent? Of course. I regard a swamp as a great sponge which holds water.

1028. Do you know if the Woronora Creek had a permanent stream during any of the great droughts? I have never seen it in great droughts. I have seen it in the month of April, when the country was tolerably green, but I have never been there in a time of drought.

1029. Amongst the many levels you have taken, have you ever taken any levels about the head of the Woronora Creek? I have levels all along the head of that land where these creeks rise. They are, however, only barometrical levels.

1030. As a supply by gravitation would be far preferable to a supply by pumping, a knowledge of the levels is a first requisite—Can you tell us any of the levels about the head of the Woronora? The general difference of level between the sources of these creeks and Sydney is about 40 feet in a mile. I can give you pretty nearly the levels of the whole of these. About six miles east of Appin you have a swamp they call Flat Rock; that is about 1,145 feet above the sea. Then there is a very high point just before the turn of the Bulli Road, which is 1,325 feet above the level of the sea. There is a creek coming in from the eastward which I think is called O'Hare's Creek. The Woronora lies more to the eastward. The head of Dahlia Creek is 1,264 feet above the level of the sea. From there you go down to what is called Tuggerai, which, in point of fact, is George's River. The crossing at King's Falls is about 744 feet above the level of the sea. Returning from this you rise to a swamp which is about the highest point on the old track. That is 1,202 feet above the level of the sea. There is one swamp further on, 1,247 feet, and another, 1,271 feet above the level of the sea.

1031. Still on the road to Bulli? Yes. There is another, 1,270 feet. Then close to the highest point, which is about 1,422 feet above the sea, there is a creek which, I think, runs into George's River, 1,313 feet above the level of the sea. There is also one 1,402 feet, and another, 1,389 feet above the sea level. Then you come to what they call London or Loddon River, which is a branch of the Cataract. I made three measurements of that, but 1,091 feet may be taken to be the level. It rises in a large swamp, 1 mile and 48 chains long, the exact height of which I do not know, but I think it must be 1,170 or 1,200 feet. In ascending from the coast between Bulgo and the Coal Cliff, you come to the first range of the sandstone ridges, at about 782 feet. There is a mass of sandstone here to the north (*indicated on the map*), about 800 feet above the level of the sea. Then you come to a creek about two miles and a third further on, and afterwards to a point 1,098 feet above the sea level. There you will find a broad arrow cut in the stone. It is the point where the road diverges. There is a creek at the head of O'Hare's Creek. In one place it is 1,145 feet, and I crossed it at another where it was 1,192 feet above the sea. O'Donohue's Rock, a point where the bushranger O'Donohue used to live, is about 1,417 feet. I cannot point it out exactly on the map, but it is a point in the bush between the top of the swamp of the Flat Rock and O'Hare's Creek. The top of the swamp is 1,223. The mean of six of these swamps is 1,282 feet. Between these and the London River and another creek there are two creeks, a river, and a swamp. The mean of the ten is 1,256 feet. We may take that as the mean of the swamps and ranges. George's River, a little below the junction with Dahlia Creek, is 272 feet, so that, taking a straight line from the head of Dahlia Creek for eleven miles, you get a fall of 87 feet per mile.

1032. Amongst these swamps, do you know of any spots favourable for the construction of any large dams or artificial lakes? These swamps discharge into deep ravines. It is not very deep at the London River, but it is exceedingly deep lower down.

1033. *Mr. Moriarty.*] That is where the table-land breaks away? The table-land is intersected by these ravines, which discharge the water collected in the swamps.

1034. *President.*] Do you think we could form a lake with a surface of two or three square miles, or several lakes collectively amounting to that? To do that, you must choose a point where the waters meet.

1035. Would you be kind enough to pass on to the Cataract River? One head of the Cataract River is about 1 mile and 72 chains from the head of George's River.

1036. Does the Cataract River rise from a swampy country? Yes, its source is very much the same as the others. Just after crossing the Waniora Hill, you come to a place called the Devil's Pinch. On the west of this is, I believe, the beginning of that branch. The mean height of the swamps and ranges of the country between the head of the Cataract and Sydney is about 1,260 feet (say 1,256, as before). The distance, in a right line, is $30\frac{1}{2}$ miles, which would give a fall of 40 feet in a mile.

1037. What is the level at the junction of the Cataract River with the Nepean? I can give you the level of the junction of the Cataract with the Wollandoola, which rises on the old road from Appin to Wollongong, a little beyond Stringy-bark Forest. The height of that is 1,060 feet close to where the road passes, and at another point 1,128 feet. The junction of the Wollandoola with the Cataract I make 423 feet; by Mr. Shone's railway level it is 419.

1038. But you have not the level at the junction of the Cataract with the Nepean? No, I have not a memorandum of it here; but it must be much lower than the level I have just given, as it probably does not exceed 215 feet.

1039. What is the general nature of the Cataract River—is it a tolerably permanent river,
do

do you know? I have always seen it full of water. It has many falls, from which it derives its name. The Rev.
W. B. Clarke.

1040. Is the water good? It is beautiful water.

1041. Can you give us some information about the general character of the Cordeaux? The Cordeaux River rises a long way further south; its sources are on the range at the back of Mount Kembla, which runs on to Keera. The head there has several branches; there is one branch with several feeders a little to the southward of Kembla; then there is a branch that comes in straight from the range; and there are several others. I can give you all those points. The heights vary from 1,163 feet to 1,247 feet, 1,600 feet, and 1,680 feet. There is a creek called Cordeaux Creek, whose head is 1,400 feet above the sea.

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1042. Is the character of the country the same as that which you have already described? Yes, generally sandstone and swamps. The Cordeaux rises in the same part of the dividing range as American Creek.

1043. Where does American Creek go? It goes down to the coast. The ridge there is about 1,252 feet high. Its elevation increases to the southward and a little to the northward, so that the highest point of all where the creek comes in is about 1,322 feet. To show that this is not a bad level, I may say that Mr. Shone made it 1,321·47.

1044. Do you happen to know the level of the junction of the Cordeaux and Nepean? Yes; 428 feet.

1045. Can you tell us the level of the junction of the Bargo and the Nepean? No; for this simple reason,—I wasted a whole day in trying to get to it, and could not.

1046. Do you think there is much fall between the junction of the Cordeaux and the junction of the Bargo? The level of the Bargo, where it crosses the main road, is about 780 feet. Myrtle Creek, which enters the Nepean less than a mile below the Bargo, is a mile above its junction, about 630 feet above the sea; and the Cordeaux junction is about 428 feet at the Pheasant's Nest; so that the difference is considerable, especially as the Nepean, further on, at the junction of the Cataract, is probably about 215 feet.

1047. *Mr. Woore.*] Do you recollect the crossing of the road from Lupton's down through East Bargo? I know the place; I have been part of the way. But the Bargo River rises on the western side of Lupton's.

1048. *President.*] The junction of the Bargo and the Nepean is one of the places suggested to us as a probable source of supply? I have been close to it. There is a good deal of water. It is a tremendously rocky place, with cliffs.

1049. A deep, narrow gorge, is it? Yes; it is a steep, deep place. I went from Myrtle Creek with a view of going to that very point, but we did not find our way to it. I got out on the top of a stony ridge from which I could see it, but I did not get to it. I do not think you could do anything with a place like that.

1050. What is the nature of the Bargo? The Bargo River comes down through sandstone, but there is a good deal of shale in it; all about Lupton's there is shale, and right across to the railway. The great mass of the Bargo water comes down through sandstone, and I should think it is very pure.

1051. Is it a permanent stream? There are large pools of water, but in places it is very shallow and confined, as in all our rivers.

1052. There are not many swamps in it, I think? There are swamps, but they are on high ground.

1053. *President.*] Have you visited the Couridjah Lagoons? I have seen them, of course, but I have never examined them.

1054. Do you think much country drains into these lagoons? Not very much, I should think. You follow one ridge, and the railway is close upon another. It is a striking place; but the question is, whether the lagoons are at a sufficient height for your purpose. I think I could give you the height of them.

1055. We will now pass on to the Warragamba, which is another suggested source of supply. Do you know the level of the mouth of the Warragamba? I think it is somewhat higher than the water at Penrith, the bed of which latter is under 60 feet, at all events.

1056. Have you gone up the gorge of the Warragamba any distance? Yes, as far as I could go.

1057. How far did you go? Three or four, or perhaps five miles. You find the rocks there have fallen into, and block up the river. You can get out of the boat and walk over the blocks. I know that beyond there are large reaches of water.

1058. What is the character of the valley beyond the head of the navigation? It is one great gorge, which runs out from the Wollondilly, where it is joined by Cox's River, and has in it an open place where there are many acres of good feeding ground. It then passes into a gorge again, and runs in places as straight as you can draw a line.

1059. How far does this rocky gorge extend from the mouth upwards—does it go to Burragorang? If you could get a boat over the rocks, you could probably go to the junction of the Cox.

1060. Can you tell us the level of the junction of the Cox and the Warragamba? I cannot tell you to within a few feet. It is under 250 feet.

1061. What is the height of the junction of Nattai Creek and the Wollondilly, in Burragorang? I should think it is not much under 300 feet, if at all. My observations make it more.

1062. Have you ever estimated the drainage area of the Warragamba? No; but Sir Thomas Mitchell marked the area of the Hawkesbury basin on one of his maps, and it is included in that.

1063. Does the Cox supply a large quantity of water to the Warragamba? It must do so.

1064. Do you know the valley of the Grose? I do not know the whole of it; I know some parts of it.

1065.

The Rev. W. B. Clarke. 1065. Have you ascertained any levels along the Grose? I know a level within a mile and a half of the head of it. It is about 2,840 feet.

3 Dec., 1867. 1066. Could you give a name to that point? No; it is about a mile and a half from the head. Mount Tomah overhangs it. It is not very far from where the railway overlooks what they now call "Petrolia."

1067. Do you know the junction of the Buralow Creek with the Grose? Not as measured. When there I had no instruments. I think, as a general rule, you may take the slopes of that country to be not more than 40 feet in a mile. Its source is about 900 feet above the sea.

1068. If a dam were placed across any of those rivers, such as the Warragamba or the Grose, do you not think it very likely that they would be filled up with the sand, and gravel, and other material brought down by the floods? Of course there would be an accumulation. At the mouth of the Warragamba there is such accumulation of drift. The Nattai and parts of the Wollondilly are blocked up with sand and pebbles. When I was last February on the Warragamba, the drift formed a peninsula. There was a very large accumulation of trunks of trees, and pebbles, with pieces of coal, all heaped up together a little way on this side of the mouth of the river. The Nepean and the Warragamba both bring down their supplies, and if both are flooded at the same time there is a contention between the currents. The beds of the Warragamba and the Wollondilly are filled with boulders.

1069. And as the Wollondilly drains a great amount of cultivated country, would it not in flood time be likely to bring down much fine mud? No doubt it would where it passes through country to produce it; but it passes also through a great deal of hard rock. The drift sand and pebbles, which are 30 feet deep in the Burrarorang Valley, must have been brought down by the floods.

1070. Could you indicate any points, say within forty miles of Sydney, where the country would be favourable to the construction of great dams? I should think that country at the head of the Cataract would be favourable for it, because there are some very deep ravines there.

1071. Would not that be more than forty miles away? In a right line I do not think it would be more than thirty or thirty and a half.

1072. On the whole, where do you think is the most likely spot whence to draw a permanent supply of water to Sydney by gravitation? I think the country I have pointed out—the head of the Cataract and further down to the Wallandoola—the table-land in which rise the Woronora River, the Cataract River, and Dahlia Creek.

1073. *Mr. Woore.*] I should like to ask you the nature of the swamps at the head of George's River and Woronora Creek—Are they similar to the swamps at Botany? Yes, they are similar.

1074. Are they not, then, liable to be dried up in the same way as the Botany Swamps? Yes, but there are all sorts of grasses and mosses growing there.

1075. And they would be liable to be hardened by the tramping of cattle? I should not think there would be many cattle tramping there. The swamps lie generally at the heads of the creeks, where you would find a regular sponge.

1076. *Mr. Adams.*] Are you aware which way the rock dips in the Lachlan Swamp? No; it would be difficult to tell that, because though the beds are generally horizontal, there is sometimes a dip which varies in direction. Mostly the dip is south-west or north-west. At the North Head the dip is north-west; on this side the dip is south-west. There is a very small dip till we get further south.

1077. Have you ever looked at the mouth of the Botany Swamp, where the present engine-house is erected? I saw it some time ago.

1078. Did you observe any natural bar of rocks which would stop the flow of water into the bay? No; the sandstone is very irregular there. The sandhills lie over, and act as a filter and a source of supply.

1079. *Mr. Moriarty.*] With regard to the country of which we have been speaking about—the heads of the Woronora and the Cordeaux—I understand you to say that the rivers and creeks break from the table-land into deep gorges? Yes.

1080. If we look there for a source of supply would it not be best to intercept the water above the gorges, on the table-land? That would be in the swamps.

1081. But sufficiently far off to keep clear of the gorges? You notice these ravines all through the country. The country slopes off, and all at once begins to drop.

1082. But before you get down to where the deep gorges are formed, do you think it would be possible to intercept the drainage, by constructing a series of dams wherever positions are favourable, and then opening canals, and following the natural fall of the country? Though the creeks fall rapidly, the country does not necessarily fall rapidly too.

1083. From your knowledge of the country, do you think that dams could be readily constructed near where the swamps break out? No doubt, if you had material that would resist percolation. But even then, from the nature of the rocks, the water might percolate below. It would be necessary to make a survey of the country.

1084. Do you think generally that it would be safer to intercept the water before it breaks out into the deep gorges, or afterwards? You could not intercept it before it goes there. It is only when it goes down to a certain depth that there is any collection of it, where there is a basin to receive it.

1085. Take, for instance, the London River,—the country is pretty flat about there? It is undulating.

1086. Would it not be better to intercept the water before it finds its way into the deep gorges? If you shut it off at the swamp, the question is whether it would not break out in another direction.

1087. But supposing dams were constructed at the lower end of the swamp, where it begins

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to form a creek? There must be a point below, where you would have to form dams. It is a question whether it would not be desirable to make a survey of all the creeks. The Rev.
W. B. Clarke.

1088. Acre for acre, do you not think that country, on an average, receives more water than almost any other part of New South Wales, considering its elevation and its proximity to the coast? No doubt it must receive an immense quantity of water, because it is like a vertical wall intercepting the clouds from the south-east, east, and north-east. 3 Dec., 1867.

1089. Have you formed any idea of the proper quantity of water per head which a population like this ought to receive? I have not turned my attention to it; but, long before you began your work at Parramatta, the question was worked out. Now that you are looking for water, I should like you to avoid shales. The water on the North Shore lies on the top of sandstone, but there are beds of shale in hollow places. I am living on one of these beds of shale. We have gone down, in making a well, 30 feet through these shales, and have come to water. We had perhaps two or three hundred gallons in two or three days, but it was so bad in its taste and smell that it was utterly useless. It is just the same in Campbelltown and Liverpool—you cannot drink the water.

1090. But might not a river flow through a district containing shale, and not be much contaminated? That depends much upon whether there are salt and iron in it. Unfortunately, the shale on the North Shore is full of sulphide of iron. The water in such cases is covered with ferruginous scum all over the surface. With the microscope you can see the iron lying in it. It is the same with all those shales throughout the whole of the county of Cumberland. It is so at Parramatta and at Toongabbee—much of the water is perfectly salt.

1091. And there is no shale in the district you indicated, about the Cataract and the Woronora? I have not seen any at the spots I have spoken of. There is shale higher up, just as at the tunnel at Gibraltar, and above the Pheasant's Nest. That ends about Appin. Just when you descend King's Fall, you pass off the shales. The shales continue across the whole country, until you come to the escarpment of the Blue Mountains. You find blue shale at the bottom, and yellow shale above, and calcareous grit impregnated with saline matter. You cannot get good water in such a country.

1092. One witness has told us that the Woronora Creek has a saline taste in dry weather—Do you think that is likely? I have no doubt there are patches of shale along the lower part of the Woronora. The Bottle Forest Road runs partly through a series of hardish shale, with ironstone in places on the surface. Wherever you find that, you may depend upon it that there is some of this saline stuff in it; but, as Mr. Moriarty suggested, to a certain point below the heads of the rivers, there would be perfectly pure water.

1093. The water should be cut off before it comes to the shales? Yes. Supposing you had the means of getting water from the Nepean, it must be remembered that in that river the water is not all pure. It is pure in the sandstone part of it; but in some parts of it, as Professor Smith has already proved, there is a great quantity of magnesia. A part of the Warragamba water passes through a series of old rocks, granites, porphyries, and coal measures, and finally, about the junction, a portion of shale. The shales go up, at the back of the sandstone gorge, to Penrith. They extend from the railway station in Sydney, right across the country, with some interruptions.

1094. From the nature of the country drained by the Wollondilly, do you think the water would be of sufficient purity to furnish a supply to Sydney? Of course you must take it with some little exceptions. I think it might be. At any rate, those parts of it that are drained out of this sandstone country would be pure; but we know that, upon the top of the ridge which supplies some of these feeders of Burragorang, you will have shale. The Oaks district has much shale. The Werriberri, which rises there, runs into the Warragamba, where it becomes inaccessible. The top of the ridge is all shale for many miles. As soon as you are over it, you get into these sandstone ravines again. You go abruptly off the sandstone, at the corner of Inglis's fence, and on to the shale which continues to Sydney.

1095. Supposing it were possible to lead the water from the Warragamba to Sydney by means of an open canal, do you think the shale of which the country is formed would have any effect on the water passing through it? Of course it would.

1096. Do you think it would so affect it as to spoil it? Yes. At Castle Hill, just on the other side of Parramatta, you have these same shales (I am speaking now of the blue shales at the bottom) resting on the sandstone. When there has been much evaporation, after a heavy rain, I have seen the ground where the shale is, at Castle Hill, white with salt—it has been so thick that you could scrape it off. I believe it would be precisely the same anywhere else where the shale is exposed to the influence of the sun, under similar circumstances.

1097. *President.*] Are you aware whether there is any quantity of salt on the Cataract River near Nepean Towers? I have seen several places where there is salt, but I do not remember the distinct point spoken of.

1098. Does the salt originate there from shale also? No, I think it forms in the sandstone. You will find salt at the head of the Bundanoon Creek, and in many places there are stalactites and salt. You will find cavities in the sandstone where salt is deposited.

1099. *Mr. Grundy.*] If the water were brought from the Warragamba by an open cutting, what would be the effect on the water? I think it would be deteriorated. It is a known fact now that, in the interior, when they dig wells they come to salt water, and yet often find pure water below it, and they are obliged to have a portion of the soil carried away.

1100. *President.*] Would not the water of a running canal soon wash the soil sufficiently to free it from the salt? But it would always be liable to crumble and disintegrate.

The Rev. 1101. *Mr. Grundy.*] You said that the same effects would probably be produced on the large swamps in the Appin District, that had happened or were being brought about at Botany; but I think you said you were not intimately acquainted with the Botany Swamps, nor aware of the changes which have taken place in them? It is not a matter of which I could speak with any certainty. My impression is, that a large supply of water could be had at Botany from these swamps, if care were taken of them and they were not allowed to be drained or injured. Supposing you had a drought of two or three years' duration, who could tell what would be the amount of water required? It is not merely what people want now. I think you should take it for granted that the population will increase, and should give them at least two or three years' supply.

W. B. Clarke.
3 Dec., 1867.

1102. We are told that the Botany Swamps cover an area of ten square miles—I suppose the swamps to which you refer would be much more? Yes; the top part of that country seems to be a series of swamps. But I think a survey should be instituted, for the purpose of ascertaining precisely what are the facts.

1103. *Mr. Moriarty.*] You think the probability of getting a supply from that place so great that it would justify the expense of a survey? Yes.

1104. *President.*] Could you name a creek that flows entirely through shale, in order that we may examine the water? The Wianamatta Creek—the main branch of South Creek—flows through shale. But in the Wianamatta there are certain thick beds of grit, with a good deal of lime. These beds are at the top of the series. The blue shales we have on the North Shore lie immediately on the sandstone; but the upper beds are yellow and brown.

1105. And which of the two classes would most contaminate water? I should think that which contains the greatest quantity of iron, and the iron nodules are mostly found in the blue shales.

1106. Do you know of any place convenient to St. Leonards where a dam could be constructed to supply that Municipality with water? There are plenty of deep creeks. From the top of the hill there is a fall of 300 feet to the sea level.

1107. St. Leonards is so cut off from Sydney that it would be difficult for it to share in the general supply—Would it not be better if a local supply could be provided? It would all depend upon the rainfall. You could block up any of those deep ravines, and form a large tank.

ADDENDUM.

I would desire to add to my remarks on the levels of different localities, that as they were calculated from isolated barometrical observations (and only occasionally checked by the theodolite), they can only be taken as close approximations, and perhaps requiring correction of a few feet now and then. I would further wish to repeat what I said in my report to the Government (21 October, 1851),—that it would be advisable to pass a legislative enactment to prevent the drainage of swamps at the heads of our rivers, and to preserve them as sources of water supply.

TUESDAY, 11 FEBRUARY, 1868.

Present:—

MR. GRUNDY, | MR. ADAMS,
MR. MORIARTY.

PROFESSOR SMITH, M.D. (PRESIDENT), IN THE CHAIR.

Edwin Barton, Esq., called in and examined:—

Edwin 1108. *President.*] I believe that some years ago you made a survey of the Valley of the Grose for railway purposes? Yes.

Barton, Esq. 1109. Did you traverse the whole length of the valley? Yes.

11 Feb., 1868. 1110. And did you take levels along its course? Yes; the levels were taken both longitudinally and transversely throughout the whole length of the valley.

1111. I understand that your examination of the valley at that time impressed you favourably with it as a possible source of water supply for Sydney? No, not at that time; it was an after-thought. I do now think it a favourable source from which to get a good supply of water by gravitation.

1112. I believe the river runs entirely through Sydney sandstone? Yes.

1113. You did not find any beds of shale in it? In one place the coal measures come in a little—just underneath Mount Hay on the north side, but south of the river.

1114. Did you find any trap rock in any part of it? No; but Mount Tomah, on the north side, is trap.

1115. The valley, I believe, is almost inaccessible from any part of its sides? Yes, it is. In fact, above Mount George and Mount Hay it is surrounded almost by mural precipices.

1116. Of great height? Of great height.

1117. There is no arable land in the valley, I suppose? No; I do not think many people have ever been there.

1118. So that there does not seem to be a possibility of any settlement being formed in that valley? No, there is not the slightest chance of that. A part of Mount Tomah is arable, and a small portion near Shepherd's toll-bar; but it is so small as not to be worth speaking of.

1119. Do those small portions of arable land drain into the Grose? Yes; but I do not suppose that the whole extent of arable land draining into the Grose amounts to ten acres.

1120.

1120. Did you ever form any estimate of the drainage area of the Grose? I can only speak from memory in regard to that matter. I think one portion—that west of Mount George and Mount Hay—would be about eighty square miles. But I made a rough map during the time I was connected with the railway survey, and that would shew approximately (in fact, very nearly) the area of that portion.

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1121. Have you that map with you? Yes. [*Witness here produced the railway map, shewing the Grose and its tributaries; also, the whole of the trial lines of the western railway, as well as a section shewing the Valley of the Grose.*]

1122. This map and this section are the results of your own surveys? Yes.

1123. Do you think the usual current of the river would be sufficient to supply Sydney with water, or would it be necessary to dam the river at different points? It would depend upon the point at which the current would be taken. The velocity, I imagine, will not be the same throughout the whole length of the stream.

1124. But is there enough water in the river? I only judge by the catchment area. I have never gauged the stream, or taken the rainfall; but, judging from the rainfall near Windsor, I should think the supply would be enormous. I do not think there could be any doubt at all about the abundance of the supply.

1125. What sort of a season was it when you were encamped in the valley—dry or moist? It was after the very dry summer of 1857-8.

1126. Could you give a rough estimate of the quantity of water the river was delivering at its mouth at that time? The volume was very large indeed, but I could not give an estimate of the quantity.

1127. Could you compare it with any stream we know—for example, do you know the apparent size of the Botany stream? No. I have not seen the Botany stream except on one or two occasions, and I do not remember what kind of a season it was.

1128. Do you think it would be desirable to form dams at various points of the river? My notion of a scheme for working the Grose properly would be to form one large dam at Mount Hay, or rather at this place [*pointed out by witness on the map*] where the Govett's Leap stream joins the main river. The flat is there sufficiently extensive to hold a year's supply for Sydney. I would not bring the water from that point to Sydney direct through pipes, but let the stream itself bring it down to a lower level, and from that lower point I would have pipes, so that the water could descend to Sydney by its own gravitation.

1129. At this lower point, then, you would have another dam? Yes.

1130. *Mr. Grundy.*] And you would regulate the supply from the upper one? Yes, I would regulate it when necessary from the upper dam; but I think that throughout a great portion of the year this stream to the south, together with these tributaries below Mount George, might be sufficient without calling upon the impounded supply west of Mount Hay, and that I would keep for a storage reservoir.

1131. *President.*] This tributary to the south, which we may call Barton's Creek, seems to be nearly as large as the main stream? Yes, I think it is quite as large; very likely it is larger.

1132. And it joins the main stream about 10 miles from the mouth of the Grose? I think it is about 10 miles from the mouth of the Grose.

1133. You propose, then, a large storage reservoir just below the bifurcation of the river under Mount George? Yes.

1134. And then you would use the bed of the river as an aqueduct down as far as the junction (say) of Barton's Creek, and from there you would bring the water in pipes? Yes.

1135. The lower embankment, I suppose, would be more to give a head for the pipes? I should imagine it would be a masonry dam sufficient to give a head for the pipes.

1136. From that higher point under Mount George does the bed of the river rise rapidly? To the source of the river?

1137. Yes? It rises very rapidly.

1138. So that it would require a high embankment to throw the water back a great distance? For some distance there is a large flat, and I think it will be found that the rapid rise does not commence for a considerable distance from the point to which you refer.

1139. Could you give us an idea how far the water would be thrown back by an embankment (say) 50 feet high? I should think (speaking from memory) that an embankment 50 feet high would retain a year's supply of water for Sydney.

1140. *Mr. Moriarty.*] It would throw it up both creeks? Yes. When I say there would be a sufficient supply for Sydney for a year, I take a population of 200,000, and reckon 30 gallons per day for each person.

1141. *President.*] What would be about the length of such an embankment at that point? I suppose not more than a few chains, but I could not speak with certainty from memory.

1142. At that point are the sides of the valley very precipitous? They are very precipitous; but from the foot of the precipice there is a slope down to the creek. But at the portion where the reservoir would be, the precipitous sides do not approach the creek so nearly.

1143. I suppose it would be necessary to construct the dam of masonry? At this point [*witness indicated the point on the map—the junction of the creek under Mount George*] if good clay could be found for puddling, it might be made an earthwork dam.

1144. And you think that a dam at the point you have indicated would intercept the drainage of about 80 square miles? Yes.

1145. What was your impression of the quality of the water when you were encamped on the river? I have never had it tested, but I should say it is pure as nearly as possible. It is likely it might on analysis contain one degree of hardness.

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1146. What would be about the distance from the junction of Barton's Creek to Sydney? Following the line of railway, it would be about 45 miles.
1147. Do you imagine that there would be any material difficulty in crossing the Nepean with pipes? I should fancy it might be expedient to cross the Nepean by putting the pipes under the bed of the river. At that point there is a fall or bar, and shallow water. I think it is possible that the pipes might be put in this bar.
1148. Do you think it would be less expensive to carry the pipes under than over the river? I think so. If the pipes were put over the river, it would involve the necessity of having a viaduct or framing above the high flood level to carry the pipes.
1149. Do you think it would be necessary to bring the water in pipes from that point to Sydney—would the country not be suitable for an aqueduct? No; I think it would be necessary to bring it in pipes from that point or some point sufficiently high to overcome the resistance in the county of Cumberland. An aqueduct would only be practicable down to the Nepean River.
1150. Supposing the Commission wanted to visit the point to which you have referred, under Mount George, what would be the easiest mode of getting access to it? To go on the railway line as far as Darling's Causeway, and then to follow down my old track, if it exists. I fancy, however, that most of it is washed away by this time. I think it is almost impossible to get up the river now. To visit the lower part, the best way would be to go up from Richmond. Without a track, it would require great physical exertions to do four miles a day.
1151. How many miles is it from the railway line to the bifurcation of the river? I think it is about nine miles.
1152. Is it possible to get to it from Bell's line of road? No; you may get to the summit of these mural precipices, but it is almost impossible to get down. It took me a week to get down.
1153. And is there no possibility of getting from the Blackheath side? Not without going to enormous trouble.
1154. In times of heavy rain I believe the floods are very severe in this river? Yes, they rise to a very considerable height. The exact height to which a very high flood did rise before the survey was made is shewn on a large section which is now in the railway office. At every point where a lateral line was taken (and they were taken frequently—sometimes as often as three in a chain) the flood line is shewn.
1155. Do you remember the highest point to which the flood rose? I should think, speaking from memory, that it rose 30 or 40 feet.
1156. Would not the necessity of providing against these great floods materially increase the expense of dams? I do not think the principal part of the remarks I have just made would be affected by that consideration, because they refer mostly to the sources of the Grose. The water does not come down there in so powerful a current. But down below it is different. I do not think it is expedient, if you can avoid it, to put a dam in the main river. I refer to the lower dam, not as an impounding reservoir, but as a balance reservoir; one that could easily be cleared out if it happened to be filled up.
1157. But would not the same objection lie against the upper dam? I think not, because the current is not so great. If there is room (and a careful examination might shew it), perhaps the flood water might be passed off and only the clear water put into the reservoir. It might be done by means of some contrivance where the velocity would carry the flood water over an opening, and the decreased velocity would admit of the clear water falling in. This is a system very often adopted to get rid of the turbid water and preserve the clear water.
1158. *Mr. Moriarty.*] That would be at the balance reservoir? Yes, if possible; but I apprehend that the river would be too confined to admit of that. Perhaps, however, on examination, a dam might be so constructed as to turn the flood water into a side creek, by means of a short tunnel through a spur. But my opinion, for want of information, is not sufficiently matured just now to enable me to express any positive idea upon that point. The course I have pointed out was adopted in the Manchester water supply. The clear water fell into one channel, while the flood water, by its increased velocity, passed over the opening.
1159. *President.*] From your section, what do you make the altitude of the river above the sea at its bifurcation under Mount George? A little under 1100 feet. Above that there is a flat with very little rise for about a mile and a half.
1160. And from the section, what do you make the altitude of the junction of the Grose and Barton's Creek? About 250 feet.
1161. Are you giving us the height from the Nepean, or from the sea? From the sea level, high water, spring tide.
1162. *Mr. Moriarty.*] With regard to the dam at the junction of Barton's Creek, if the height is not sufficient, I presume there would be no difficulty in putting a dam four or five miles higher up the Grose, bringing the water from there in a pipe to Barton's Creek, and making that the starting point? There would be no difficulty in having a pipe from either creek. It is possible that two dams might be better than one.
1163. And you would take your piping from the dam at Barton's Creek? That might be sufficient; if not, from both. This creek rises much more rapidly than the Grose.
1164. It is the character of all tributaries, is it not, that they rise much more rapidly than the main river? Yes. On the north side, about the same height as on the south is attained in half the distance.
1165. As a general rule, do you think there would be any difficulty in bringing water from such a distance—say 40 miles from Sydney—by pipes following the natural inequalities of the

the soil? I do not think there would be any difficulty, providing the pipes were sufficiently strong to stand the pressure, and that proper precautions were taken to have valves for escape of air. Valves would be required during the time of filling the pipe and for passing off air generated during the flow of water through the pipes.

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1166. It is of course a mere matter of calculation as to the height required to bring the water here in pipes—Have you made any calculations as to the head which would be necessary? No; I have not been able to ascertain what the resistance would be through the county of Cumberland. A decreased height would involve an increase in the size of the pipe.

1167. Do you think it would be safe to attempt an earthen dam at the junction near Govett's Leap, seeing the large quantity of water that must come down there in times of flood? I would not like to speak positively in regard to that. If clay were found of a proper quality to make a puddled trench, and there were the means of passing off the flood water by a tunnel through a spur, it might be safe. It certainly would not be safe if the flood water were passed over the dam.

1168. Have you ever thought over the height to which it would be safe to build a dam of sandstone, having regard to its porosity? No, I have never entered into that question.

1169. You think that, by the upper intercepting dam and the lower dams we should be able to catch all the water draining down that stream in dry weather? Yes; and I think it likely that the water which would be so caught in dry weather would be greater in quantity than would be required to supply Sydney.

1170. You do not think there would be any chance of the water in the upper dam being lost by leakage or evaporation? If the dam were large, the evaporation would be considerable; but I do not know how much, for I had no means of ascertaining. It might be taken, I suppose, at about the same as in Sydney—6 inches per month during summer. The evaporation might not be so much there, because it is very cold and not much exposed to wind.

1171. Do you think there would be much loss by evaporation down the bed of the river? No, I do not think so. There would be some loss by evaporation, but not much, and none from any other source, and this would be more than compensated by addition to the stream.

1172. You think that more water would be supplied from springs and by the drainage of adjoining tributaries than could be taken up by evaporation? Much more. The tributaries from Mount Tomah and those on the north side of the river would supply a very large quantity. I think it would be almost equal to the volume of the river.

1173. *President.*] And this dam would be solely as a stand-by in case of the failure of these tributaries? The upper dam would be a stand-by in case of long-continued drought. At the head of the valley, on site of proposed reservoir, there is some magnificent blue-gum timber, but the valley below that is sterile.

1174. *Mr. Moriarty.*] Have you made any estimate of the probable cost of these works and the piping which would be necessary? No; I have not known the exact height. It would be enormously costly to carry pipes from Mount Hay or the upper dam to Sydney; but for a gravitation scheme it would not be very costly to make dams there (*referring to plan*) and carry the pipes from the creek and river at these points to Sydney.

1175. And there would be no difficulty in laying the pipes from the lower dams? To within about four or five miles of the confluence with the Nepean, I think there would be difficulty in getting the pipes on to the ground and in laying them; but I do not think there would be much difficulty after that, in working up from the lower end and making the track of the pipes the road for transit.

1176. There would be no insuperable difficulties in crossing these various tributaries? I think not. A small girder of wood or other material would be sufficient to cross them and carry the pipes.

1177. Would it be possible to bring water from the lower dam in an open trench to some good starting-point nearer to the level country? So that it would go to Sydney by its own gravitation?

1178. Yes, I mean keeping the track on the same level? I think it might be done on the north side, by a good deal of trouble—to Burnlow Swamp, for instance; but I think it likely that, in any case, communication through pipes would be cheaper.

1179. You would start with pipes, and continue them right through? Yes; I think the cost of getting the material on the ground to make a trench would be more than the cost of the pipes.

1180. You have not given any consideration, have you, to the details of the question? No, not more than just thinking of them. I have not gone into the question, not knowing whether you would carry the water from the mains to the service pipes in case of fire. I know that the cost would be enormous to bring it all the way in pipes from a point sufficiently high above Sydney. But if you have a lower head of water, the diameter of the pipe must be increased to make up for the diminished velocity.

1181. You could not have less than a couple of 30-inch pipes, or something of that sort? Much less than that would do for the head of water at Govett's Leap; and, but for the resistance (static and otherwise) through the county of Cumberland and the intervening ranges, a 2-foot pipe would supply the town with the quantity I mentioned.

1182. That is merely the statical resistance, but the friction is what you have to do with? Yes, the friction of bends vertical and horizontal, and in the pipe.

1183. Do you think that piping from the lower dam you have indicated to Sydney would cost more than half a million of money, or so much? I should think that it would not cost so much. I have not, however, calculated the pressure in, or the diameter of the pipes required.

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1184. Would it be asking too much to request you to think the matter over? I would make a rough calculation, if you would tell me the amount of water you want to supply, and whether you wish it to run constantly into a service reservoir, or into service pipes direct, or to limit its flow to a certain number of hours per day.

1185. It would be constantly running I apprehend? That would involve the necessity of the mains in Sydney being sufficient to stand the pressure. If not, it would be desirable also to have a fire main.

1186. And also proper provision for the cleansing of water-closets and matters of that kind—it would seem desirable to keep the water running all day? I do not think there would be much difficulty in making the calculation, if you once ascertain these heights (different heads of water). The diameter of the pipes could then be easily got at; but it would be too much for me to guess at the cost which would be necessary. To cross the river these little tributaries would incur an expense which I could not state. The cost of bringing the water to Sydney would depend mainly upon the head of water, the quantity required, the time of delivery, and the resistance. If the Government entertain the idea of getting water from the Grose, it would be well at once to reserve the whole land within the watershed.

1187. *Mr. Adams.*] Have you seen the river in times of drought anything like that we have experienced during the last two years? No; the time I saw it in its lowest state was in the summer of 1857-58. That was when I first examined the valley.

1188. Do you think there would be sufficient to supply the daily wants of Sydney from this spot in a dry season—I mean from the spot above the junction of Barton's Creek? I think so; the catchment area is very great including Barton's Creek.

1189. But in a time of actual drought do you think the supply would be sufficient? That would depend entirely upon the size of the impounding reservoir above Mount Hay. I think it possible that a reservoir might be made there that would contain nearly two years' supply of water.

1190. If a 50-foot dam were constructed below Govett's Leap, what do you think would be the width of the water area? I should think that just below Govett's Leap, where the dam would be constructed, it would be perhaps half a mile or three-quarters of a mile wide.

1191. *Mr. Moriarty.*] Are there cross sections? There are cross sections on the south side of this Govett's Leap, but I do not think they extend to the north side.

1192. I should presume that they are pretty uniform, north and south? They are below Mount Hay, but above they are not. The character of the valley above Govett's Leap changes considerably. It becomes much more extensive.

1193. *Mr. Grundy.*] I think you said it was during a dry season that you saw this place? Yes.

1194. And I understand you to be of opinion that at that time there was more than sufficient water for the city? Yes; the supply I then saw nine or ten miles below Mount George was a very large volume of water indeed.

1195. Then, the fact of making a reservoir at the place pointed out as a site for the upper dam would not alter that? It would not when the reservoir was full.

1196. Then, practically, you think that there is a sufficient supply of water without exhausting this dam at all? It is possible that the other tributaries of the river might be found sufficient in ordinary seasons for the daily supply.

1197. And you propose to make an earthen dam? I have not spoken positively in regard to that matter. I think the lower dam, or the lower dams, as the case may be, must be of masonry. The mode in which the upper dam should be constructed would be a matter of investigation.

1198. *President.*] Do you know the course of the Weeny Creek? Yes.

1199. Would that map of yours enable us to find the drainage area? No; it does not extend sufficiently to the north.

1200. Is Bowen's Creek, which I see marked there, a tributary of Weeny Creek? No; it runs direct into the Colo River.

1201. Could you, from what you have seen, form any judgment in regard to the drainage area of the Weeny? I should think its drainage area would be from 15 to 20 square miles—that is Big Weeny. There are two Weenys—Big Weeny and Little Weeny.

1202. Do you take into account a large tributary that comes from the north, and joins the Weeny just above what is called "The Gap"? Above the Tabara Gap, or the Kurrajong Range, I do not think any tributary to the north of the Weeny is very extensive. There is a good deal of flat land to the north, but I do not think there are any long tributaries. There is a large swamp on the north of Big Weeny, called Blue Gum Swamp; it is a flat.

1203. Is that what they call the Mountain Lagoon? Perhaps so. I have no idea what is the height of the valley of Big Weeny Creek at its junction with Little Weeny.

1204. Have you been at that spot where the junction takes place of the Big Weeny and Little Weeny? Yes; I have been from the junction of Big Weeny and Little Weeny to the head of both Big Weeny and Little Weeny Creek.

1205. Is it possible to follow up the bed of Big Weeny Creek from the junction of Little Weeny? The valley of Big Weeny Creek below the Gap is rather wide and extensive.

1206. Does the Colo Road cross near the junction of the two Weenys? No; you have to branch off, I suppose for a distance of perhaps a mile or two miles, to the westward of the Comleroy Road.

1207. That road crosses the creek lower down, does it not? Yes.

1208. The crossing is not very far from the junction, is it? I think it is a mile or so. There is a track from the road down to this point—the junction of the creeks at Town's farm.

1209. What is the nature of the valley where the two Weeny Creeks join? In its geological aspect?

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1210. Its physical aspect rather? It is wide, something like the head of the Grose Valley. It is wide, with precipitous sides.

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1211. Could a dam placed there throw back very much water? Yes; a dam placed at the confluence of the Weenys would throw back a good deal of water. A very extensive dam may be made there.

1212. But you are not aware of the height of this place above the sea? No; I did take aneroid heights of that part, but I have not got them now.

1213. Have you followed up the bed of the Warragamba for any distance? Yes, I have been up the Warragamba for, I suppose, half its distance.

1214. Have you been as far as the junction of the Cox? Coming down the Cox River I have been to its junction with the Wollondilly, where the Warragamba is formed.

1215. Did you happen to take any barometric level at that time? Yes; but I have not that either. I made an exploration through Burragorang, as it is called, down Nattai, and all through the mountains to Hartley; but I have not now my note-book with the heights. The country was so rough that it was abandoned.

1216. We are anxious to get the altitude at the junction of the Cox and the Wollondilly, and the altitude of the Wollondilly in Burragorang? The junction of the Cox and Wollondilly?

1217. Yes? I have not got that.

1218. And the altitude of the Wollondilly in Burragorang? Which part?

1219. Any part? There are no levels; but it would not be difficult to get that. It might be obtained by a day's ride, with a barometer, from some bench mark. Picton would be the nearest point.

1220. What would be your opinion of the Warragamba as a source of water supply? As far as abundance is concerned, I should think it very good. There is an enormous supply there. The drainage area is the largest on the eastern side of the main dividing range.

1221. From all that you know of the two rivers, would you give the preference to the Grose over the Warragamba? For quality of water, and facilities for making an impounding reservoir, I think perhaps the Grose affords greater facilities than the Warragamba.

1222. Do you not think that a masonry dam, thrown across the gorge of the Warragamba, would throw back an immense body of water? At which point of the Warragamba?

1223. Within a very short distance of its junction with the Nepean—perhaps a mile up? So long as the dam stood it might; but almost every flood would have a tendency to fill up the reservoir. The timber and other matter coming down that river in flood-time is so great that it would soon fill up the river to the top of the dam.

1224. From your engineering knowledge, what height would you venture to make a masonry dam to bank up water? I should say 60 feet, except in cases where there are very great advantages indeed.

1225. You would not like to venture more than 60 feet? I do not think so; I should look upon 60 feet as a very high dam.

1226. Taking into account also the tremendous floods in the Warragamba, it would, I apprehend, be very imprudent to make a dam higher than that? The current in the Warragamba is so terrific in flood-time that it is doubtful whether any dam would stand, no matter what height it might be constructed. The whole volume of water coming from Goulburn and the western district accumulates there in one narrow gorge. I have seen that in times of flood, and the force of the current is tremendous. I think there would be extreme difficulty in getting any dam to stand.

1227. So that, although there may be more water in the Warragamba, you think there are not there the same facilities for storing water? I think the best part for storing water from that source would be the junction of the Wollondilly with the Cox, at the point where the Warragamba is formed. That is the only practicable point I know which is likely to give any impounding area for a reservoir.

1228. If a dam were formed there, would there be much difficulty in bringing pipes from it to the open country? There would be considerable difficulty. The whole of the Warragamba is difficult to traverse on foot. The sides are precipitous and rough. There would be considerable difficulty in getting pipes on to the ground even.

1229. But probably not more difficulty than would be experienced in the case of the Grose? In the case of the Grose, to the extent of 10 miles there would be much difficulty; but beyond that, the Grose would be not so difficult—the sides are not so precipitous.

1230. Do you remember what distance the junction of the Cox is from the mouth of the Warragamba, along the river? I should say it is fully 20 miles. It is almost impossible to walk up the Warragamba or down it. I have been down a very considerable distance, and up a very considerable distance, but I never made a thorough journey from either end.

1231. Are you well acquainted with the upper portions of the Nepean River? No, I am not well acquainted with them. I know the Bargo, and I know something of the Cataract and the Cordeaux.

1232. What sort of country is it at the junction of the Cataract with the Nepean? It is a sandstone country.

1233. With the same deep gorges you have already described? Yes; it is of the same character as all the land that surrounds the county of Cumberland. I think that is in the county of Cumberland. It falls into the Nepean direct, and is precipitous.

1234. Are there any facilities for making a great storage reservoir at the junction of the Cataract and the Nepean? I do not think so. The gorge is steep, and I do not think it is sufficiently wide to make a great storage reservoir.

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1235. Probably the beds of the rivers rise too rapidly to allow of the water being thrown very far back? Yes; I fancy they are all of the same character.

1236. Would the same objection apply to the junction of the Bargo with the Nepean? That is rather limited. I know the Bargo River very well down to the Nepean, and I do not think there is any chance there of making anything except a work something like what might be required on the Warragamba.

1237. Have you gone as high as the head of the Cataract River? Yes; I have been on the coast range.

1238. Have you observed any favourable ground there for reservoirs? I think I remember some large swamps at the head of that river.

1239. Do you know the tributaries of the George's River? No; I think the principal tributaries of the George's River are low down from its source. I know the head of the George's River.

1240. What county is the head of George's River in? It is beyond Appin. It is in the neighbourhood of Appin. I know the river there very well.

1241. *Mr. Grundy.*] It rises close to the Cataract? Yes.

1242. *President.*] Have you ever seen among the sources of the George's River any places suitable for great reservoirs? No, I do not think so. From what I know of the character of George's River at its source, I do not think it at all suitable for making large impounding reservoirs.

1243. What would be your opinion of the Couridjah Lagoons as a source of supply? In the first place, I do not think the quality of the water would be sufficiently good; in the second place, if there were any demand upon those lagoons, they would soon cease to be lagoons at all.

1244. In ordinary dry seasons I suppose there is no great flow of water from them? No; I have seen them in dry seasons and also in times of flood. In flood-times even I never saw a great flow of water from them. I often had occasion to cross below the largest lagoon in times of flood, where it falls into Cedar Creek, and I never saw much water flowing. The catchment area is so limited that it is impossible that from that source alone any large volume of water can be collected.

1245. And you do not think that the quality of the water is good? I think the quality very bad. I have had to drink the water there. I think it contains a large quantity of organic matter, and its colour is very bad too. Stonequarry Creek, and all the country about there is aluminous, and the water is perfectly salt. Stonequarry Creek comes from Cedar Creek, and these lagoons, and all the streams running into the Nepean about Razor-back, are brackish. It is impossible to drink the water.

1246. It is very likely that bad water comes down the Picton way? I know the water is so bad at Picton that persons unaccustomed to it are made ill by drinking it.

1247. Do you think that in the lower parts of the Cataract, before its junction with the Nepean, a great impounding reservoir could be formed? No. I think the Cataract and the Bargo, and several other small streams, are all of the same character. I do not think an impounding reservoir can be got from any of these streams, except near the source. This applies to almost all the streams throughout the sandstone country. The sources of the stream are the only places where you can make large reservoirs.

1248. Then, from your knowledge of the country, you do not know of any more suitable locality than the Grose as a source of supply of pure water? I think the water in the Grose is pure. I think there is a very large quantity of it. From my knowledge of the country, I do not think that, by any gravitation scheme water can be got from any point nearer to Sydney than the Grose, with everything that would be requisite for the scheme.

1249. Have you given much attention to the present source of supply—the Botany Swamps? No, I have not. It seems to be a very large source of supply. I saw a letter, written, I think, by a member of this Commission, which stated, I think, that twenty-eight millions of gallons of water were delivered into Sydney per week. In that case, it must be a very large supply. I had thought that, from some tributary in George's River, an auxiliary supply might be thrown into the Botany Swamps, and then be pumped into Sydney. This might be the means of putting off a good deal of anxiety in time of drought. I certainly think the Botany supply is one that ought not to be discarded.

1250. Have you seen the Yan Yean reservoir? I saw the ground before it was made a reservoir.

1251. And have you seen it since? I have not seen it since it was completed.

1252. In going over this country, have you seen any similar conformation of surface to that? No, I do not think so.

1253. A wide, shallow valley, pretty level in its bottom for a great distance? No, I do not think so. The country about the Yan Yean is tolerably level, except on one side, where there are plenty of ranges. I do not know any country similar to that in New South Wales.

1254. Have you gone over much of the drainage area of the Colo? Yes. I have been at the head of the Colo. I have been on the tributaries to the north of Bell's line (the south tributaries of the Colo). I have also been lower down the river, and up it for a considerable distance above the junction of Big Weeny Creek.

1255. The drainage area must be as large as that of the Grose? I should think it drains twice the extent of country. It comes from the Crown Ridge, on the Mudgee Road, and takes in the whole of the country from Piper's Flat, and a great extent of the country between Bell's line of road and the Colo River itself. The drainage area of that part of the country is very extensive indeed.

1256. Then it must deliver a larger quantity of water into the Hawkesbury than the Grose? Yes, a much larger quantity.

1257.

1257. Could it be put in competition with the Grose as a source of supply? I think it very likely that the Colo River would give an enormous supply of very pure water; but the distance from Sydney would be greater than that of the Grose River. And it may be difficult to find, in the Colo River, a place which would afford so great facilities as are afforded in the Grose for a large impounding reservoir.

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1258. Is the country equally impracticable? For a very considerable distance—I suppose for 10 miles above the Bulga Road, as it is called. This Colo or Comleroy Road passes the Colo. For a distance of ten miles, I suppose, you could ride on horseback along by the river.

1259. The elevation, I suppose, is not very considerable? No; I feel convinced that it would be low.

1260. If you followed the river till you attained an elevation of 400 feet, would you get into an impracticable country? It gets almost impracticable. It is of a similar character to the Grose. It is not inhabited, and the distance would be very great.

1261. And there would be a much greater distance to carry the pipes? Yes; but I think that the Colo is a source of supply that is really worthy of some attention.

1262. Do you know how far back we should have to go to get an altitude of 400 feet on the Colo? I think it is very likely we should have to go about 10 miles above the crossing of the Bulga Road. The valley does not rise rapidly; it is very like the Wollondilly, with sandstone cliffs and the same geological formation. The river winds about in sandy apple-tree flats, just in the same way as the Wollondilly. It would not be a difficult matter to ascertain the level. If levels were taken to the junction of the Little Weeny and the Big Weeny, a barometer almost would do it.

1263. *Mr. Moriarty.*] We have hitherto been going mainly on the high-service gravitation scheme—If such a plan were impracticable, except at great cost, do you think it would be feasible to have a combination—could not the greater part of the lower portions of the town be supplied by a low-service gravitation system, and the other parts by a high-service gravitation, trusting to pumping? That would be leaving the Botany Swamps to supply the lower part of the town, and bringing from a distance the water for the high service by gravitation—

1264. No. Supposing great difficulty were found in getting far enough up these rivers or creeks to get an elevation sufficient to give you a high-service gravitation system, do you think any considerable saving might be effected by introducing a sort of composite system—a low-service gravitation and a high-service pump? I do not think it would be advisable to go beyond the Botany Swamps for any pumping scheme. The difference in the distance you would have to go to get the necessary elevation to supply the whole of the town would be so small that, in my opinion, it would be advisable to abolish the pumping system. In the case of the Grose River, I think it is very likely that two miles more would give the necessary elevation to supply the whole by gravitation.

1265. And you would prefer going in at once for the high-service gravitation system? If it were thought advisable, after consideration, even to go to the Nepean River to pump (which I look upon as the nearest supply to be pumped from) I would be inclined to go to some very considerable cost to get an elevation beyond that, and dispense with the annual cost of pumping.

1266. What I refer to more particularly is, a scheme which has been partly put before us to bring water from a place which would not deliver it at a height sufficient for high-service, but which might deliver it into a low-service reservoir at Paddington, or some other part of the suburbs, from which most of the low parts might be supplied by gravitation—The water for the high parts would, of course, have to be pumped? I would prefer, in adopting a mixed scheme of that sort, to have the reservoir at the site of the source.

1267. But in the one case you would have to raise the whole of the water by pumping, while in the other you would only have to raise such a quantity as might be required for the higher parts of the town? Yes, I see; you would have two reservoirs.

1268. *President.*] But, referring again to the Grose River scheme, could you find out how much higher than the junction of Barton's Creek we must go, to reach an elevation of 400 feet above the level of the sea? Four miles. The section shews an elevation of 390 feet.

1269. *Mr. Moriarty.*] Would it be possible to bring the water by an open cutting? No, unless it were made with stone-work and cement. In that case, the cost of getting the material on the ground would be greater than the pipes.

1270. What do you think of the feasibility of making a dam 300 feet high in any of those rivers where there is a large volume of water? I do not think it practicable. Besides, even supposing that the dam stood the pressure, it would be difficult to keep the reservoir from being filled up.

1271. *Mr. Moriarty.*] And even supposing it were possible to construct such a dam so that it would stand, would not the enormous pressure of a head of 300 feet of water be likely to force new passages for itself through the horizontal stratification of the rock? If there were any places sufficiently weak, I have no doubt that a large body of water would find its way out through the stratification. At any rate, before that large quantity of water went into the dam, it would have to be examined and stopped where necessary.

1272. For this purpose it would be necessary to go back several miles? Yes; and the work might not be successful for the first two or three times. These points are not readily discovered.

1273. At all events, it would have to be made so tight that the leakage through these beds would not be so great as the amount of water coming down the river in dry seasons, otherwise the thing fails? If the leakage is greater than the supply, in time, of course, the reservoir would be dry.

1274.

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1274. And in these deep reservoirs, the great body of the water would be practically useless, unless the bottom of the reservoir is above the point of delivery—There would thus always be a large standing pressure which could be of no service? It would be much better to move the dam a little higher up the river, so as to bring the bottom of the dam on a level with the top of the useless water. It will be found a difficult thing, and not at all advisable, to make a large dam in a main river subject to the high floods which in this country sometimes prevail, unless there is some way of getting the flood-water away from the reservoir without passing it over the dam.

SATURDAY, 15 FEBRUARY, 1868.

Present:—

MR. MORIARTY, | MR. ADAMS,
MR. WOORE, | MR. GRUNDY.

PROFESSOR SMITH, M.D. (PRESIDENT), IN THE CHAIR.

Edward Flood, Esq., called in and examined:—

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1275. *President.*] I understand that for a considerable number of years you have taken a large interest in the Water Supply of the city of Sydney? I have taken some interest in the matter. Several years ago I paid considerable attention to it.

1276. You have had opportunities for a number of years, I think, of observing the capabilities of the Botany Swamps? Yes, I have. I was born in Sydney, and have lived here all my life.

1277. Will you tell us the general result of your experience in regard to these swamps—Do you think they are now to be trusted for a permanent supply of water to Sydney? I think that a very small amount of artificial means has ever been attempted in reference to these swamps. There has been, certainly, a little done of late years, at and near the engine-house at Botany, but it is only a little. Anyone that has examined or inquired into the various strata of the basin which forms the Water Reserve, must know that it is composed entirely, or nearly so, of drift sand.

1278. Do you think that the running stream itself is sufficient to afford a constant supply, or must means be taken to impound the flood water, in order that the supply may be equal to the requirements of Sydney? I do not think the present stream would be sufficient, unless artificial means were adopted for the purpose of impounding the water, or causing it to concentrate itself at some point,—that is, taking the whole length of one side of what I call the basin of Botany Bay. This basin has four sides. The Cook's River Road is one, the Old South Head Road is the second, the dividing range at the coast is the third, and Botany Bay is the fourth.*

1279. But that would include a good deal more than the drainage area of the Botany stream, would it not? It would. I think the whole of the water falling within these lines will find its way into Botany Bay. The water running from the east of Cook's River Road finds its way into Shea's Creek. A great quantity of the water falling south of the range which divides the waters that fall on a portion of Sydney, will also find its way into Shea's Creek.

1280. Is not Shea's Creek hopelessly contaminated by various manufacturing operations? There is no doubt that it is to some extent contaminated, but that wholly arises from the apathy of the authorities. As a proof of this, I would instance the late sale that took place on the part of the Crown, under Mr. Cowper's Government, of land on the watershed near the Randwick Racecourse. When that land was advertised, I wrote to Mr. Robertson, who was then Minister for Lands. Unfortunately, I was late, for I only saw the advertisement on the morning of the sale. In consequence of my letter, however, he withdrew some of the allotments. In my opinion, none ought to have been sold. All those establishments which have the effect of deteriorating the quality of the water supply ought to be immediately abolished, at any cost.†

1281. But on the drainage area of Shea's Creek, are there not many buildings for manufacturing purposes and dwelling-houses? Yes; there are a good many east of the Cook's River Road, and there is certainly a large population at Redfern.

1282. It would be a very expensive thing now, to resume all those lands within the drainage area? I do not think that would be necessary. Under a proper sanitary system, I think all the sewage might be collected and carried into Botany Bay ‡

1283. Then do you think that, to complete the water supply, it would be necessary to add to it the drainage of Shea's Creek? I think so, and also of Cook's River. That was my opinion many years ago. 1284.

* NOTE (on revision) :—Since I made this statement I have looked at the watershed which drains into Shea's Creek; and, from the number of manufactories carrying on offensive trades, and the large number of inhabitants located upon the east side of Cook's River Road, and nearly the whole of the inhabitants of Redfern and Waterloo, as well as a considerable number in Sydney, from Redfern to near my house in Botany-street, I am now compelled to confess that the whole of the above area is lost to the city, and we cannot look there for the purpose of increasing our limited water supply.

† NOTE (on revision) :—The correction in my previous answer applies to this.

‡ NOTE (on revision) :—For the reasons already given, I must abandon the idea of obtaining water from either Shea's Creek or Cook's River.

1284. You think the Botany stream is not sufficient itself to supply Sydney? I do not think it would be sufficient, without using considerable artificial means to collect the whole of the water falling within the basin, as I have described it.

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1285. We have understood that several of the tributaries of Cook's River are brackish? Yes, Cook's River was originally a salt water stream. The tide went up nearly as far as the Punchbowl Road. The whole of the water was salt, and salt water fish used to pass up to within a mile of the Punchbowl Road. This river might be made use of for some of the outlying suburbs.*

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1286. If any of the tributaries be brackish, would not that be fatal to adopting Cook's River as a part of the supply? No doubt it would, unless you could reclaim these tributaries by wholly excluding the salt water. The only cause of the water of the Cook's River being now brackish is, I think, the leakage of the dam, which is a very rude construction.

1287. If the dam were made so as entirely to exclude the tide, do you think that by and by the water would be quite fresh? I have no doubt of it. I have a paddock on the upper part of Cook's River, and the water is fresh there now.

1288. We have it in evidence that some of the tributaries are brackish, and that they do not derive their saline properties from the sea water? I am not competent to give an opinion upon that point, but I am at a loss to know how those who gave the evidence arrived at the conclusion. There are no indications of salt, and no saline plants about.

1289. *Mr. Adams.*] But if there is any blue shale about there, that might render the water brackish? In all parts of Sydney we have blue shale, more or less. It will no doubt be a difficult task to exclude the salt water from Cook's River, if my theory be correct, and the dam is made on a bottom of sand and shells. Of course percolation will go on through that, unless you can get some retentive puddle fixed below. That is a very minor objection.

1290. *President.*] You have a decided opinion that the water of Shea's Creek and the water of Cook's River ought to be preserved, and added to the present supply? Yes.

1291. And you think that whatever expense may be necessary to buy up factories and other buildings must simply be faced? That is my opinion. I think that it would be much the cheaper way, in the meantime, of getting an adequate supply for a very large population.

1292. But this difficulty of forming retentive dams is a very serious one—Have you examined the dams which are at present being erected on the line of the Botany stream? I have not.

1293. But you have indicated the difficulty of constructing dams on a porous subsoil. To preserve these waters which you have named, it would be necessary to build dams, and it does not appear that there is any watertight basis to work upon? I would suggest—as I suggested many years ago—that you begin at Bunnerong or the Cook's River Road. You should sink as low as possible below low water mark. If I am correct in thinking that the formation is of sand, I do not believe there would be much difficulty in taking out the sand, so that a retentive soil could be put in, which would keep back the water below low water mark. We all know that sea water is much stronger than fresh water; that of itself will be sufficient to keep back the water to the level of high water mark. Supposing that percolation still goes on below the retentive soil which I suggest should be put in, I would insert a perforated drain pipe of sufficient size, the whole length, on a dead level or with a slight incline, so that it should convey the water to a given point.

1294. What would be the object of the perforated pipe? For the water to percolate into the pipe.

1295. And it would act as a drain? It would make a drain from one end to the other.

1296. But unless you could make a really retentive dam, it does not seem possible to store a large amount of water—If there were any considerable pressure, it would soak out? If you were to sink a hole on the beach at high water mark, at any part along the line I have indicated, I guarantee that you would get water at 2 feet—shewing that a large quantity of water is kept back by the sea, without any artificial means.

1297. Still, it seems necessary to have great storage reservoirs, and if the level of the fresh water be raised considerably above the salt water, and the dams be porous, the fresh water must leak out? I have stated, that unless you can get a puddle down sufficiently low, the dam will be of little use.

1298. What then becomes of the storage of fresh water? The whole formation, being like a sponge, must contain a considerable quantity of fresh water, and its operation of draining off is very slow indeed—something like the passing of water through a sponge or a drip-stone.

1299. Then you do not think it necessary to have great storage reservoirs—You think the ground, like a sponge, will contain a quantity sufficient? No; it would be better to have reservoirs, if you can get them. I would suggest one great reservoir. I proposed a scheme to the late Minister for Lands, Mr. Robertson. It consisted of constructing a dam, beginning at the highest land north of the toll-gate on the Randwick Road. The line would be about where the toll-house now stands; then it would continue along the side of the large sand-hill or range on the west of the Randwick Road, throwing part of the hill down for the purpose of forming the road; then a line about south, until you come to the bridge on the same road, through which the water passes and goes down the stream west of the Racecourse. From the bridge the road would form a sharp curve, and go direct to the public-house on the Randwick Road, opposite the Racecourse.

1300. To what height would you consider it safe to raise such an embankment? Without any particular data, and from merely looking at the place, I should think the extreme height

* NOTE (on revision):—I do not think Cook's River could be connected with the Waterworks at Botany, unless Shea's Creek could be made use of.

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height above the level of the road would be something like 16 to 20 feet; and I would propose that the road should be fenced on both sides of the embankment sufficiently wide for a road 60 feet wide between the fence.

1301. And then you would dredge out the contents of the swamp inside, so as to form a lake there? Yes. That might be a work of years. The reservoir or lake could be enlarged as the exigencies of the times required. In seasons of drought you could go on with your operations; and for that purpose I should recommend a dredging machine, with silt punts, to which should be attached flanged wheels, so that they could be taken out of the water upon rails fixed so that the silt could be taken to such a position as it would be out of the way of the water. In connection with this upper dam there ought to be a large reservoir erected at the highest part at Waverley, from which all, or nearly all, the suburban municipalities might be supplied with water. The engine required to lift the water could be so placed that it could be also used to land the silt punts upon the rails. Should this work ever be carried into effect, some alteration would be required to the late Mr. Busby's tunnel, as the pressure of water would be so great that the tunnel would burst at Hyde Park, and serious damage might result therefrom.

1302. Do you know the result of the borings which were made in that locality a number of years ago? My recollection is faint. I have not seen the evidence for a number of years. I think they bored 60 feet and did not touch the rock.

1303. Keeping that fact in view, how would you construct a dam so as to raise the water 16 feet? At times, when we have heavy rainfalls, the water would rise there considerably, although at all times percolation must go on. I would recommend a puddle core to be used, 3 or 4 feet in thickness, and sunk as much below the present surface as possible. Percolation will, of course, still go on below the retentive soil. In times such as I have often witnessed, when we have great rainfalls, this place might get full in spite of the percolation, and then it would take years to run off. It is the same in the case of the small lagoons. There is a small lagoon near the toll-house; when that gets full, it takes a very considerable time for the water to run off. I have known some of these lagoons to be nearly full for years. By the same rule, we all know that a straw will raise water in a stream. Percolation may be going on in the upper work, but the leakage would all pass into the lower reservoirs.

1304. Still you see we must have provision made against a long-continued drought. This place has been subjected to droughts of more than a year's duration, as in the case of the great drought of 1838-9, and for a permanent supply we ought to have stored water sufficient to last for a year. Do you think a dam like that you have described would contain such a store? I think it would be a great auxiliary; that and the lower works would, I think, contain water enough for several years.

1305. Have you made any estimate of the quantity of water which ought to be supplied per head of the population? No, I have not.

1306. Sydney now requires a very large amount of water, and the present supply is admittedly insufficient? It appears to be insufficient, because there is no means—at least, I have not been able to discover any means—used for the purpose of increasing the quantity by artificial works.

1307. Until the present dams were made at Botany, and they are not in full operation yet? I think the whole thing is insignificant, from what I have heard of those dams. Many people here think they can get a supply by cutting open the sponge, and letting the water run away at full speed; but this is fatal to its permanence. They have nearly destroyed the swamp, by cutting away the sponge.

1308. Your scheme would involve the resumption of a good deal of land that has been sold, would it not?* Not necessarily; it would involve certainly the removal of all wool-washing establishments.

1309. But you must buy them up? I do not care how you get them. Of course, the owners of those properties must be compensated in some way. If the public require a man's dwelling, they must pay for it. When the public exigencies require a house, or works of any kind, they should be resumed, and the parties paid the full value of their property.

1310. We have it, I think, in evidence, that the rental of that portion of Sir Daniel Cooper's estate on the drainage area of Shea's Creek is not less than £16,000 a year—all that would have to be resumed? I do not think so. That must include the whole of the houses erected between the Cook's River Road and Shea's Creek. With a proper system of drainage, I think the sewage from most of those houses might be conveyed into the waters of Botany direct.†

1311. But even if the property were not resumed, a new and expensive system of sewerage would have to be introduced, to preserve the purity of the water—and the factories must be stopped and compensation given. Would it not be better, instead of incurring this large expense, to improve the present supply (which after all would have to be pumped up to Sydney by steam power), to go to a greater distance to procure a supply by gravitation? I do not know that it would be better. I think that in the first place you ought to tax the present water reserve to its fullest extent. I am not prepared to say that you could get from it sufficient water to meet the requirements of any amount of population. I think that, in addition, you ought to be making preparations to bring the water from some other source. In point of quality, I believe that the water collected at Botany is superior to any other water on this side of the mountain ranges.

1312.

* NOTE (on revision):—No; there is only a small portion of land, the drainage of which falls within the upper dam. The drainage of the Military Barracks might be diverted, at a small cost, into the sea or harbour, and this drain could be used by the Paddington Municipality.

† NOTE (on revision):—This, as I have already stated, I consider lost as a water supply.

1312. You would not contemplate your scheme as one to serve distant posterity, but you would regard it as one to serve for a time, until a larger supply could be got elsewhere? Yes; I think you should contemplate going elsewhere to get a larger supply. My opinion is that, in times of great drought, the water you would bring from the Nepean would be very impure.

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1313. Do you know the Warragamba River? No, I cannot say that I know much about it. I know little of any of those rivers, having only crossed them.

1314. *Mr. Moriarty.*] Do you not think that, as a general rule, to trust to machinery for a supply of water to a large population in a hot climate is objectionable, and a thing to be avoided, if possible? It would be better if it could be avoided.

1315. If a boiler were to burst, it might lay the whole thing in ruins? Yes, it might.

1316. And the entire population of the town might some morning find themselves without a drop of water? No doubt. There is always that difficulty in any kind of public works. If you have not a second engine and a second set of machinery, and anything should go wrong, of course the operations would be stopped. This would be to some extent obviated by the erection of works at the upper dam, alluded to in a preceding page.

1317. But suppose you had two sets of engines (there are three at Botany), one of the boilers blowing up might bring the whole thing to the ground? Yes.

1318. So that there is considerable risk, you think, in trusting to any pumping arrangements for supplying a large and increasing population with water? No doubt you must always labour under that difficulty. During the time of the Russian war, I often thought that it would be better if the machinery were nearer to Sydney. I used to think it would be a very serious thing if the Russians took charge of our waterworks. The expense of removal would no doubt be great; but you could get a better lift in Sydney than at Botany, and there would be a large saving in the cost of fuel, owing to the much shorter distance it would be necessary to convey it.

1319. Looking also to the probable future requirements of Sydney, do you not think it is necessary that we should make provision here also for a very large extension of the great sea-port of the Colony? I think you ought to make a suitable provision for our probable future requirements.

1320. For the extension of the town itself, I mean? I should hope it will not extend in that direction, at all events.

1321. Do you think it can extend sufficiently in any other direction? There is nothing to prevent it extending in every other direction, because generally the country is of a sterile nature, and fit for little else than building sites.

1322. But if the whole of the area were converted into a town, do you not think it would seriously interfere with the purity of the water? There is no doubt it would. If you built more houses upon the present water reserve, you do away with the object for which the reserve was intended. In fact, I believe the present Corporation, who are our sanitary protectors, contemplate now selling a portion of the water reserve, which I think is a great mistake. It appears the Mayor and Aldermen of the city have already sold about £4,000 worth, and are now seeking further power from the Legislature, by a short Bill, to dispose of more land which, I believe, drains into the water reserve, which was referred to a Select Committee on the 16th March instant, and passed through all its stages, and was reported upon on the 17th instant, or next day. The only gentlemen examined were the Mayor, the City Engineer, and the City Treasurer.

1323. Have you been lately at that place which you designate as "the old bridge," near the Racecourse? Yes, I pass there very frequently.

1324. Have you observed a lot of nightsoil and other stuff thrown on the sand? Yes—it is a common receptacle for nightsoil. They used to throw all the nightsoil a little on the Sydney side of where I propose to commence the dam.

1325. Do you know where the drainage of that land ultimately finds its way? A great quantity of it must go into the present water reserve. It passes down that stream to which I have directed your attention, west of the sandhill, which sandhill divides the main stream and this small stream, till it passes south of the sandhill, when it joins the main stream.

1326. And the little stream to the westward takes the drainage of that ground to which you have alluded? Yes, nearly the whole of it. The stream crosses the road a little below the toll-gate, and meanders down until it comes to the bridge. It then passes under the bridge and down the stream, and joins the main stream near the site of the Paper Mills.

1327. And the whole of the water is contaminated from the sewage and nightsoil placed on that area? More or less. All this has been done by our civic authorities.

1328. We are told that nearly all the land from the Racecourse down to the Botany Engine-house has been alienated and is now private property, which is very likely in a short time to be brought into the market for building purposes? If that be the case, that is an additional reason for constructing the large dam above the Racecourse. Sir Daniel Cooper's estate there, I think, is large; but I have an impression (it is merely an opinion formed without sufficient data) that in the original grant some reservations were made in regard to water.

1329. But if the land is really sold, do you think any amount of reservation would be practically available for preserving the purity of the water? No; I do not think you could prevent the water from becoming contaminated, if you allowed a large population to settle down on the reserve. It is impossible. But if land is granted for a special purpose, I question whether you can convert it to any other purpose; and that land, I think, was granted to several parties

Edward Flood, Esq. 1330. Do you think there is anything in the deed of grant to prevent their selling the land for building allotments, or for similar purposes? There may be nothing in the grant to prevent them selling the land as building allotments; but I think, if it was granted for a special purpose, and the water reserved for the use of the public, the law should step in and prevent the erection of any building or manufacture which would have the effect of injuring the water.

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1331. We know that on a considerable part of the drainage of the Lachlan Reserve there are, at this moment, houses built, the drainage of which finds its way into the reserve. Do you think there is anything to prevent the same thing occurring to a greater extent on the lower portion of the drainage, as the population extends in that direction? I do not, except by legislative enactment; and we ought not to hope for anything like that when we see the Government themselves, on the one hand, selling the land upon the watershed; and, upon the other, the civic Corporation are now, I believe, contemplating selling a portion which drains into the water we are now using.

1332. Well, recognizing both these as undoubted facts, and seeing that they probably arise from the natural conditions required for the extension of the town, do you not think it would be better, perhaps, at once to look the difficulty in the face, and seek for a gravitation system elsewhere? I do not at all object to your seeking a gravitation system elsewhere, but I would certainly recommend that additional means should be used to increase the supply from the present source, and to prevent further deterioration of the present water reserve. I think all the authorities, both Government and Civic, should be invoked for that purpose. As to the cost of the upper dam, supposing my views should be carried out, I think the work might well be performed by our convicts who are suffering for the lighter offences. Perhaps I shall be told that it would be bringing convict into competition with free labour; but these are our own convicts, and, instead of living in a state of luxury in Darlinghurst Gaol, they ought to be made to work.

1333. It was suggested to us by a former witness, that a treadmill might be erected at the Lachlan Swamp, and that the prisoners might be made to pump the water up to the Paddington reservoir—What do you think of that? I think that we have got past the age of treadmills, and can employ convicts more beneficially.

1334. You would not object to the thing as far as the prisoners are concerned, but you think they could be more usefully employed? Yes; if fellows won't work I should not object to placing them on the treadmill, because they would be obliged to work there.

1335. *Mr. Woore.*] If convicts are assembled at these outside places, it is a question whether the advantages of their labour would not be more than counterbalanced by the great expense of keeping them? But you must keep them, even in gaol; and I think the cost of escorting them to and from the works would be trifling.

1336. It seems to me that the cost would be entirely additional, because the gaol would have to be kept up as well? Of course it would; but I consider that we ought to try and inspire hope in our convicts. This might be done by allowing the privilege of working (for I consider it a privilege) to those who behaved themselves properly.

1337. Do you think you could get sufficient work out of convicts to pay for keeping them? That would depend upon circumstances—whether you have to erect extensive works. But that will not apply to my recommendation;—you have the gaol and the men at a reasonable distance from the work. I cannot conclude my remarks without again calling your attention to the fact of the Mayor and Aldermen selling a portion of the Water Reserve, which I consider a most insane act, and feel sure if the citizens were aware, they would at once convene a great public meeting to protest against the alienation of any portion of the land in question.

WEDNESDAY, 25 MARCH, 1868.

Present:—

PROFESSOR SMITH,
MR. MORIARTY,

MR. WOORE,
MR. ADAMS,

MR. GRUNDY.

PROFESSOR SMITH, M.D. (PRESIDENT), IN THE CHAIR.

Edward Bell, Esq., C.E., called in and further examined:—

E. Bell, Esq., C.E. 1338. *President.*] We should like to know the opinion you have now formed of the dams at Botany, after the experience you have gained during the late heavy rains and floods? Do you mean of the three upper dams or of the three lower dams, or of the whole of them?

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1339. Of the whole of them. We should like to have your general opinion of that system of dams? I think very little improvement could be made upon that system of dams for that swamp. I would of course prefer to have a clay bank in them if I could get it, but it is so difficult to get clay in the neighbourhood, and so expensive. The bog forms such an impervious dam, that I am almost as well satisfied with a bog bank, properly put in, as I would be with a clay one. It may be a matter of opinion, but I think it would be as well if each of those dams had another weir, with a self-acting sluice.

1340. But the principle of construction you think is sound? Yes.

1341.

1341. Under the circumstances? Yes; it may be desirable perhaps to make a few alterations in detail, but the principle is sound. E. Bell, Esq.,
C.E.

1342. The fact that three of them have been partially destroyed by these floods has not shaken your confidence in the principle of construction? No; the principle of their construction is correct. The partial destruction of the three lower dams is attributable to the stupidity or negligence, if nothing worse, of the man who was in charge of them. These dams were being constructed across the swamps, of timber, bog, and earthwork, between high natural banks of sand which skirt the margin of the swamps on both sides; they are, in fact, earthen embankments; and no earthworks, whether natural or artificial, will bear the action of a stream of water passing over them without certain destruction. The dams have been planted with couch-grass, and when this has grown so as to cover the embankments entirely, they will endure the action of water passing over them for some hours. The dams are about 14 feet in height above the level of the swamps, and were intended to sustain in the ponds above them 8 feet head of water. In each dam there is a sluice placed in the natural watercourse, the object of which is to regulate the flow of the stream towards Botany. There is also a weir to each dam, placed at an elevation of 8 feet above the level of the swamp, to admit of an overflow in the event of the stream being greater than the sluices will discharge, and thus prevent the water from rising in the ponds so high as to run over the earthwork of the dams. The general orders given to the man in charge, when the use of the sluices was explained to him, were, to allow no water to pass over the weirs whilst it could be passed off by the sluices, and his business was, when he saw the water rising in the ponds, to leave open the sluices, and allow their full and free operation. Instead of this, he shut down the sluices; and although strongly urged to the contrary, pertinaciously kept them closed, and allowed the water to pass over the top of the natural soil at the end of the artificial embankment of No. 3 dam, to its imminent peril and destruction. The dams Nos. 4, 5, and 6 were very little damaged by the flood; their sluices being kept shut, subjected them to far greater strain than they were ever intended to bear, yet they withstood it admirably; but had their sluices not been opened when they were, much damage must have occurred to the natural soil at the ends, which is lower than the dams themselves, by the action of water passing over and carrying away the natural sand formation. The ends of Nos. 1 and 3 were carried away in this manner, but the artificial embankments remain undisturbed and very slightly injured, although they were unfinished, and the pressure of water against them was 12 feet instead of 8 feet. No. 2 dam was in a very unfinished state. The timber-work was very badly done, and like that in Nos. 1 and 3, not at all according to contract. The filling or earthwork of No. 2 was not half done. If these dams were commenced in June and finished in January, as Nos. 4, 5, and 6 were, before the flood season commences, they could be made perfect; but they cannot possibly withstand the storm waters in an unfinished state, or during the time of their construction. The damage which the dams sustained was entirely attributable to the sluices being kept shut; and in order to prevent a recurrence at any future period, I recommended the immediate insertion of a self-acting sluice in each dam, in addition to the existing sluice, which is under the control of, and dependent upon, the man in charge. A self-acting sluice would, when the water rose to a certain height, open itself and allow storm waters to escape, without the aid of any one.

1343. And what happened then, in your opinion, did not prove any inherent weakness in the dams? No. The timber-work of the three lower dams (Nos. 1, 2, and 3), I should remark, was very badly executed; I was too ill at the time to devote any personal attention to them, and the work was very badly done; in fact it was condemned, and as far as practicable rectified by the Corporation after the fact was discovered. The work of the three upper dams (Nos. 4, 5, and 6) was very superior; they were, in fact, made very nearly according to contract. The wooden piles in those three were driven into the hard ground, but not so in Nos. 1, 2, and 3; part of No. 4 was slightly neglected, but the rest of it is very fairly done. If the workmanship of the whole of the dams had been done in like manner to Nos. 5 and 6, and the sluices had been attended to, we should have had no trouble with them.

1344. Does the Municipal Council intend to rebuild these three dams? Not at present. There was a resolution passed that they should not be touched until some inquiry had been made.

1345. And have they instituted any formal inquiry into the construction of those dams? They have not yet.

1346. And they will delay restoring those dams until such a formal inquiry has taken place? I do not know whether they will or not.

1347. I think that, in your former evidence, you stated that on the site of No. 4 dam you had proposed a much more extensive construction? Yes, that is on the site of what you may term No. 4 reservoir.

1348. After the additional experience you have gained in regard to those dams, do you still think that a very large reservoir could be formed there? Yes.

1349. With an embankment of a much greater height? The reservoir could be executed to a much greater depth. The depth of the bog is 18 feet. It might very well be excavated all over to a depth of 18 feet, and then I presume that no flood waters could ever affect that in any way. In addition to having the bank increased in height, you would have a larger dam.

1350. Has the general soakage through the dams been greater than you expected? No; rather less—in all of them less.

1351. And you would not hesitate to build a higher embankment, on the same principle, to retain a greater depth of water? No, I would not hesitate at all. I know now exactly what that bog will do, and I know exactly what weight of sand is necessary to keep it down.

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E. Bell, Esq., down. That was not known before, and we had no records from which to obtain such
C.E. information. It was merely a matter of opinion or judgment. Now I know perfectly well
what can be done with the bog, and what weight of sand is necessary to make an impervious
bank, because I conceive that it is only a question of weight after all.

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1352. Is there any obstacle in the way of greatly increasing the size of the engine-pond?
None whatever.

1353. Would it not be advisable to make that a much larger storage reservoir than it is?
Yes. I think that if any of them were extended in size so as to contain more water, it would
be an improvement.

1354. Would it not be easier to make a large storage reservoir of the engine-pond than
any of the others, in consequence of the deposit of clay upon the rock there? On that side
it would; but on the side next to the village of Botany it would not be very easy—it would
be an expensive work. On the sea-shore it would be very easy. In fact, the present
engine-pond might be carried out on the shore to the extent of 200 acres further than it is
now. That is a very eligible site for making a dam very cheaply. But to carry out a
work for a deep reservoir on the site of the present one, and within the reservoir fence,
would be rather an expensive work, so close as it is to Botany.

1355. But you think it would be more easy to extend it seaward? Yes.

1356. There is plenty of good clay there for puddling, is there not? There is plenty of
clay.

1357. And the rock is not far from the surface? The rock is near to the surface. It is not
fit for building, but it is good for rubble. The clay is excellent. There is stone very handy.
I believe it would be an immense improvement to Cook's River if some such work as that
were carried out, so as to narrow the mouth of the stream there and keep the channel
deeper than it is now.

1358. But is there any value in Cook's River as a means of transit? I think there would
be, if the depth of water were greater than it is now. The coal-ships now that supply the
engine-house with coals draw 6 feet. Vessels have to be made almost specially for the
trade.

1359. I think you proposed a dam not far below the tunnel, on the site proposed long ago
for a dam? I do not know whether that is a site proposed long ago, but it was near the
road. There was a dam I know proposed higher up.

1360. Do you know where there are a few piles driven? Yes.

1361. Is that the site of the dam? No; that which I proposed is near the Randwick
Road, where the two hills approach each other more closely than in any other part. It is
within a hundred yards of the Randwick Road.

1362. Would it not be a good thing to endeavour to construct a very large reservoir in
that position, and then pump the water directly up from that to the Paddington reservoir,
instead of allowing that body of water to go down to Botany? For the supply of the higher
levels it would.

1363. Would it not be much less expensive to pump it up there, than to allow it to go to
Botany and pump it up from there? No, I think not. The cost of coal is much cheaper
at Botany than at Randwick; we are paying less than half the price for coal to work the
engine on the Randwick Road. We paid 36s. and 38s. for coal on the Randwick Road,
but we never paid more than 15s. at Botany for a much better steam coal.

1364. So that the advantage in respect to height would be counterbalanced by the increased
expense of coal? Yes, unless we could get coal much cheaper than we have hitherto been
able to get it. That question was studied when I first took the works in hand, and it was
proved beyond a doubt that, at the price we were then paying for coal, it would be cheaper
to pump the water from Botany than to place the three engines at different intervals in
the stream, or to place one or two of them near the Randwick Road.

1365. Can you tell us how much water is pumped up to the Crown-street reservoir by the
expenditure of a ton of coal? I could, but I cannot tell you from memory.

1366. Can you tell us what is the expense of pumping (say) a million gallons? I have
taken the entire cost of the pumping establishment at Botany last year, inclusive of repairs
of machinery and renewals of pumps, at £4,700; and as 956 millions of gallons were sent
in during the same period of twelve months, the average cost per million gallons was, as
nearly as possible, £5. If we have reservoirs to contain as much water as the three engines
would pump in, the average cost would be decreased considerably.

1367. I should like to know what is the expense of pumping a given quantity up to
the high level reservoir? There is not a very great deal of difference, but in the course
of the year it would be felt. We work with the same pressure of steam to the high level
as to the low; but we throw one more grade on the lifting side of the piston—that is, the
side of the piston which lifts the bucket of the pump. Instead of cutting off the steam at
one-fourth, we cut it off at one-half. The consumption of coal consumed is, of course
greater, but it is difficult to arrive at the exact cost, because the high level reservoir being
small, the engines require to work to the high level only a few hours consecutively.

1368. Is the present main from Botany quite strong enough to send the water to a much
higher level—say up to Waverley? No, I think I would not trust it to work to a higher
elevation than I do now. The head of the present main is on the sand-hill between
Botany-street and the Barracks, and the water finds its way by gravitation from the sand-
hill to the high level reservoir at Paddington. Of course the column of water is the same
against the engine; but the water has not to travel so far in the main from the engine as
it would do if that main were extended to Paddington.

1369. Then, if you were to construct a reservoir for Waverley and the highest parts of
Paddington, how would you fill it? I would pump from one of the other reservoirs, or
from

from the Lachlan Swamp, but I would prefer to pump to Waverley from a large reservoir which I propose to make on Sydney Common, and from that place I could supplement the supply, if necessary, to Paddington, Crown-street, and Hyde Park, during dry seasons.

1370. By an independent engine? By an independent engine. I should supply Waverley, and when necessary, supplement Paddington. To Hyde Park it would run by gravitation, and to Crown-street reservoir also, while the Sydney Common reservoir was more than half full. I should not require for the purpose anything like so large a main as we have now from Botany to Sydney.

1371. Is it possible to greatly extend the area of the Crown-street reservoir? Yes, it might be made double the size it is at present; we have land sufficient to make it as large again as it is now.

1372. And could the Paddington reservoir be greatly extended? To any extent required.

1373. Are there facilities for forming a large open reservoir in the vicinity of Paddington or Waverley? Yes, there is a very good site for the formation of a reservoir near the site of the windmill at Paddington, and a very eligible site at Waverley.

1374. Is there plenty of clay there? There is plenty of ironstone, gravel, and clay too, at Paddington.

1375. At that elevation would not an open reservoir be quite sufficient? I would not recommend it at Paddington; I would cover that reservoir; it is too near the settled districts of Sydney and the suburbs to allow the water to remain pure.

1376. Do you know the height of the highest land in Sydney covered with houses that ought to be supplied? In the city of Sydney?

1377. And the suburbs? No, I cannot give you the height of the highest land in the suburbs to be supplied with water; the highest land in the city is about 189 feet, and that is supplied.

1378. Is Waverley about the highest land in the suburbs? I think it must be; in fact, I believe the site I propose for a reservoir is the highest point around Sydney for several miles.

1379. Do you know the highest part of Waverley? 320 feet above high-water-mark, and that is the site I suggest for the reservoir. I believe the highest part of Paddington to be 226 feet.

1380. Does the Sydney municipality charge for the water in the suburbs in the same manner as they charge in the city? Exactly.

1381. Five shillings a room? Five shillings a room.

1382. Have the suburban municipalities any control over the water supply? No.

1383. And as soon as a main is carried along a street in a suburban municipality, I suppose all the inhabitants are rated? All are rated as soon as the main is laid.

1384. But I suppose they are not rated at all until there is a main in the street? No; nor is there a main laid in a street unless a majority of the inhabitants of the street petition for it, and very often not then for some time.

1385. Returning to the question of reservoirs—Do you think it would have been better to construct large water-tight reservoirs in and about Sydney, than those dams in the Botany stream? I think that dams in the stream are indispensable, but in any case it would be better to construct large reservoirs in and about Sydney; because if you have these reservoirs in town the water is safe. If there should be any accident to the pumping engine, or any defect in the main, you would still have the water in store to supply the town for some time without pumping.

1386. And the present engines could in rainy weather pump up a great deal more water than is required for the city? Yes.

1387. You could therefore fill the reservoirs in wet weather with a supply that would hold out during the dry weather? Yes.

1388. Is the iron piping that is used entirely unprotected, or has any been procured with a protecting coat internally? No; the 30-inch main is neither protected internally nor externally. When that main was ordered, I believe the utility of Dr. Angus Smith's process had not been developed.

1389. It must be a great source of loss, using unprotected piping. The smaller piping is being rapidly choked up, I believe? No; we have not had any choked up that have not been under ground for twenty years. All the piping we lay now, and have done for the last four or five years, is coated by Dr. Angus Smith's patent process, and keeps perfectly clean.

1390. And as the old piping is taken up, new piping will be laid down in that way? Yes.

1391. In rainy weather there is generally a large quantity of water running to waste from the Sydney end of the tunnel? Yes.

1392. Is there at present no means of utilizing that water? No. I suggested a method which would prevent it from flowing over Hyde Park and into the streets; that is, by stopping the tunnel where the land in the park is higher than the old terminus. The land at the end of the tunnel would then be higher than it is at the Lachlan, and consequently the water could not run over. This has been carried into effect.

1393. But the best way, I suppose, would be to carry out your plan of forming reservoirs in Hyde Park? No doubt the overflow of the Lachlan in wet seasons ought to be run into reservoirs in Hyde Park by gravitation, instead of being allowed to run to Botany; a very much larger quantity of water might then be brought in by gravitation than now. Heretofore it has been partially stopped from flowing in during wet weather by a gate or sluice, because there are no means of storing it for use in dry seasons.

1394. I think you told us that when the water in the tunnel gets very low, the pipes usually supplied by the tunnel are then supplied from Crown-street? Yes, some part of them.

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E. Bell, Esq., 1395. Is the tunnel water in such a case turned off and entirely wasted? No. Three or four of the lowest districts are always supplied from the tunnel; such as the lower part of Woolloomooloo, the lower part of Parramatta-street, the lower part of Kent-street, and a few other places. As the water decreases in the tunnel, we would shut off Parramatta-street, and throw on the supply from the Crown-street mains. As the water still further decreases, we turn off Kent-street from the tunnel supply, and give the water from Crown-street.

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1396. And you would so do it in detail? Yes, we just manage to suit the supply.

1397. Will you please to give us an estimate of the cost of the construction of reservoirs, covered and uncovered? This depends on so many circumstances that it is almost impossible, unless a spot is indicated and the nature of the sub-strata known. The reservoir I propose to make on Sydney Common would be very large—it need not be covered—and in consequence of it being a large natural basin, the earthworks and excavation required to convert it into a reservoir would be very small in proportion to its extent and capacity. I believe the sum of £35,000, which I named for it, will be sufficient to form, puddle, and complete it.

1398. Do you know the total quantity of water pumped up by the engines during last year? Nearly 956,000,000 of gallons.

1399. *Mr. Grundy.*] You said that the flood water carried away the natural ground near the Botany dams, but not the dams themselves? Yes.

1400. Is not that a greater difficulty to overcome than if the floods had affected the dams themselves? No, I think not.

1401. Any fault in the construction of the dams could be remedied, perhaps easily; but if the floods carry away the natural ground, it appears to me that the difficulty would be more serious? Not at all. We have merely to fill up the space with an embankment.

1402. You must fill it up all round, and then it would not approach the natural ground at all? We have not swamp to contend with where the natural ground is washed away. We can put a bog or sand-bank on the natural ground at a quarter the price we can put an embankment across the swamp.

1403. But that would only drive the difficulty further back until you get above the higher level of the water? No. If the sluices are kept shut instead of being open in storm-time, and the storm-water is not allowed to escape during excessive floods, the water will run over the embankments at some place or other, and, as I have before stated, no earthworks will bear the action of water passing over them. Steps must be taken to prevent this, and the responsibility must not be dependent on any person. The embankments were not finished at the time of the flood, and the natural surface of the ground was lower by the depth of a foot or eighteen inches than the dams themselves, because the former was not covered with sods and finished. The dams require to be made about a foot higher in the centre than the ends, so as to allow the middle, where the bog is steepest, to settle, and so that, when it had settled, the dam, instead of being hollow, may be straight. Before it had time to settle, the water came over the ends, and in consequence of the proper escape for the water being closed, the water ran over, and carried away a portion of the natural soil at the ends of the artificial dam, but not the dams themselves.

1404. *President.*] Have you any regular means of inspecting the houses supplied with water, to see that everything is in good order? Yes; and we have the power to cut the water off from any house where we discover a leak and waste, if it is not remedied at once. Notice is served as soon as it is discovered, and if it is not remedied that day or the next, the water is cut off until the repairs are made.

1405. But in spite of that there is great waste? Yes, there is an enormous amount of waste. The chief waste arises from allowing persons to use other than self-acting cocks and water-closets, and by leaving the taps open permitting the water to run night and day.

1406. Do you not think that the only means of distributing the water fairly would be to make the consumers use meters? Yes, it would for all large consumers; but there would be a difficulty in the use of very small meters for house services. The Sydney water gives a brown vegetable deposit, which would clog the screen placed in the meter to prevent any large substance getting through. When meters are clogged and out of order, there is difficulty in getting them put right again. If the water were filtered, there could be nothing better than Simmons' patent meters, but they are clogged by this deposit, and the difficulty is to force people to get them cleaned.

1407. *Mr. Woore.*] Does that deposit injure the pipes? No, but it prevents the proper action of small meters, unless they are carefully attended to.

1408. Do the pipes soon get foul? The 20-inch main, which has been laid eleven years, and in work for ten, has got a crust inside of $\frac{1}{8}$ th or $\frac{1}{16}$ th of an inch thick on the lower side.

1409. *Mr. Moriarty.*] With regard to the reservoirs which are proposed. On page 14 you have given some estimates for reservoirs in the city, which you consider necessary for a permanent and sufficient supply. You do not, I think, there include the cost of the Hyde Park reservoir? If I did not, I can state the price of construction.

1410. How much would have to be added to that £130,000 for the Hyde Park reservoir? I stated, in question 287, what would be necessary for the present time or for some few years hence.

1411. The Hyde Park reservoir was supposed to form part of a scheme, and I think it was omitted to ask you what its cost would be? I think for the making of the reservoirs in Hyde Park and covering them, you could not put down less than £10,000 or £11,000 an acre.

1412. Do you think £11,000 an acre would be sufficient to include the cost of excavation and covering? Yes.

1413. *President.*] What depth are you supposing they would be? About 16 feet.

1414. And they would cost £11,000 an acre? Yes.

1415.

1415. *Mr. Moriarty.*] Have you formed any estimate of the number of acres you would propose to make this reservoir in Hyde Park? I have stated its capacity, in my reply to question 333, at 20 millions of gallons. This would require a space underground of about $5\frac{1}{2}$ acres.

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1416. Your project is that the stream of the Botany Swamps, supplemented by the dams and by certain reservoirs, will give an adequate supply? Yes.

1417. You have given us the cost of certain reservoirs, but I find that the one I understood to be the most important is omitted; I want you to endeavour to supply that omission now? I do not deem the Hyde Park reservoir the most important one; but the others, for the supply of the city and suburbs, I deem to be indispensable. The reservoir at Paddington is expensively made. We shall shortly be able to get hydraulic lime here (so I am told); and if we do, we shall be able to make the walls of these reservoirs much cheaper than formerly. I estimate the cost of the reservoir I propose in Hyde Park at £55,000.

1418. Are there any other expenses connected with the pumping, than the £4,700 you have given us—does that include the whole cost? Yes, wages and everything.

1419. And the £24,000 is the amount of the rates received per annum for water? Yes.

1420. That is, from the 75,000 people already supplied? Yes; the revenue for the half-year was £7 over £12,000.

1421. So that if the whole population of the city and suburbs were supplied, a corresponding increase of revenue might be naturally expected? Yes.

1422. *President.*] Do you think the inhabitants of Sydney would submit to a higher water rate for a more abundant supply of water by gravitation? I think not if they could help it. They are crying out loudly now about the rate. It is difficult to get the water rates in, and particularly so in the suburbs. I find that the manufacturers complain of the price of water at $7\frac{1}{2}$ d. per ton.

1423. Is that the charge by meter? Yes. Some of them when they have worked for three or four years by meter we can average and reduce to a special rate, but then it sometimes happens that they use a great deal more in consequence; some of them are very careful with their meters. After the rate that has been levied, I think it would be difficult to get more than 5s. from the citizens.

1424. *Mr. Moriarty.*] Could the price not be increased if you gave them any additional quantity of water? No; the houses have now as much as they can use. They have a constant service at their command. It is the factories, the steam-engines, and so on, who would use a great deal more if they could get it cheaper; but I doubt if they would use more water if it were not cheaper. Even now, pressure is brought to bear upon the Aldermen when they go up for election, with a view of obtaining a reduced rate.

1425. The water revenue is abundant to meet the expenditure? Yes; and to increase the works too, I think.

1426. Does it also pay interest on the plant? Yes.

1427. I want to get the working expenses? I have not got that. There are some men we keep constantly at work at the mains,—drawing plugs, attending to leaks and services; the expense of these goes into one fund, under the head “General City Works.”

1428. Do you not keep “works” and the management and distribution of the water separately? No.

1429. Could we get those accounts? I do not think we could get them separately.

1430. It seems to me that one should go down to the “capital account,” and the other to the “working expenses”? Your expenses in that respect would be just the same, whether you brought the water in from one source or another, that is, the city service expenses.

1431. I want to ascertain the amount available, after paying all these expenses, to go to interest on capital? On the half-year that £4,000 is charged, there were 6,000 yards of main laid; 1,460 yards of 3-inch, 3,642 yards of 4-inch, 1,000 yards of 6-inch, 51 yards 9-inch, and 229 yards of 12-inch.

1432. Now could the cost of these things be put down separate from the gross amount—the balance would perhaps be the working expenses? It could be worked out by calculation. For instance, we pay about ten guineas a ton for the pipes; and the cost of their laying and other expenses might easily be arrived at, if one had the time to devote to it, and could know the nature of the ground.

1433. Do you mean additional? The cost of the pipes is ten guineas per ton. One contract may be £10 7s. 6d., and another £10 12s. Ten guineas is a fair average. The cost of laying is additional. That must depend on whether they are laid in rock or soil.

1434. *President.*] Is there a surplus in the amount of water rates, after paying all the expenditure on account of the water supply? No doubt can be entertained about it; and there is a considerable fund towards new works.

1435. Is that reserved for new works? I cannot say; the Treasurer would be able to tell you. You would get from the City Treasurer more information than I am able to afford relative to the accounts.

1436. But the present water rate is more than sufficient to maintain the present water supply? Yes.

1437. And to extend the mains into the suburbs? It is more than sufficient to keep the present works in operation and repair, and to pay the interest on the debt too.

1438. *Mr. Moriarty.*] You do not know how much of it would be available to pay interest on a new debt if it were incurred? No; the rate must be considerably increased. We laid 6,000 yards of pipes in the half-year to which I have referred, and the rate shewed a balance of £184 on the half year. The debt is £282,000.

1439. *President.*] Are the present pipes sufficient to distribute a greatly increased supply? Yes; but it would depend upon where you brought it in. If it were brought in at a different

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different place from that where it is brought in now, we should want new mains from that part to the town—to the reservoirs. The distributing mains, as they extend in distance from the reservoir, decrease in size.

25 Mar., 1868. 1440. *Mr. Woore.*] Would the present mains be large enough to supply much larger pipes? No; in many places now we are obliged to take up the main and put in a larger one. We are going to do so in O'Connell-street; we have already done it in Macquarie-street. The majority of the pipes used to be 3-inch, but now not more than 1,000 3-inch are laid to 3,000 or 4,000 4-inch.

1441. It is not economy to lessen the size of the pipes? No. The only use I now make of 3-inch pipes is to put them in remote corners, where only a small supply is wanted, and where it would be simply a waste of money to put in a larger pipe.

Since the foregoing evidence was given, I accompanied the members of the Water Commission to point out the sites I proposed for the reservoirs at Sydney Common and Waverley; and on that occasion I promised to furnish the particulars of the heights, extent, levels, &c., of the Sydney Common sites. These have been carefully taken, and I find that the average height of the hills which surround the basin is 142 feet above high water mark, that the length from north to south is 40 chains, and the width from east to west is 20 chains. The levels taken on a line drawn through the centre (from north to south) of the basin shew the elevation of the hill at the northern end to be 148 feet, and the southern 132 feet above high water spring tides; and the bottom of the basin to range from 101 feet, at the northern end, to 91 feet above high water at the southern end. Hence it is quite practicable and easy to convert this natural basin into a reservoir, 40 chains by 20 in extent, with a summit water-line of 137 feet above high water, and 94 feet on the bottom. This would contain (850,000,000) eight hundred and fifty millions of gallons, and would supply the Crown-street reservoir to as low an elevation as 120 feet by gravitation, and Hyde Park tunnel to 104 feet. When the water was below those elevations in the Sydney Common reservoir, any supplementary supply would have to be given by steam power to Crown-street and Hyde Park—in like manner to Paddington and Waverley. If this splendid natural basin were converted into a reservoir, as I have suggested, and the extensions in Crown-street and Paddington be made, we should be able to store, in the town and its immediate vicinity, 891 millions of gallons of water for use under any emergency, in addition to the stream which is constantly flowing in from the Lachlan Swamp, viz. :—

Sydney Common Reserve	...	...	...	...	850 millions
Crown-street and Extension	...	...	...	...	8 "
Paddington and do.	...	...	...	...	8 "
Waverley	...	...	...	...	5 "
Hyde Park	...	...	...	...	20 "
Total	...	...	...	...	891 millions

being sufficient water, together with the Lachlan Swamp stream, to supply Sydney and suburbs for a whole year, without pumping at all.

After careful measurement of the basin in Sydney Common, I estimate the cost of converting it into such a reservoir as I have described, together with an engine and the requisite pipes, &c., will not exceed

...	...	...	...	...	£56,000
The Hyde Park reservoirs	...	...	...	...	55,000
An open reservoir at Waverley	...	...	...	...	9,000
A covered reservoir at Newtown	...	...	...	...	24,000
Extension, Paddington and Crown-street	...	...	...	...	40,000
					<u>£184,000</u>

TUESDAY, 7 SEPTEMBER, 1869.

Present :—

PROFESSOR SMITH, | MR. ADAMS,
MR. E. O. MORIARTY.

PROFESSOR SMITH, M.D., IN THE CHAIR.

The Hon. Thomas Holt, M.L.C., called in and examined :—

The Hon. T. Holt, M.L.C. 1442. *Chairman.*] We have had from you several letters on the subject of supplying Sydney with water from George's River. Since writing those letters, you have no doubt considered the matter further? Yes.

7 Sept., 1869. 1443. Perhaps you would be good enough to state now your matured views on the subject? The more I see of the country, the more convinced I am that it is very easy to provide Sydney with an almost inexhaustible supply of water at a comparatively trifling cost. To accomplish this, two or three, or more, ways would present themselves, and we could ascertain which is the best only by an accurate survey of the country. A friend of mine, with whom I have been over the country, has suggested to me an idea which I think far better than any I have suggested myself, inasmuch as it would provide two different sources of supply—one for manufactories, and another for the city itself. We have been over the ground

ground together since the Commission met, and, as far as I can see at present, I am convinced that his scheme would be the best. He suggests that there should be a dam constructed on the west side of the present waterworks, where the water is shallow. This would make a road across Cook's River, and enable the citizens of Sydney to have easy access to the beautiful Seven-mile Beach. He suggests that a channel should be cut from Shea's Creek to the other side of the dam; and by means of this canal, he says, coal could be brought to the manufactories, which could be uninterruptedly established from Rickety-street, St. Peter's, to Rocky Point or (Sans Souci). He points out that there would be an inexhaustible supply of water from the swamps and from George's River (which could be let into the swamps when the water of that river is made sweet); but what he attaches great importance to is, the easy provision which could be made for disposing of the surplus water after it has been used. I know the importance of this, from what I have seen myself in Leeds and other manufacturing districts of England. When I was in Leeds, not very long ago, I was struck with the fact that some streams which, thirty years before I had known to be pure, were then quite black. I have also read a great deal of the evidence given before the Commission appointed to inquire into and report upon the pollution of rivers. I find that wherever manufacturing districts have been established, the first thing has been to pollute the water. What were before clean and wholesome streams became discoloured and impure; but, by availing ourselves of the swamps to which I have referred, all this might be entirely obviated, and manufactures to almost any extent could be carried on if effect were given to this idea of my friend, with whom I went over a portion of the ground yesterday. By small cuttings the swamps would connect George's River with Cook's River. There is from Rickety-street to the Cook's River a reserved road along the swamp. This road has never been used, and probably never will be. A canal might be cut along it without purchasing an inch of land; and thus water communication could be continued from St. Peter's all through the swamps to Sans Souci. Between George's River and the swamps there is only a distance of two or three hundred yards. Therefore, when the George's River is made sweet, supposing that a dam should be constructed at Sans Souci, the two waters can be readily united, and the united waters of the two rivers (George and Cook) and the swamps used for manufacturing purposes. And with respect to the supply of water for domestic use in Sydney, it is questionable whether it would not be desirable to have the pumping higher up the river; and if so, that original idea of mine, to bring the waters along Woolli Creek, could easily be carried out without any cutting, where the ground rises, near Saltpan Creek. The water might be conducted in the same way as it was originally taken part of the way into London by the New River Company—by conduits of wood. It could be raised by turbines or centrifugal pumps, and carried in a direct line through the valley to a point near the foot of Camden-street, Newtown. It is a question whether it would not be much better that the pumping of the water for domestic use should take place at a little distance from the dam. It would certainly be better if there were any leakage of the dam, which, however, ought to be avoided, and which I do not think would take place. But if the pumping took place higher up, I should think Saltpan Creek the best place. Since my attention has been directed to this question, I have never ridden or walked out without observing the face of the country, and seeing how easy it would be to furnish an abundant supply of water to the city of Sydney. Nature has done so much for us. There is in George's River one of the most beautiful reservoirs in the world—it has stone sides all the way to Liverpool, a distance of 28 miles—it has tributaries of considerable extent, and one of the finest watersheds on the face of the earth. Two or three floods would, in my opinion, make the water of that river as sweet as it could possibly be. I speak from experience, having lived for some years on the banks of George's River; and we drank nothing but the water of George's River, which was formerly as brackish, probably, as that of the ocean. It was kept sweet by means of a dam. Since that dam was erected, two large works have been erected, one for wool-washing and the other for the manufacture of paper. But I can give you a better instance of what may be done by a little dam. I refer to that at Cook's River, near Canterbury. Mr. Lucas was the contractor. He told me that his contract price was £146, and that so satisfied were the directors of the Sugar Company with the work that they gave him £160 for its construction. The result has been in this case the establishment of a large wool-washing establishment, at a cost of several thousand pounds, which uses an enormous quantity of water. The washing of wool requires a large quantity. If these two small dams have been so beneficial, how much greater benefits might not be derived from a dam over George's River at Sans Souci? The present dam over George's River at Liverpool dams what may be called only a creek. There is no storage capacity of any magnitude above the dam. I have known the water to rise there thirty-five feet in twenty-four hours. One of my men lived on the bank of the river, in a position which was considered to be perfectly safe; but on one occasion the water rose so rapidly upon him that he could not escape, and he was obliged to make an opening through the roof and sit on the top of the house for twenty-four hours before we could rescue him. But there are no floods of the kind lower down George's River. At Sans Souci, I do not think the floods ever rise more than two or three or six inches at the most—there is such a large opening. You might there store the water any height you please. There are wonderful facilities for making weirs, either at Cummings' Point opposite Sans Souci or at Tom Ugly's Point, where there is a promontory of solid rock which would only require a little scarping to make it available; or at Kangaroo Point, a little higher up the river. On these three points there could be weirs made to let off any quantity of water, so that a dam might be placed across the river without causing any flood whatsoever. The water could always be kept at one height. At the Liverpool and Cook's River dams there are no such facilities; and the consequence has been that, in times of flood, the dams have been greatly injured. The Liverpool dam was

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once nearly washed away, and the dam at Cook's River has been so disturbed that it has cost a considerable sum to repair. But at any of the points I have mentioned on George's River there would be no danger of such injury to the dam. All that would be required would be to make the dam sufficiently high, and there are natural weirs over which any quantity of water could flow. By means of the numerous tributaries, the water would, I believe, always remain at the same height. From a calculation I saw made a short time ago of what pumping would do, it appears to me that all the pumps which would be required for a length of time would only reduce the water to so small an extent that the diminution would be scarcely perceptible. I think you mentioned, Mr. Moriarty, that the reservoir in George's River, between Sans Souci and Liverpool, would be about 3,000 acres; the Woronora would be one or two thousand more; but the source, now called Croton Lake, since the river was dammed, which supplies New York with water, is only five miles in length. This proposed lake of George's River may be compared to Windermere; and I think Windermere is only twelve or thirteen miles in length. I believe the capacity of George's River for storing water is as great as that of Windermere. There need be no doubt as to the quantity of water. When once the river was made sweet, the supply is so immense that there would be sufficient for London itself. I do think this matter is well worthy the attention of the Water Commission. And again, what would be the expense of making a dam? If you can make it without any cut stone or cofferdams—by merely piling up suitable materials—no skilled labour would be required. And I would particularly call your attention to what is said about metal roads, as being applicable to this subject. Macadam made a remark which, since I read it, has been often in my mind. He says—if stone broken to a proper size be laid down without any other material, the rough edges will join together so as to make one compact mass. I have read recently of one road being broken up which had only four inches of stones, and underneath the crust it was perfectly dry. It had been impervious to wet. Macadam lays stress on roads made in this manner which will become one solid mass, or as he puts it—"like boards." In making a road through swamps, too, these stones do not spread out and sink in the swamp, but become a solid mass. If that be the case, I think there is a new era in dam-making. Dams are more required in this country than perhaps in most others; and if we can make compact, solid dams, of broken stones in the same way that we can make a hard road, they will no doubt be very extensively constructed. When dams are made solely of sand without any counteracting force, such as the dams made by Mr. Bell, the City Engineer, at Botany, they cannot stand. If such a dam were constructed across George's River and a considerable body of sand on each side, I believe it would answer exceedingly well, and that it could be made at a comparatively trifling cost.

1444. You still think there ought to be a dam constructed at Rocky Point, of loose material—not a masonry dam rising from the solid rock? I think it would be a gross waste of money to have any masonry. I would have nothing but such material poured in as is spoken of by Macadam—stones properly broken and a sand beach on each side. I have spoken to many gentlemen on this subject, and they are of the same opinion as myself. Mr. Woore (Mr. Mort told me) has erected a similar dam, not of these rough stones, however, but of gravel, on the Wollondilly. This dam is impervious, and retains the water without any leakage. It is made simply of gravel and sand.

1445. But large filters are constructed exactly from these materials. At the Chelsea Waterworks, for example, some years ago, they had filter beds, each covering an acre, and they were made of a certain thickness of large stones, than smaller stones, gravel, and fine sand. Such a mixture is found to be freely pervious, and if it can be so used as a filter bed, how can it be used also as an impervious dam? But it is used; and these are the materials nature makes use of. Sand, and sand only, nature makes use of to enclose a large part of Holland. This is the material, too, which you find on nearly all the sea-coasts. I do not think we could do better than follow what nature has done and is doing.

1446. You recognize the necessity of having a watertight dam, I think? It would not do to let the salt water percolate through into the fresh water; but I do not think there would be any fear of that, because I think the fresh water would be always higher than the salt water.

1447. It would be necessary to keep the fresh water some feet above the salt water, would it not? I doubt the necessity, but I think it would be desirable to do so. When you got up to low-water-mark, you might fill up the centre with clay. That is what Mr. Lucas did, in the dam he constructed over Cook's River, at Canterbury.

1448. Was your experience of the water at Liverpool such as to make you confident that it would be good in all seasons—I mean the water of George's River? It was always good. A short time since I asked the opinion of a gentleman whose father was a clergyman there. I said—"What do you think of the George's River water at Liverpool?" and he said—"There is no better water in the world."

1449. We have had the evidence of Mr. Atkinson on this point. He was asked if he had a knowledge of George's River, and he said he knew it very well. He was asked if he thought that would be a preferable source of supply to the Botany stream; and he said—"Decidedly not." He said—"There is fresh water above the dam at Liverpool, but you could pump it all out in about twenty days." Then he was asked—"You think that in dry weather the supply is small?" He replied—"Yes, and as I said before, sometimes the water is bad, although at other seasons it is good." He does not say in what respect it is bad.

1450. He was asked—"In dry seasons does the water become brackish?" and he says—"Yes, it has a taste of salt." That may arise because the dam is not perfect. I do not consider that dam well constructed by any means. At one time it was injured, and for a lengthened period the salt water did flow through.

1451. *Mr. Moriarty.*] The evidence referred to the water before the injury had been done to the dam; and similar evidence has been given by other witnesses? But the mere fact that they wash wool there is a clear proof that the water could not be brackish—they could not wash wool with brackish water. As regards pumping it out in so short a time, that no doubt is quite correct, for there is no storage capability. As I have already stated, I have known the river rise in a short time thirty-five feet. What became of all that water? Two or three days afterwards it had gone down into the sea. The great advantage of taking George's River as a reservoir between the dam at Liverpool, and any one of the points I have mentioned, is that there is such an enormous storage capacity.
1452. Could you give us any idea of the width of the channel at the place where the water rose thirty-five feet in twenty-four hours, and the width it spread over? The river is very narrow there, but the water, I should say, spread over a quarter of a mile.
1453. Do you speak of the great flood which swept away the Sophienburgh piggeries? No; it was before I sold that place to Mr. Atkinson—it was two or three years previously. You will see a cottage there on the high land; that is the place where the man was who had to take refuge on the roof in consequence of the sudden rising of the waters.
1454. There must have been a considerable depth of water over the flats? Yes.
1455. And you think it extended a quarter of a mile back? Yes, I think so.
1456. Did there seem to be much current running down at the time? Yes, there was a current in the centre, but there was not room for the water to escape. If there had been, there would of course not have been any flood.
1457. There was a flood which ran with sufficient velocity over the flat to carry away a piggyery? Yes; but that was close on the banks, where the current would naturally be strong.
1458. It was three or four hundred feet from the bank, was it not? I do not think it was more than half that—it was almost close to the bank.
1459. Have you any authentic information as to rivers of the magnitude of George's River—subject to such a rapid tide, and forming so large an estuary of salt water—having become fresh? I know this, that George's River itself has been fresh about Sans Souci; I have drunk the water there on two or three occasions, and found it only a little brackish.
1460. That was water taken from the surface? That was from the surface; but if the salt water had been kept out, after two or three floods the river would have become perfectly sweet. I do not see that it makes any difference what is the size of the river, so long as there is a sufficient supply of fresh water to cleanse it; and beyond doubt there would be sufficient in George's River, from the vast extent of the watershed.
1461. From your acquaintance with the climate, should you say that floods of great magnitude are of sufficiently frequent occurrence to warrant the prediction that George's River would be fresh in any given time, if a dam were constructed—say five, ten, fifteen, or twenty years? I believe that if the dam had been erected twelve months ago, the river would have been fresh now.
1462. *Chairman.*] Have you known George's River in any very dry seasons? Yes.
1463. Do you know the amount of water delivered into the estuary of George's River by its tributaries during any dry season? No; but this I know,—there are some creeks from the Sutherland estate that never cease running. There are two running into Gawley Bay, (opposite Sans Souci) which never cease to flow even in the driest seasons, and there is scarcely any difference in the volume of the stream at any time except during heavy rains.
1464. If George's River were dammed at Rocky Point, would it not be necessary to buy up the factories at Liverpool? You are as good a judge as I am of the law of the case; but I understand the law to be this,—that any one on the banks of a river may draw from that river what he pleases, but is not entitled to pollute it. I would allow the factories at Liverpool to make use of as much of the water of George's River as they please, but require that they should find an outlet for the water, when made impure by use.
1465. At present they allow it to fall into an estuary of the sea. If that estuary were enclosed, so as to become a fresh water lake, I do not think the state of the law would prevent factories pouring impure water into it? But supposing you had to pay them compensation for removing their factories nearer to Sydney (and I would be very liberal in all such matters), where there would be a good outlet for the waste water, that would be a mere bagatelle in comparison to the importance of the work, which would furnish one-third of the county of Cumberland with an abundant supply of good water.
1466. Still it is an element in the expense? I think it is an item (with all due deference) not worth taking into account. There are very few manufactories at present. There is one at Canterbury, on Cook's River, and two at Liverpool. But the Liverpool people would be glad to raise the dam for the purpose of encouraging the establishment of other manufactories. If that were done, manufacturers would go twenty miles to find that which they might obtain close at hand if a dam were made across George's River at any of the points I have mentioned.
1467. There is another objection. George's River drains a considerable extent of agricultural country, and also receives the drainage of Liverpool and Campbelltown. It is scarcely desirable to draw our water supply from an area partly cultivated and settled? But what is the cultivation, and what the settlement? There are not more than three or four hundred people within the range of twenty-eight miles; and I doubt if there are twenty acres cultivated on the watershed between Sans Souci and Liverpool. Is that an item to take into consideration—a paltry amount of land under cultivation, and a small number of inhabitants in the only township at the head of the navigation!
1468. *Mr. Adams.*] You referred to a dam made by Mr. Lucas. Was that dam made on dry ground at the time, or in deep water? I am not able to say. I know what Cook's River is both above and below the dam.

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1469. There could not have been any great depth of water to contend with? No; there is no great depth of water anywhere in Cook's River.

1470. *Mr. Moriarty.*] You were saying that, supposing the George's River scheme were carried out, it would give water to one-third of the county of Cumberland. Of course, whatever water was supplied by that arrangement, would be given only to persons residing on the immediate banks of the river, and those who would draw the water by pumping? Yes.

1471. No land could be irrigated except by means of the pump? I am not sufficiently acquainted with the nature of the country to reply with any confidence to that question. If there is any low land between here and Liverpool, it would be possible to irrigate it without a pump.

1472. But they would have to bank out the river first? Yes; but I am not sufficiently acquainted with the country to know whether there is much of that land which could be irrigated. I think irrigation is a separate scheme altogether. If you were to bring water fifty or sixty miles by gravitation, I do not think you would have much to spare for irrigation.

1473. Do you mean from the George's River? No; from the Nepean or elsewhere.

1474. That would depend upon the quantity? Yes.

1475. And then you have not made any estimate of the height to which it would be necessary to raise the water to allow it to gravitate into Sydney? No; that is a question for an engineer. A suggestion has been thrown out whether it would not be desirable to take the water from the river a little higher up, and make use of Woollen Creek. It would require some little cutting to take it from thence into Sydney by a watercourse. It might be raised by means of a centrifugal pump, and without any cutting be brought near to Sydney by gravitation.

1476. That, of course, would involve the expense of pumping? But the expense of pumping, when water is not taken to a great height, is scarcely worth taking into account.

1477. There are engines, coals, labour, machinery, &c. In Sydney, at present, they are paying about £5,000 a year for pumping water? But that is not a perpendicular lift; they force it to a long distance. It would cost probably not one-tenth of that amount to raise the water fifteen or twenty feet by centrifugal pumps.

1478. It would cost a little more than that. It would be in the ratio of the height to which it was lifted. The quantity supplied at present is utterly inadequate to the wants of a growing city like this. Have you made any estimate of the quantity which in your opinion would be required? No, I have not gone into any calculation of that kind. Where there would be so large a supply, and where the quantity taken from it would be so inappreciable, it would be superfluous to go into any minute detail. But these swamps could be supplied with water without pumping, and thus, at a trifling expense, any number of manufactories could be accommodated, and the city would be relieved to the extent of their consumption, while the manufactories would be encouraged. Then there is another thing I would suggest. In Holland they have canals almost everywhere. Here, seeing that you have the land—that it would not be necessary to purchase a single inch of ground, or build a single bridge—why not make a canal from St. Peter's all the way to Sans Souci through these swamps. For a distance of nine or ten miles there would be running parallel the east side of Botany Bay, into which the surplus water could be readily drained. The fresh-water canal would be useful for the transporting of commodities from one place to another. Wool brought to this port, at St. Peter's, near the church, could be taken alongside the wool-washing establishments without cartage. By an expenditure of £5,000, or probably less, ample provision could be made for all the manufactories that can be required.

1479. Keeping a distinct channel for the supply of water to the town? I think it is desirable that in a large manufacturing town a supply should be set apart specially for manufactories. If this were so, all the land between St. Peter's and George's Rivers, along the canal and swamps, would be the manufacturing part of Sydney. The land would not be the less valuable because it would not be used for suburban residences by merchants and other gentlemen—it would become all the more valuable—it would be used by those engaged in the manufactories, and the merchants and other gentlemen of Sydney would go elsewhere to reside.

1480. Supposing this scheme were carried out, where would you propose that Cook's River should be dammed? I think the best place is between Nos. 21 and 42 on Bishop's map, and Muddy Creek (which is fresh at its source) would also require to be dammed as near the mouth as possibly—say between Unwin's 50 and Webb's 300 acre grants. Shea's Creek, at the foot of what is called Rickety-street (St. Peter's), should be widened and deepened, so that vessels with coal and other materials could be taken up for the use of manufactories, and this canal would serve at the same time as a sewer for the waste water.

1481. Would it be below the junction of Shea's Creek? Shea's Creek need not be interfered with, except deepened and widened as above, and also straightened.

1482. With reference to Shea's Creek, we have had it in evidence that the whole of the water of that creek has been contaminated by woolwashing? That is true, but you would make the fresh-water canal at some little distance, and running nearly parallel with the creek. It would be invaluable as a sewer for the manufactories, and as a ship's canal for bringing coal, &c. There is a reserved road of I think 66 feet running from the river to Rickety-street. Although it is only marked on Bishop's map with one line, I know there is a reserved road, &c. It has never been used as a road and never will be, and that might be readily made into a fresh water canal, from St. Peter's, at the back of Mr. Chalder's house to Cook's River, and from thence through the extensive fresh-water swamps to George's River.

River. As the said swamps (on the *west* side of Botany Bay, and which run parallel with the Seven-mile Beach) are in some places one or one and a half mile wide, they alone without George's River (which could be united with them at any future time when George's River was dammed and the water perfectly sweet) would probably yield as much water as the swamps on the *north* side of Botany, which is all that Sydney, with her more than 100,000 inhabitants, have to depend on. I strongly recommend that a survey be made of the country, and the said swamps between Rickety-street (St. Peter's) and George's River.

The
Hon. T. Holt,
M.L.C.

7 Sept., 1869.

Alexander Kennedy Smith, Esq., examined:—

1483. *Chairman.*] What is your profession? I am a civil, practical, and consulting engineer, in Melbourne. A. K. Smith,
Esq.

1484. Have you ever been engaged in the construction of works for supplying towns with water? I have. 7 Sept., 1869.

1485. Where? In Scotland, and also in Devonshire, where I was engaged in works for supplying farms on the high-pressure principle, pumping up the water and sending it through pipes; and recently, as Engineer of the South Yarra Waterworks, Victoria.

1486. So that you have had an extended experience in storing and distributing water? Yes.

1487. You have heard the evidence just given by Mr. Holt, and you have been over the ground between Sydney and George's River? I have.

1488. Will you kindly give us your opinion of Mr. Holt's scheme for supplying Sydney with water? It seems to me that, although there might be considerable expense in damming the river at the various points indicated, it is not at all impossible to do so; and the amount of storage, with a depth of 4 feet, would be equal to three thousand two hundred and sixty-seven millions (3,267,000,000) of gallons.

1489. What surface do you assume? I was informed that it was 4,000 acres; but since coming into this room, I have been told that it is only 3,000 acres. $1\frac{1}{4}$ inch of rain on this watershed would give 4 feet of water in the reservoir, and supply something like sixty-two and a half million gallons per week.

1490. Do you think that a dam constructed in the way Mr. Holt has described would keep the water permanently 4 feet above the level of the sea-water outside? I cannot say that I thoroughly understand Mr. Holt's description of how he would make the dam; but I think it is possible to make a dam across George's River without having recourse to masonry. And with regard to keeping the fresh water permanently 4 feet above the sea-water, I would observe that the difference of level you would have to take into consideration would be the river in its highest known flood state. You would take the maximum height of fresh water, and the minimum height of the salt water outside the dam. That would give you, I suppose, during spring tides, at low water, about 5 feet 6 inches to be added to the increased depth of water during heavy thunder showers or storms. You might, therefore, have a pressure equal to 5 or 6 lbs. upon the square inch. I am of opinion that, if the dam were made sufficiently broad at the base, in a very short time it would be effective. The pressure being always on the fresh-water side, there would be sufficient silt and other deposits to keep it tight, even though it were not of such a character as would be necessary to dam a ravine where there would be a great pressure on one side and nothing on the other.

1491. Would it not be necessary to allow a certain height, in addition to the storage capacity, for the purpose of enabling the water to flow along a canal? That is simply a question for an engineer, after examination and survey. I am inclined to think that, if there is any high ground at or near George's River, or if George's River were connected with Cook's River, in a position common to both, it might be as well to have the pumping done at once. You might so command Sydney, if there is any ground sufficiently high; but of that, being a stranger, I am not aware.

1492. *Mr. Moriarty.*] There is not? Then the water would have to be raised by a dam, or some artificial means, to such a height as would enable it to flow along a canal to some place whence it could be supplied to Sydney by pumping machinery.

1493. How would you propose to construct a dam sufficiently watertight without masonry? I would make it sufficiently broad at the bottom, and use the best material I could obtain for its construction. I would put punts and rails across to run the waggons on, and make the dam by a deposit of stones and clay and sand. In a short time the silt would come down the river, and make the dam as tight as it would be necessary to have it made. You have such an enormous amount of storage that the difference of the level during the states of the tide would make the leakage slight. There would not be any very great pressure on the dam.

1494. But supposing you had to raise the fresh water 10 feet above the salt, do you think that plan would be sufficient? No; as an engineer I would prefer lifting it 10 or 20 feet, so as to give a good velocity in some other aqueduct. In coming from George's River towards Sydney there are swamps for a considerable distance. I would have the dam as low as possible in George's River, and raise the water only sufficient to keep it sweet and retain a sufficient quantity. Then I would lift the water, by a centrifugal pump and a moderately powerful engine, to a height of 6 or 8 or 10 feet, as might be requisite to bring a sufficient quantity of water along the aqueduct.

1495. But if it were necessary to raise the water 10 feet, you do not think a dam of loose material would suffice? There would be more danger of its leaking in proportion to the height you made it retain the water. I would raise the dam, at any rate, 10 feet above the surface

- A. K. Smith, surface of the water. I believe ample provision could be made for the overflow. Advantage
Esq. can be taken of a long stretch of rocks, and the bye-wash can be made sufficient to let off
7 Sept., 1869. any quantity of water which comes down George's River. Still, I am not aware what that
quantity might be. In Cook's River I looked carefully for the highest drift, and found it
6 feet above the position of the level of the water in Cook's River then, and I think it was
about half-tide. That is a pretty fair indication of the height to which the river would
rise. But George's River draining such a large area, it is possible the flood water coming
down there would require a large bye-wash to protect the dam; and that, even when the
bye-wash was in operation, the water would rise very high.
1496. It would not do to let the flood-water go over the dam? No, not unless it were a
proper dam of masonry.
1497. Unless the dam were perfectly watertight, what would become of the reserve of fresh
water in very dry seasons; for example, during several months we might have scarcely any
water running into George's River? You would have enormous quantities to spare. If
you were to save only an inch and a quarter on the watershed, that would give you sixty-two
and a half million gallons per week.
1498. But does it not seem necessary, for the sake of keeping a store of fresh water in times
of severe drought, that the dam should be perfectly watertight? I have no doubt it would
be so. It might not be exactly so at first, but I feel sanguine it would be so in a short
time, always providing the water was not raised to a very great height. The pressure
would not be severe if the water were raised to anything within ten or twelve feet. We have
instances of this in connection with railway works. Railway embankments, constructed of
stones and soil, have dammed back water of considerable depth until proper provision has
been made to carry it off.
1499. Do you know any example of an estuary such as George's River being dammed and
made fresh? I cannot recollect any instance. I have no doubt I could find one if I were
in my office and had access to my books. In Scotland rivers are dammed for the purpose
of getting falls for the working of ordinary machinery. Caulds, or, as we call them in
England, weirs, are made with stones and sand found in the immediate neighbourhood.
They are sometimes protected and strengthened by a little wood being built in them. I
know many caulds on the Tweed and the Teviot which raise the water to various heights,
for the purpose of obtaining a fall. During the summer-time these carry off the whole of
the water, and the leakage, if there is any, is a mere trifle.
1500. These dams do not raise the water many feet, as a rule; I should say, not more than
three or four? They raise the water to various heights. I have seen them from three to
eight feet.
1501. And they are constructed mostly on rivers of considerable magnitude, on which there
is always a permanent stream setting down? Yes; but the stream is much less in the
summer than in the winter.
1502. Those rivers discharge, as a rule, a considerable body of water? Yes; they
discharge more than perhaps would appear from observation, inasmuch as the velocity is
considerable.
1503. Do you not think, also, that in Scotland, as a rule, the country is more saturated
with water, in consequence of the greater frequency of the rainfall? Undoubtedly. I
can understand that the 300 square miles of watershed to George's River must be very
different.
1504. It is a barren plateau of sandstone rock, with scarcely a fragment of soil, except in a
few patches, and very sparsely covered with vegetation. It is very broken and precipitous
from first to last, so that the floods come down, as Mr. Holt has described them, with
extraordinary rapidity. As you have heard, the water rose, on one occasion, thirty-five feet
in twenty-four hours? I fancy that must be owing to some narrow neck preventing the
water from getting away.
1505. No? There is nothing known of this at Rocky Point. The river rises so little there
that they have failed to observe any particular increase in its height.
1506. I have seen floods extend over a quarter of a mile at Liverpool. Mr. Holt has
described their effect correctly. The water flows with great velocity? Is not that due to
some narrowing of the channel lower down the river?
1507. No. If you were to examine our rainfalls, you would find them very extraordinary
at times—about twenty inches have fallen in twenty-four hours. That is not a very common
thing, but we have enormous rainfalls occasionally. The heads of George's River are close
to the coast on the elevated table-land, so that there are heavier falls there than are
recorded in Sydney. Supposing that twenty inches of rain fall in twenty-four hours, over
that area of three hundred square miles, you can easily account for such a flood as that of
which Mr. Holt has spoken? Yes, but I do not think it would raise the river at Rocky
Point in anything like the way spoken of by Mr. Holt in regard to the floods at Liverpool.
1508. If you look at the section of the river, you will see that it is one third of a mile, by
a mean depth of thirty feet. That will discharge a large body of water? But the
quantity discharged would not be in accordance with the mean depth—it has an opposing
body in the tide.
1509. The whole will be discharging? Yes, at a given velocity.
1510. Having that in view, the extraordinary quantity that seems to come down, and the
objection to letting it flow over the dam, do you not think it would be necessary to raise
the dam a considerable height above the tide level? Care would have to be taken to have
it sufficiently large in its sectional area to take the largest flood. Supposing there would
be six feet of water flowing over the bye-wash, the dam must be six feet higher, and then
the ordinary height again above that, to guard against accident.

1511. We have it in evidence that George's River is, in some places, a quarter of a mile broad in times of flood, and that the channel of the river is thirty-five feet deep—Should you say, generally, that raising the dam six feet would be sufficient? No; I would be more inclined to take the area of the watershed, and estimate the whole quantity, and prepare for its being run off in a given time. A. K. Smith,
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1512. Twenty inches in twenty-four hours? Yes; but I doubt whether such an abnormal quantity would fall over the whole of the 300 square miles. When I was in Newcastle, about two years ago, the river rose very high at Maitland and Singleton, but the heavy rainfall made very little difference at Newcastle. The rising of the waters at Maitland and Singleton was simply due to the river being narrow at particular places, so that there was not a sufficient space to allow the floods to discharge.

1513. Your project, then, as I understand it, would be to raise the water by pumping to such a height as to enable it to gravitate into Sydney from George's River? It has been pointed out that there is a possibility of connecting George's River with Cook's River. If this were done, and a canal were cut along the low ground alluded to by Mr. Holt, the water might be brought near to the present water supply, and there pumping operations could be commenced. I think it would be desirable to do so, inasmuch as it would bring you to an immense body of sand, and enable you to provide proper filtering reservoirs. If it were necessary to supply the water direct from George's River, it might be expedient to keep it first as low as possible, and then to raise it to the height required by means of centrifugal pumps. But that can only be determined by careful calculation and actual survey.

1514. That would involve a twofold system of pumping. First, it would be necessary to pump the water out of George's River into a canal, and then to pump it into Sydney? It would; but I apprehend that it would be better to bring it into the swamps than to incur that expense, although the expense of pumping the water into the canal would not be at all in proportion to the expense of pumping water into Sydney. To raise water six, eight, or ten feet, would be nothing compared with the expense of sending it to the higher reservoir.

1515. The object of that would be to save the risk and cost of raising the water permanently in the river so much? Yes.

1516. Have you made any estimate of the height to which it would be necessary to raise the water in George's River to store a twelvemonth's supply? It would be necessary to raise it about four feet.

1517. That would depend of course upon the quantity supplied to Sydney. What have you estimated the supply at? I have estimated that four feet would give 3,267 million gallons. Dividing that by the number of days in the year, would give you the quantity per day. A fall of an inch and a quarter of rain, of which you would save (say) 75 per cent., would fill the reservoir, and afford a supply of sixty-two and a half million gallons per week, as against the twenty-five millions now supplied.

1518. Do you estimate saving 75 per cent. of the whole rainfall? Decimal 617 (.617). Quoting your own figures, we might assume .75 on the country you spoke of.

1519. You are probably aware of the great difference in the available quantity of water over what are properly called watersheds, and the summer discharges of large rivers such as would be the case in George's River. It is found by experience that, although you may save .5, .6, or .8 of the water which falls over a limited watershed close to the head, when you come down low on the river you do not save anything like that quantity. It is well authenticated that the discharge of the Severn, and the Thames, and other large rivers, does not amount to more than one-eighth of the whole? That arises from a state of facts which would not apply here. There the banks are low, but here the river is well defined, and there is little or no fall almost from its source to the sea. It has been worn down to a level almost with that of high-water, and I think you have a greater quantity of watershed on such an area than those which supply the Severn and the Thames.

1520. That is a matter of opinion. We have here an enormous evaporation in summer—often one or two inches of rain have fallen in a month without being felt in the river at all, being taken up entirely by evaporation. But it is different in winter. I believe our measurements of the rivers here show that, although in the summer we do not get the same proportion of the rainfall as they do in England, in winter we get a larger quantity. In summer we only detect one-twelfth of the actual rainfall as making its appearance in the rivers. That which falls in winter comes down in floods, and runs away at once. It is absolutely necessary, therefore, to store. It will not do for us to go into abstract calculations, and say that if an inch of rain falls, we can get of it .5 or .12. George's River has ceased to run at the dam; it did last year, to my knowledge. We have it in evidence that it has done so frequently. We have it in evidence that such bodies of water as Lake George have been dry—twenty miles by fifteen, and of considerable depth. We must, therefore, provide for storage, and the question is, whether in any great scheme of water supply, it would not be necessary to make provision against extraordinary droughts. Having that in view, do you think four feet would be sufficient? I think it would be ample to give you the large quantity you are speaking of. Whatever quantity fell, you might safely calculate on getting three inches of rain during the twelve months, which would be sufficient.

1521. If you are to keep it, that involves storing it? But this lake is at the water level of the sea, and it must retain the water—it cannot get out.

1522. Unless by percolation through the dam? Unless through the difference of the levels.

1523. What do you consider would be sufficient? If you could get three inches of rainfall on that 3,000 acres, it would leave you a large supply for summer droughts, or leakages, or waste.

1524.

- A. K. Smith, Esq.
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1524. Can you form any estimate of the quantity of leakage you will have to allow for? That would depend upon the workmanship of the dam. I believe it is possible to make the dam practically water-tight.
1525. The bottom is not mud, but sea-sand. Do you think that on a bottom of thirty feet of sea-sand you could make a water-tight dam? I think so.
1526. You are aware that almost all the wells in the world are sunk into sand and free soils. The green-sand of London is the great water-bearing stratum. That underlies the clay beds, and the moment you get to the green-sand you get water. Is there anything to prevent a similar process in such a work as this? Yes; I think that in a short time the amount of silt and other impurities held in mechanical suspension by the water, and brought down on to the dam, would make it tight. In Victoria, on one occasion, Lake Learmonth was dry, and vegetation began to grow. Cattle were turned into it, and they puddled it so that it became retentive, and it is now a beautiful lake.
1527. But here you have thirty-nine or forty feet of water, so that cattle cannot tramp it down. You have also a river running through a sandstone formation, and bringing scarcely any deposit. As far as I am aware, there is no tendency in the river to deposit anything. If you go over the banks of George's River after a flood, you would not scrape as much mud as would cover your knife? Tanks varying from twenty to thirty feet, I have made tight by putting in soil. Sometimes manure from stables has forced its way down, and made tanks tight, showing that if you can introduce matter into the small interstices there is a chance of a dam becoming tight.
1528. But supposing you are dealing with a pure water and an easily moved bottom; would not the tendency be rather to carry away the sand, and increase the leakage through the sand at the bottom? With a depth of forty feet, and an embankment of five or six to one carried to a considerable height above it, I think the work would consolidate, so that there would be no danger of leakage from a moderate pressure.
1529. *Chairman.*] The drainage is partly through the Wianamatta shales, and would, no doubt, bring down some clay? It would settle.
1530. *Mr. Moriarty.*] But is there any necessity for its settling near the dam? If there is any considerable current and the bye-wash is close to it, it would draw all the impurities near to it.
1531. And you assert, as I understand you, that you consider a dam could be made and guaranteed to be water-tight on that bottom? I would have no hesitation, as an engineer, in undertaking to make such a dam, always bearing in mind that the water is not to be raised by the dam to any great height. For practical purposes, if you retained four feet of water above the level, you would have twelve millions of gallons per day. You could be sure of this, if you had three inches of water saved all over the watershed per annum.
1532. Then you start with it at four feet above high-water-mark, as I understand? The level of the bottom of the bye-wash should be at least four feet above high-water. It would then be level with the top of the water I wanted to save.
1533. And what height would you make the dam—You have heard what Mr. Holt has said of the floods, and you have heard also of the drainage and the extraordinary rainfall? You are speaking as if there were severe floods at Sans Souci; but, from inquiries and observation, it does not appear to me that at this point the river is affected by floods. They seem to have increased the height of the river so little as not to have been noticed by the people living there.
1534. But if you placed a dam there, you would prevent the discharge of the flood-waters, which now goes on, and bring about a totally different condition of things? Yes. We should have to provide for that changed condition of things, by making a bye-wash of sufficient length and at a proper level to carry off the greatest flood.
1535. Then practically you would get the same conditions? No; the conditions would be changed, inasmuch as the water would be rushing over the weir. The velocity would be less if it were running against the salt water.
1536. No doubt it would discharge more rapidly over a weir than out of the present channel? Yes. There is a small roadway crossing Cook's River now, near the toll-bar. Any one looking at that would imagine that if the base of that road were four times the width, it would be easy—by raising it—to keep the water of Cook's River four or even ten feet above the level of the sea-water.
1537. But I do not find that these things are done so? It is seldom that a person would attempt to dam a river of this description, unless he were compelled by necessity or financial considerations. It seems that Sydney is not receiving a proper supply of water, and it is necessary to consider the best and cheapest means of making suitable provision for the wants of the citizens. It becomes a question more of finance and calculation as to the relative cost of different schemes, taking into consideration that the one scheme would be complete by gravitation—the best of all modes of supply—and that, in connection with the other, there would be the cost of pumping.
1538. Do I understand you to say that there is difficulty, or that there is no difficulty, beyond the financial considerations, in constructing a dam of that sort? I have said that I would have no hesitation in taking a contract to make a dam across that river. There would be difficulties, but not such as would be, in my opinion, insurmountable.
1539. Are there any means by which you could puddle the clay, or consolidate it in such a depth of water? I would endeavour to get some sort of stone structures, or banks, and put broken stones or sand, or whatever the neighbourhood would afford, between them. The upper part of the dam must be constructed with stone facing, well pitched, to withstand the effect of the waves. But it would not do to allow the water to flow over such a bank, and therefore the waste weir or bye-wash ought to be of sufficient size to take away the largest quantity of water that has ever been known to flow down George's River.

1540. Do you think that the stones in the centre would have any effect in stopping the leakage—would you not have to depend on the clay puddle? I think that such a weight going on to a body of sand would have a tendency to consolidate. It would be laid in water instead of being mixed with water, as when used in a dry place. A. K. Smith, Esq.
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1541. Do you think that would make any great difference? You cannot, of course, take so much care when you are tipping great quantities of material into deep water, as when you are treating them on land.
1542. That is against the probability of success, is it not? Yes; but if you carry along two dams of stone parallel with each other, and fill in between them, I fancy you would get a tight dam for a moderate pressure of four or five pounds to the inch.
1543. *Chairman.*] Those retaining banks would be of materials thrown in loose? Yes.
1544. Would they be of large or small stones? Whatever they could quarry them, so as not to expend too much labour.
1545. *Mr. Moriarty.*] Sufficient to keep up the hearting? Yes.
1546. That would consist of stone, and clay, and gravel? Yes; if there was plenty of clay in the district I would get it by all means. I noticed clay near the river.
1547. Have you formed anything like an estimate of the cost of such a work as that? I have not.
1548. And you would not hesitate to say that you would guarantee that stone, and clay, and sand, tipped in in that way—the same as a railway embankment is formed—would be watertight? I think it could be made watertight.
1549. Do you not think the stone would keep it open? No.
1550. Are you not aware that breakwaters have one-third of their space vacant? But they have an entirely different object. They are made simply to break the surface of the waves.
1551. I am speaking of the cubic contents. Stone structures of that kind generally have one-third of their space vacant. If you measure a cubic yard of stone, you find one-third of the space vacant. It is the same with all open stone structures. Might not the same occur in the construction of this bank? I think you could run clay, earth, and sand in amongst them, so as to make them watertight.
1552. How? I have stated that I would run two dams across the stream, of considerable breadth at the bottom, and carry them to the top. The water would be comparatively still; and, by going on regularly instead of letting the water scour through, you might, with properly prepared materials, make them tight between the two dams.
1553. Do you not think that the action of the tide rising and falling, and the tide setting first one way and then another, would interfere with your sand and clay? No doubt it would interfere with it. You might put sheet piling across it as well.
1554. Do you not think that any sand thrown in under such circumstances would be washed away by the scouring of the current? You might prevent it by using sheet piling.
1555. Do you think sheet piling would be necessary? I think it would; but I am not in such a position as I would like to be in regard to this matter. I am asked to give evidence on a very important engineering subject; and I would not like to say at a venture that which, upon mature consideration, I might think to be wrong.
1556. Are you still inclined to say that you would not hesitate to undertake to make such a dam watertight? I would not hesitate to undertake to make it watertight for all practical purposes in connection with furnishing a supply of water to the city of Sydney; but how it could be best done would be a matter for careful consideration.
1557. Do you mean that you would not hesitate to undertake to make the dam watertight absolutely or relatively? Relatively. There might be some percolation of the fresh water at certain times of the tide.
1558. If there might be such a thing, would you undertake to measure the percolation, and say how many million gallons it amounted to? No.
1559. Might it not exceed the whole of your estimate? No. If it did, it would be no dam at all. You have only to conserve a small quantity of water.
1560. Pardon me; you would have to store a large quantity? I believe one good storm would give all that would be necessary to supply Sydney for twelve months.
1561. *Chairman.*] The question would be, how long would the natural percolation take to empty it? Just so.
1562. *Mr. Moriarty.*] Let us suppose an experiment—that you enclose a small piece of the sea-beach with a perfectly good clay puddle dam resting on the sand; do you think the water would rise in your dam when the tide rose outside? That would depend on the distance.
1563. Do you think that when the tide rose outside, it would not also rise inside from underneath your dam? It might on that sand.
1564. And supposing you poured any quantity of water you liked into your dam, would it not be absorbed by the sand and percolate into the sea? I do not think so. The swamps between Cook's River and George's River seem to me to be all in sand, and yet they retain water. I do not know what the level is.
1565. The level is a few inches above high-water-mark; but these swamps have a coating of peat, which is a perfectly retentive material. It has been used as a core for the Botany dams. I have seen many bogs where upon 6 inches of peat there have been 6 feet of water. These swamps are covered with a coating of peat—you can tell that by the colour of the water? I do not think there is much peat there.
1566. We find peat all over the Botany swamps. But to return to this suppositious case. If you poured ever so much water on that sand on the beach, do you think your dam would retain it? I do not think the sand would hold the water—it would sink down through it until the sand was charged. 1567.

- A. K. Smith, Esq.
7 Sept., 1869.
1567. Do you think it makes any difference whether the sand is thoroughly saturated with water, if there is a difference of level on the two sides? Yes; it depends upon the breadth of your base. You may have a large water-pipe, so long that at the other end the water will not run out. This is simply on account of the friction due to the pipe. Something of the same kind would apply to the length of the base of such a dam. Supposing it were 5 or 6 chains at the bottom, the percolation would not be so likely to take place as if it were of less width.
1568. But do you think anybody could reasonably attempt to measure that amount of percolation? There would be difficulty in measuring it.
1569. Or ascertaining that it did not take place to any great extent? I think it quite practicable nevertheless to make the dam answer its intended purpose. I know a case in point, at one of my own saw-mills in the ranges. The mill was built by some Canadians, and they formed a dam across a creek in the Dandenang Ranges. They made simply a timber frame in the bottom, and when I looked at it I had an idea that it would not be tight because there was nothing at the back, and the fall was considerable. But the creek brought down something which made a deposit, and the dam became perfectly tight.
1570. But do you not think the mere action of the tides during the period of constructing your dam would wash away a large quantity of the clay and light material as you put it in, and that it would assume the slope we find on beaches? It could not do that if the two walls or dams were placed on each side. Neither would I advise leaving any space so that the water would acquire a greater velocity.
1571. Do you think the masses of loose stones would prevent the sand from washing down? I think that if you properly place the broken stone and other material before proceeding to put in your core, it is possible to make such a dam as that of which I have been speaking.
1572. Is not one of the great difficulties in the construction of the Suez Canal the working of the sand from the outside to the inside? I am aware that they are putting down blocks of stone, as they did in the case of the Plymouth Breakwater, thrown in any position.
1573. But the sand works through them: might it not also work through this dam in the same way? I do not think it would. I think it would fill up the interstices, and that the pressure from the top would consolidate the dam still more.
1574. If there was any current there, would it not wash the sand out? It might; but then there is stiff retentive clay in the neighbourhood.
1575. How would you puddle your clay—would it not be likely to be washed away in the shape of liquid mud? No; I should put the clay in in a different state to that in which I should apply it under other circumstances.
1576. You would put it in much drier? Yes.
1577. Would you make certain that clay put into the dam in large dry lumps would work its way into the interstices of the stones? As soon as it softened, I think it would.
1578. Particularly if there was a strong tidal scour running through it? I think that scouring could be greatly prevented, either by the action of the breakwaters, or by sheet piling.
1579. We will assume that the water runs up at present at the rate of two miles an hour. That fills the estuary at one tide to a certain height. If we diminish the sectional area in a certain proportion, and leave (say) only one-third, the water would have a tendency to run up at an inverse ratio. That would give about six miles an hour through the interstices. The clay, I think, if put in very solid (as it must be) would not thoroughly commingle with the other materials—it would go down in clods, and be scoured out. Sand put in would have a tendency to assume a certain slope—it cannot be made to stand in the core of an open-work bank at 1 to 1—it will flow through the interstices of the stone till it assumes its natural slope? Still, I fancy that if you put two banks of stone, and then have two rows of sheet piling again between these, you could allow as much water to pass it as you chose. You could diminish or do away with that tendency of the tide to scour away the material you put between two such dams—they would, in fact, become a cofferdam, with this difference, that it would be upon sand, instead of into rock or clay.
1580. And you are still of opinion that a dam of loose stones such as you have described, made upon the sand, would be watertight? I do not say that it would be perfectly watertight, but it would answer its purpose in conserving a supply of fresh water.
1581. Do you not think it would sink into that sand? Yes, and so consolidate.
1582. Then, instead of having a sand-bed to rest on, it would have an open stone bed? No; the sand would mix with the stone. It is easy to imagine a dam placed across a river, without a puddle-bank, which would keep up the water six or seven feet, and do all you want it, and yet let a considerable quantity pass away.
1583. But the question is, whether one would be justified in going in for a scheme which involves such manifest difficulties; whether one would be justified in ignoring the difficulties, particularly as you admit that you cannot measure the leakage. If there is a fault anywhere you cannot detect it—you cannot see where it is, to correct it. If, in putting in the core, the work is not properly done by the contractor or workmen, you do not detect the error until you find you cannot keep the water in; and then it is too late to remedy it. In such a work, do you think there would be any possibility of correcting a defect? No; prevention would be the thing for an engineer to look to, and not correction.
1584. And from your knowledge of workmen and contractors, would you say that such a work could be guaranteed by any engineer to be watertight? I have said that I am aware of the difficulty of making a dam across that river; but seeing that it would be necessary only to maintain the water to a height of 4 feet, I do not think those difficulties would be insurmountable.
1585. That gives you nearly 10 feet at low-water; and then, in addition to that, you have the head, in times of flood, tending to force its way over that work. Supposing that the water,

water, in times of flood, rose 10 or 12 feet above the level, you would have all that water forcing its way against the dam? The bye-wash should be of sufficient length to allow it to escape. I do not think it would be advisable to allow the water to rise 12 feet.

1586. Well, put it at 6 feet—that is, 16 feet of a head inside your dam—Do you think an open-work dam on a sand bottom would be tight with such a pressure? Not unless it had a good wide base and sheet piling.

1587. And it would depend mainly on the sheet piling—Do you think any man would engage to make sheet piling such a depth tight from top to bottom? Although there are difficulties, I do not think there is any impossibility about it whatever.

1588. It appears to me that the difficulties are so formidable that I, for one, should be timid in undertaking to overcome them? I admit that they are formidable, but I do not think they are insurmountable. It is a question of some difficulty to begin with, and then a question of expense, but I do not think the difficulties in the way of constructing such a dam are insurmountable. First of all, careful surveys should be made to endeavour to find some part of the river where there is a pretty equal bottom. Numerous surveys should be taken, seeing that there is so large an area of storage ground. You might find places where the sectional area is not half what it would be in other places, and the depth not more than half. I am not prepared to say that there are such places, but before making the dam it would be desirable to exercise great care in the selection of its site, and to endeavour to find such a point.

1589. But the great storage capacity is in the lower part of the river. As you go up, the river becomes quite narrow? The storage is so enormous that if you took away a quarter of it you would still have abundance. It seems to me that you might get places where the river is only half the distance it is down there, and where probably the depth may be less. Still, in making the dam higher up, there might be difficulty in getting a bye-wash.

1590. Do you not think this would be a very expensive kind of work? Yes, it would be very expensive, for if done at all it must be done very carefully and every precaution taken.

1591. I have roughed out the cost, and I find that the sheet piling alone would come to some £180,000? If the difference was not very great, I would strongly recommend the gravitation scheme, but if there would be a difference between this and the gravitation scheme of some three hundred or five hundred thousand pounds, it would then be a matter worth thinking of. The only difficulty with which you have to contend is the erection of that dam, and keeping it tight under the peculiar circumstances of the case.

1592. That has always seemed to me to be the key of the whole work. The other matters are questions of detail which need scarcely claim consideration. The dam is the only thing I should fear? That is the only difficulty I see.

1593. And then having overcome all the difficulties, you have only a pumping scheme? Quite so.

1594. And do you not think that in a great work of that kind there would be accidents from floods and heavy gales? I have been led to believe that the sea does not get rough in that place. It is not on a long stretch.

1595. Still I dare say there would be some breaking in a heavy gale? You would have to pitch the inner bank to the flood level, and the outside where it would be subject to the action of the waves.

1596. Do you not think that a bank constructed in that way would be liable to settle from time to time? That would depend greatly on the width of the base, and the making it of sufficient height to allow for subsidence.

1597. But if subsidence takes place, will it not be irregular in regard to the disposition of materials—will there not be a little more clay in one part, and a little more stones in another—that would make a difference? I do not think the cohesion of the materials would allow it. I think they would be sufficiently free to go down in a body. We are speaking of it under the most favourable circumstances. There would be slopes on each side which would act as abutments, and the water would assist them.

1598. I do not agree with you that the water gives any abutment? We know that if you were to take water out of half the canals, you would bring in their banks. In those cases the water acts as abutments.

1599. I think that most materials have a tendency to assume a flatter shape in the water? It would be often dangerous, according to the opinion of many engineers, to take the water out of canals.

1600. That is because the banks are cracked; but I do not think it affects this question? I know an instance, where I constructed a dock, and it was found necessary to make some alterations. I cautioned the engineer against taking the water out, but he did take it out, and he broke in both the sides. It was made in a sort of black soil.

1601. But with reference to settlements; if any settlement did take place at any part of this dam, do you not think it would be likely to lead to serious leakage? I think, considering there would be water on both sides, that the settlement would tend more to the consolidation of the bank than to make it leak.

1602. But the effect of settlement is to alter the arrangement of parts? Yes—to consolidate them in many instances.

1603. And in others, perhaps, not to do so? It might not do so in particular instances.

1604. If a bank be carried out a certain height from one end to another, and there is a settlement in perfect mathematical uniformity, I can understand that the effect would be consolidation; but if the settlement did not take place with mathematical uniformity, the effect would be dislocation, and therefore, leakage? In railway embankments, we look for the greatest settlement at the greatest height.

1605. And according to the material of which the embankment is constructed? Yes, and the mode of construction.

1606.

A. K. Smith,
Esq.
7 Sept., 1869.

A. K. Smith, 1606. But railway embankments of great height are carefully constructed, and the material is put on in successive lifts. The consolidation goes on as the work proceeds. Here the bank would be made under very different circumstances: the material would have to be tipped into deep water, and be subject to a powerful current? There would be a current, but I do not think the term "powerful" should be applied to it.

^{Esq.}
7 Sept., 1869.

1607. I know there is a current there, because I put that punt at Tom Ugly's Point, and laid the chain across. We found a rapid current there. I noticed the other day that there was a current; I should say it was running not less than two miles an hour? That would be supposing you had nothing obstructing it; but suppose you had sheet piling, and two rows of stone breakwater, you would then arrest the current and its action.

1608. I have had experience of that sort of work, and I have found this to take place:— There has been a strip of (say) one-eighth of an inch between the piles, and at the bottom some little opening took place. Through this aperture you have a tremendous scouring, and the sand into which your piles are driven is cut away? Do you think that would take place at a depth of forty feet?

1609. I am certain it would. You would have the same scour forty feet deep as at the top, owing to the velocity due to its head. I have found this when dealing with rivers having bottoms of free sand. The sand is invariably cut away by the rush on each side, and the piles become loose.

WATER SUPPLY OF SYDNEY AND ITS SUBURBS.

APPENDIX.

To the President of the Commission to inquire into a Supply of Water for the City of Sydney.

Sir,

In accordance with your request, I have the pleasure of putting on paper the observations I have made on the swamps at Botany during the last thirty-eight years.

My first visit to that place was in December, 1829, being then a Sub-lieutenant on board H.M. Sloop "Zebra," on a passage to India, for promotion. The ship came here freighted with British coin, to replace the dollars and mutilated dollars (rings and dumps), that were then in circulation in this Colony.

During that month, in company with James Raymond, Esq., then Postmaster of New South Wales, and Mr. Garling, of the Customs Department, I rode from Sydney to Botany Bay, keeping the swamps principally on our left hands. There was then only one path between those places, which wound about over the sandhills. Our object was to visit the spot on which the unfortunate La Perouse and his companions were last known to have refitted their ships—the place where the monument has since been erected; but we were disappointed in this, *not being able to cross a stream that ran out of the swamps into the bay*, although we were on horseback. This, I apprehend, was where the present pumping works now are. It had been somewhat swollen by late rain, but there was evidence of a copious stream at all times.

I again visited these swamps in 1833 and 1834, after being promoted to a lieutenancy in H.M. Ship "Alligator," under the command of Sir George Lambert, the present Commodore's father. I did so in company with Baron Hügel, the present Austrian Ambassador at the Belgian Court, an enthusiastic naturalist, who was sailing in the "Alligator" as Sir George's guest.

Our principal object was the collecting of aquatic plants, which at that time grew there in considerable variety, as a great part of the surface was covered with water. This occupation led us over almost every part of the swamp that we could obtain footing on; but it was very difficult to travel, and in many places impossible to do so, from its semi-liquid state. We at all times carried a piece of rope, to drag each other out should we get immersed.

Much stunted timber and some large trees were at that time growing on the sand slopes in sheltered hollows, and the whole was covered with a thick coat of brushwood, that effectually prevented the sun's rays and hot winds from penetrating to the surface.

I have now many specimens of *Utricularia* and other plants of a similar nature we collected there, that can only exist in quagmires, and a sketch of the Waterloo Mills, I then made, which shews the building standing on the verge of an extensive marsh.

In the early part of 1834 the "Alligator" was anchored in Botany Bay, when the late Admiral King, Sir George Lambert, and myself, closely examined the shores of the bay. We were then employed inspecting the Harbours on the Southern Coast, to ascertain their capabilities.

It was at this time I made the survey of Twofold Bay that has been published by the Admiralty, and is still the only one in existence.

In January, 1835, I descended one of the tunnel shafts of what is known as Busby's Bore, and traversed the whole length that was then excavated, for the purpose of examining the nature and dip of the underlying rocky strata, and the manner in which that work was executed.

At that time the tunnel had been bored from Hyde Park to a point about midway under the first swamp lying south of the present Military Barracks, adjoining the Rifle Practice Ground, and was being actively proceeded with. There was then a considerable stream of water running through it into Sydney, which was teeming into the bore through the top and sides of the excavation; so much so, that I had not been in it more than a quarter of an hour before my clothes were thoroughly saturated. The swamp overhead was in a very moist state, and, even at that time, was being denuded of its scanty covering of timber. The tunnel was evidently tapping it underneath; and I observed, a few years after, that it was drained almost as dry as it now is.

Now, comparing that state of those swamps with the present aspect of the flat, it is evident a very great change has taken place. The stream that was once so copious into Botany Bay has nearly ceased to flow, unless heavy rain has fallen; the aquatic plants have entirely disappeared, and could not now exist there in the present dry state of the ground; the manufactory is no longer worked, for want of water; and an equestrian can now ride with safety over any part of what was originally a fluid morass, with the exception of a few acres in the immediate vicinity of the pumping machinery, which is becoming rapidly drained, and will shortly assume the same character as other parts.

Numerous

Numerous fires having passed through the brushwood in dry seasons, opened the way for parching winds and the fierce rays of the summer sun to dry the ground; cattle and horses then advanced to browse on the scant but moist herbage so grateful to them in warm seasons, still further hardening the surface by their continual tramping; when man followed, denuding the soil of its brushy covering, and cutting drains, either to collect the remaining water for his uses, or to free it of an excess of moisture, for the purpose of growing vegetables.

The whole area has thus been converted from what once may have been likened to a *great sponge*—that received the pure water from heaven as it fell—that, by its adhesive attraction, held it in store from seasons of abundance to those of scarcity—that, by its massy coating of brushwood, protection was given against waste by evaporation, until overcome by the greater force of gravitation, it gradually gave out its precious burden, cool and unpolluted for the use of man. And well had it been for the citizens of Sydney had this wondrous piece of mechanism, this glorious gift of God, apparently for the especial use of this city, been appreciated, and kept intact, instead of the wanton waste that has been going on—been permitted.

What has the scene now become! A tract of *barren sandhills*, that immediately the rain descends on them, rushes to the sea in torrents, leaving the ground, after a few weeks, as dry and parched as it was before it fell.

A small portion of the swamp, near to the pumping machinery, is still performing its original functions; but this, as I have said, is becoming still more rapidly changed, and must, in the ordinary course of nature, cease in a very short time to furnish any appreciable supply.

The character of the flat is entirely changed, and it is my opinion it can no longer be trusted to for a supply of water; its original powers have been destroyed, and the porous nature of the soil that formerly tended to harbour a superabundance is of the very worst description to establish retaining dams on; therefore I have no faith in their being made effective, no matter how well they are constructed.

I remain,
Sir,

Your very obedient servant,

5th November, 1867.

THOMAS WOORE.

HISTORY OF THE WATER SUPPLY OF SYDNEY.

THE following paper was read by Professor Smith, before the Members of the Royal Society, on Wednesday, 14 October, 1868:—

It is my intention to give, in this paper, a brief account of the manner in which Sydney has hitherto been supplied with water, reserving for some future occasion the question of the improvement and extension of the supply.

The first fleet sent out from Great Britain to found the Colony of New South Wales arrived, as you may be aware, in Botany Bay, on the 18th, 19th, and 20th January, 1788. Being disappointed with the capabilities of that locality,—“which,” says Mr. White, the Surgeon-general of the Expedition, “does not, in my opinion, by any means merit the commendations bestowed on it by the much-lamented Cook, and others whose names and judgment are no less admired and esteemed,”—the Governor (Phillip) and a small party went round to ascertain if nothing better could be found in Port Jackson. “The different coves of this harbour,” we are told in “Phillip’s Voyage to Botany Bay,” published in 1789, “were examined with all possible expedition, and the preference was given to one which had the finest spring of water. * * * This cove is about half a mile in length, and a quarter of a mile across at the entrance. In honor of Lord Sydney, the Governor distinguished it by the name of Sydney Cove.” In “Collins’s New South Wales,” published in 1798, it is said that “the spot chosen [for the settlement] was at the head of the cove, near the run of fresh water which stole silently along through a very thick wood, the stillness of which had then for the first time since the creation been interrupted by the rude sound of the labourer’s axe, and the downfall of its ancient inhabitants.” In this judiciously selected spot, abounding in natural beauty, and possessing many of the features (though by no means all) that ought to mark the site of a great city, the fleet was brought from Botany Bay on the 26th of January. The whole of the people were landed by the 6th of February, and were found to number 1,030. Thus was planted the germ—not, it must be allowed, a healthy or promising one, but still not devoid of irrepressible British vigour—which, through many vicissitudes and varying fortunes, has grown and expanded until, in eighty years, it has overspread a great portion of this island continent with nearly a million and a half of energetic, self-governing, English-speaking people. At the head of Sydney Cove, and on the banks of the clear running stream, the tents and huts of the infant settlement were erected. It was not long before the supply of water became a source of anxiety, for the stream was scanty, and doubtless sometimes stopped running, but we are told that the people soon began to dig wells, and were successful in finding springs.

By a notice in the *Sydney Gazette* of date October 19th, 1811, it appears that when the settlement was only in its second year, it fell into great straits for want of water. “From the best information we can collect,” says the *Gazette*, “so intense a drought at this time of the year has not been witnessed since the year 1789, when the

new

new colonists suffered a parching thirst for several months, the springs from which they had been before supplied either failing totally, or yielding scarcely a sufficiency to support nature."

As the town increased, wells were multiplied, and the rivulets falling into other parts of the harbour were laid under contribution, particularly the copious stream running into Blackwattle Swamp; but for a number of years the Tank Stream was the main dependence, and strenuous efforts were made, from time to time, to husband the supply and preserve its purity. Three reservoirs or "tanks" were excavated in the rock near the mouth of the stream, close to the point where Hunter-street and Pitt-street now intersect. I have not discovered the exact date of the construction of these tanks, but it must be at least as early as 1802; for a "General Order" was issued on the 14th of October of that year, and republished in the *Sydney Gazette* of 18th December, 1803, of which the following is an extract:—"If any person whatever is detected in throwing any filth into the stream of fresh water, cleaning fish, washing, erecting pigsties near it, or taking water up but at the Tanks, on conviction before a Magistrate their houses will be taken down, and forfeit £5 for each offence to the Orphan Fund." It is further enjoined that the fences along the stream should be kept in good repair—that no person might have access to it but at the Tanks. Allusion is made to this fencing in the *Gazette* of 16th October, 1803:—"The enclosure of the Tank, undertaken by Government, will, when completed, considerably improve the town in its appearance, and render universal benefit in the preservation of its excellent stream. Every appearance of rubbish has been removed from its sides, and the crystal current flows into the basin with its native purity."

In the "Government and General Orders" of date 15th September, 1810, I find the following:—"It having been represented to His Excellency the Governor as a very serious grievance, that the stream of water which flows through the town of Sydney, and the Tanks which have been constructed thereon (at considerable expense), for the purpose of procuring an adequate supply of pure and good water for the necessary accommodation and benefit of the inhabitants at large, are frequently polluted and rendered totally unfit for those valuable purposes (which become the more important by the scarcity of wholesome water with which the town is supplied), and it thence becoming an object of the first consideration to the health and comfort of all persons residing within the town of Sydney that said stream and Tanks should be strictly preserved and guarded against all abuses whatever, His Excellency deems it necessary to issue the following Orders:—

- "1. That no necessaries, slaughter-houses, tanneries, dyeing-houses, breweries, or distilleries, shall be in future erected on or near to the said stream, tanks, or springs flowing thereto * * * and further, that all * * * [such nuisances] already erected or established thereon shall be immediately pulled down, or otherwise suppressed, under pain of the owners or possessors being proceeded against and prosecuted under the Nuisance Act.
- "2. That no person shall presume to throw any dirt, rubbish, ashes, dirty water, or filth of any kind, into the tanks, or streams supplying them, or into any of the springs or streamlets flowing to and past the said tanks.
- "3. That no linen, clothes, or any other article, shall be washed in the said tanks, stream, springs, or streamlets.
- "4. That no pigs, goats, sheep, horned cattle, or horses, shall be permitted to drink at, or otherwise render foul, the said waters, or any part of them, under pain of forfeiture of said animals, as already prescribed in His Excellency's public notice, dated 11th of August last."

The next reference that I find to the Tanks is in the *Sydney Gazette* of March 2nd, 1811:—"The long prevailing drought has destroyed every hope of the maize crop, which is unfortunately past recovery. A scarcity of water has also been the consequence, scarcely ever before witnessed. In Sydney the Tanks have been several weeks empty, and those who were in want of water obliged to collect it from small cavities in the spring course above the Tanks, which has afterwards been sold at from fourpence to sixpence per pail." Heavy rains fell soon after the date of this notice; and, for several years thereafter (with the exception of 1814-5), floods were more characteristic of the country than droughts. So frequent, indeed, were these floods, and so destructive, that fears were entertained that the cultivation of the alluvial flats of the Hawkesbury, on which Sydney then greatly depended, would have to be given up.

In 1820 there were two or three heavy bursts of rain, causing floods, but there was also a continuance of dry weather, which brought out the following notice in the *Gazette* of October 28:—"The present dry season of the year being indicative of an approaching long drought, which will be much felt throughout the town of Sydney, we presume it would be advisable, as much for the sake of decency as cleanliness, to pay a little if not due regard to the General Orders in existence relative to the preservation from all filth and impurity of that valuable and serviceable reservoir the Tanks. With much pain we have lately observed individuals washing themselves in this stream of water, particularly in that part that runs central from King-street, because that spot is almost secluded from every eye, that of curiosity excepted. In former times the punishment for this offence, it may be recollected, was summarily severe"; and they go on to quote from the General Order of September, 1810. In 1823, the *Gazette* (November 6) again comes out in defence of the water supply, by a republication of the General Order of September, 1810, prefaced by the following words:—"In consequence of certain intelligence having reached us, to the serious injury and annoyance of the inhabitants of the town of Sydney, that the stream of water which flows through the

the town, and the Tanks which have been constructed thereon, at a vast expense to Government, are systematically polluted, and rendered totally unfit (if known generally) for the valuable purposes intended, we have thought it advisable to publish the following extract, &c." A drought of some severity began in this year, and continued till towards the end of 1824. In the *Gazette* of March 18th of the latter year we read:— "As we have had but little rain since July, water has been scarce in town; but then it should be gratefully remembered what a providential supply Blackwattle Swamp furnishes in the most dry season. It would be well to build a reservoir or tanks at this spot. * * * The kindness of the Government will, it is humbly presumed, ever secure this spot from the clutches of private individuals." Of course the kindness of the Government did no such thing; and indeed, it would have been utterly impossible to preserve the purity of the streams that drain the area on which Sydney stands; but had anything like the same care been bestowed on the waters that drain into the north side of Botany Bay as was fruitlessly lavished on the Tank Stream, Sydney might have been abundantly supplied at the present day; and yet, perhaps, it was a mere question of time, and it might have been no more possible to preserve permanently the drainage area of Shea's Creek (the chief of the Botany waters lost to the public) than it was to save from defilement the streams flowing into Darling Harbour and Sydney Cove.

The drought of 1823-4—we learn that 35 inches of rain fell in the former year, and only about 19 inches in the latter (*Gazette*, 10th March, 1825)—drew public attention more strongly than ever to the deficient supply of water; and at the Quarter Sessions commencing on November 9th, 1825, the presentment of the Grand Jury contained the following passage:—"The Grand Jurors have to lament that their repeated presentments of the inadequate supply of Sydney with water have been hitherto disregarded. They have, therefore, again strongly to urge the indispensable necessity of some immediate measures on this subject. The principal stream whence the inhabitants are at present supplied with this necessary article they find still unclosed, and polluted by common sewers, and every description of filthy pools emptying themselves into it, which must render it of highly deleterious quality." And at the Quarter Sessions, in February, 1826, the subject of the water supply is again brought forward in similar terms. The despairing attempts to preserve the Tank Stream, and the pathetic way in which the *Gazette* holds up its condition, have not a little of a comic element. "We actually beheld," says the *Gazette* of 1st March, 1826, "upwards of half a dozen boys bathing in the very stream from which, it is most probable, the next moment many of the inhabitants of Sydney were obliged to supply themselves with water for culinary purposes." These representations, equally with the authoritative Orders of Government, were all in vain. Nothing could save the Tank Stream. Its inevitable destiny was to become a filthy sewer, and, in that capacity, it has long been covered over and hidden from public view. After 1826 I find no further reference to it as a source of water; and, indeed, if you consider its limited drainage area, it is remarkable that it should have served Sydney so long. If a person start from the Custom House, and proceed (by Bridge-street and Macquarie-street) to the middle of Hyde Park, then across to Bathurst-street, thence to George-street, and round by the Police Office to York-street, thence to Church Hill, and back to the Custom House by Bridge-street, he will have enclosed (in a circuit of about 2 miles) the whole area drained by the Tank Stream, amounting to no more than 178 acres. Part of this area, however, was well fitted for the retention of water; for I have been informed by an old colonist that a spongy swamp once stretched from about the position of King-street back towards Park-street, and laterally towards George and Castlereagh streets—such a swamp as may still be seen in several places near Sydney, giving rise to streams of a remarkably permanent character.

The year 1826 began with heavy rain and floods, but soon changed to a prolonged drought, which must have helped materially to bring the question of water supply to a crisis. "This year," says Captain Sturt, "commenced one of those fearful droughts to which we have reason to believe the climate of New South Wales is periodically subject. It continued the two following years with unabated severity." If we consider further that the population of Sydney now amounted to 10,000, it will be understood that a new and more abundant source of water was imperatively needed. In 1824 Mr. John Busby had arrived in the Colony, with the appointment of Mineral Surveyor to the Government, and his labours were soon turned, by Sir Thomas Brisbane, to a search for water. After examining several localities near Sydney, he ultimately reported (in 1826) in favour of the Lachlan Swamp, lying to the south-eastward of Sydney, in the hollow between Paddington and Randwick. Mr. Busby's plan was adopted, and the work of driving a tunnel from Hyde Park to the Swamp was commenced in September, 1827. From the unmanageable and unskilful character of the labourers employed (convicts), and from unforeseen difficulties in the strata that had to be gone through, the undertaking was much more tedious and difficult than had been anticipated, and it was not till June, 1837, that it was brought to a successful termination. The tunnel, however, began to supply Sydney with water as early as 1830, by virtue of drainage from the surrounding rocks. The whole length of the tunnel is 12,000 feet, upwards of $2\frac{1}{2}$ miles, with an average width of 4 feet, and height 5 feet. Twenty-eight vertical shafts were sunk from the surface, varying in depth from 20 to 80 feet; the whole mass of excavation amounted to 255,930 cubic feet, fully nine-tenths being through solid rock; and the total cost was £24,000. The catchment basin of the Lachlan Swamp is about two square miles, but probably only about half that area actually drains into the tunnel; and as no provision is made for retaining storm-waters at the swamp, a great proportion of the rainfall runs down to Botany Bay. The tunnel remains in good order to the present day, and is used to supply the lower parts of Woolloomooloo, and a portion of the city along Darling Harbour, between Bathurst-street and Erskine-street. The termination in Hyde Park is

is about 104 feet above high-water-mark. The daily delivery varies much with the state of the weather, but it may be taken at somewhere between 300,000 and 400,000 gallons, which at the time the tunnel was opened was a fair supply for the population of 20,000 that then existed in Sydney. This quantity represents less than one-fifth the annual rainfall on the area draining into the tunnel. An important feature of the original scheme was to have a reservoir excavated in Hyde Park, capable of holding 15,000,000 gallons, but this, unfortunately, was never carried out.

Soon after the opening of the tunnel there commenced a calamitous drought, the severest and most general of which we have any record. Cotemporary accounts represent the Colony as reduced to great straits through the destruction of vegetation and live stock. One writer says:—"No words can express the miserable appearance of the country. * * * There is neither food for man nor beast. * * * God knows what will become of us all, if some change does not take place very soon." I regret that I can find no record of the rainfall at Sydney, or at any other part of the Colony, for the years 1838-9, during which the drought prevailed; but in Captain Stokes's *Voyage of the Beagle* there is a distinct assertion of the total absence of rain for a period of perhaps eight or nine months. He says:—"For some time previous to our former departure from Sydney, during the whole of our absence, and for several months subsequent to our return, not a drop of rain fell." Now the "Beagle" left Sydney on the 11th November, 1838, and returned 10th March, 1839. The close of the above period must have been May 29th, for I find this record in the *Herald* of May 31st:—"It rained very hard in Sydney on Wednesday night, blowing a perfect gale of wind." It is usually stated, however, that the drought did not break up till October.

There is evidence that, during this distressing period, the tunnel never altogether stopped running, although the supply became scanty. Even so early in the drought as 5th November, 1838, I find this statement in the *Herald*:—"Great distress exists in Sydney, especially at the northern end, in consequence of the scarcity of water. The stream from the pipes on the Racecourse is very small—so small that the men cannot fill the water-carts without waiting four or five hours for a turn. Threepence per bucket is the price now asked—a heavy tax upon poor people." I have been assured by a gentleman who lived in the northern part of Sydney at that time that he had to pay as much as sixpence a bucket. The increasing deficiency of water led the authorities to look about for some fresh source, and the Dam at Cook's River was begun about that time, with the view of increasing the supply. Speaking of the disposal of some prisoners, the *Herald* of 13th May, 1839, says—"The men are to serve the probationary period at Cook's River stockade, where they will be employed at the dam which is to supply Sydney with water." This dam, when constructed, was not found to exclude the salt water, and no further steps were taken in that direction.

The great drought of '38-39 was succeeded by nine years of abundant rain and frequent floods. During this wet period the tunnel seems to have kept Sydney pretty well supplied—at least I find no records of scarcity, nor of schemes for increasing the supply—but in the year 1849 there occurred a drought of considerable severity, and the water question again started into prominence. In that year the rainfall, as measured at South Head, was only 21½ inches (the average being about 50 inches), while the population of Sydney had increased to about 40,000, or double what it was when the Lachlan Swamp was first tapped. I find that in April, 1849, the Water Committee of the City Council directed the City Surveyor (Mr. F. Clarke), to examine the swamp and tunnel with the view of improving the supply. The Surveyor sent in his report in December, recommending that a dam should be carried across the lower part of the swamp, so as to form a lake of 40 or 50 acres, with an average depth of 4 feet, and to construct a reservoir of masonry near the east end of the tunnel, 25 feet higher than the lake, and capable of holding 10 million gallons; this reservoir to be filled by pumping from the lake. A commencement of the proposed dam was made, but it was soon abandoned, and the remaining part of the recommendation was neglected. The next movement was the appointment, in January, 1850, of a special Committee of the City Council, "to inquire into and report on the best means of procuring a permanent supply of water to the City of Sydney." This Committee did not close their labours till February, 1852, when they sent in a long and carefully-compiled report—the result evidently of a laborious investigation of the whole question. This report gives the population of Sydney at nearly 50,000 (the census of 1851 gave about 45,000, and there was a large accession about that time in consequence of the discovery of gold); the number of houses 8,482, of which only 2,300 were supplied with water; the assessed annual value of city property, £232,678; and the gross water revenue, £3,493. In discussing the mode of improving the water supply temporarily, the report condemns the embankment proposed by Mr. F. Clarke, and recommends instead that a trench should be dug at the lower part of Lachlan Swamp, and the water pumped from thence to a reservoir at Paddington, 207 feet above sea level. With regard to a permanent supply, the relative merits of George's River, Cook's River, the Nepean, and Lord's Dam at the mouth of the stream draining the Lachlan and other swamps, are discussed, and the preference is given to the last-named source. It is recommended, however, that this supply be supplemented by the drainage eastward as far as Bunnerong, and westward to Shea's Creek and Cook's River. Before any action could be taken on this report—before indeed, it was handed in—the Governor (Sir Charles Fitz Roy) appointed, in January, 1852, a board of five gentlemen to examine the question afresh. Their report (remarkable chiefly for its length) was laid before the Legislature in August of the same year. They did not take up, as the City Committee had done, the merits of different schemes, but restricted themselves to an examination of the Botany Swamps, as being undoubtedly the best available source; and they recommended that the stream flowing down from Lachlan Swamp should be intercepted at a point about

a mile and a half above Lord's Dam, and the water pumped up to a reservoir at Paddington, capable of holding 12 million gallons. They held that a supply of about twenty gallons per head would be sufficient, while the City Committee assumed that forty gallons ought to be provided.

On the 1st January, 1854, the management of the city passed from the hands of an elective Council to three Commissioners appointed by the Governor; and this arrangement lasted for three years. The Commissioners took up zealously the question of water supply, and passed speedily from inquiry to action. In 1854 (a very dry year in Sydney) they erected a small pumping engine at the lower part of the Lachlan Swamp, for the purpose of throwing more water into the tunnel,—by this adding about 150,000 gallons to the daily delivery; and at the same time, they entered on the necessary preliminaries for obtaining a new and more abundant supply from the lower end of the stream, at Lord's Dam. It was not, however, till November, 1858, that the pumping engines at Botany were set to work, and that system of supply commenced which we enjoy at the present time. Since then we have experienced some very dry seasons, and occasionally the pumps have not been fully served by the stream; but the Municipal Council has always been on the alert, and, on the whole, Sydney has been kept fairly supplied with water. Every dry season, however, has stimulated a fresh inquiry. In 1862, only 24 inches of rain fell, and a Select Committee of the Legislative Assembly was appointed to investigate the state of the Water Reserves. 1865-6 were rather dry (each year giving about 36 inches of rain), and the latter part of '67 very dry, with only 9½ inches in six months, which had the effect of starting inquiry once more. In September last year a Royal Commission was issued, appointing five gentlemen to take up the search for a more abundant and trustworthy supply of water, and these Commissioners have not yet sent in their final report.

The present state of the supply is this:—At Lord's Dam, the drainage of nearly seven square miles falls into Botany Bay. The pumping establishment there comprises three steam-engines of 100-horse power each, two of which are generally kept going night and day. The total quantity pumped last year was 956,000,000 gallons. A 30-inch main, about four miles long, leads to two reservoirs, one at Crown-street, 139 feet above the sea, holding 3½ million gallons, and the other at Paddington, 214 feet above the sea, and holding 1½ million gallons. As these reservoirs contain less than two days' supply, and as the great defect of the system is the want of storage for water in wet seasons, efforts have recently been made to form dams on the Botany stream, so as to preserve a surplus in wet seasons to make up the deficiency of dry. Six of these dams were constructed, but three were partially destroyed by heavy floods in the early part of this year. Had they remained efficient, they would have provided (along with the two ponds near the engine-house) storage capacity for 250,000,000 gallons. The total cost of the works for supplying Sydney (including the two service reservoirs, but excluding the cost of distribution) has been nearly £150,000. The cost of pumping up the water last year was £4,700; and if to this we add the interest on cost of plant, we find the total cost of supplying Sydney (still excluding the distribution) to be about £33 per day, or less than half a farthing per head of the population supplied. The water is distributed through the whole of Sydney proper, together with the municipalities of Glebe, Darlington, Redfern, and part of Paddington, by about 105 miles of piping.

When the present system of supply was completed, in 1858, the population of Sydney and suburbs was about 87,000: at the present time it must be about 118,000. Of this number, about two-thirds share in the public supply of water; and, adding the quantity delivered by the tunnel to that pumped from Botany, it appears that the distribution is at the rate of nearly 40 gallons per head,—a fair supply, if only it could be kept up and fairly distributed, and all could share in it. But we have no sufficient provision for a long drought, and there is nothing to spare for thousands of people in the suburbs, or for the natural increase of our population. Supposing, however, that these defects were remedied, we should not rest content with 40 gallons per head. In a hot climate like this, there ought to be a superabundance of water, as well for public health and safety, as for personal comfort and convenience. Sydney, however, is not favourably situated for an abundant supply, and it cannot be procured without enormous outlay. The words of Sir Thomas Mitchell, in his evidence before the City Committee, in 1850, are as true and forcible now as then—"I cannot but see that the weakest point in the character of this great city—for a great city it is likely to be—is the present insufficient supply of water; I should therefore desire a more certain source."

REPORT on certain Specimens of Water submitted for Analysis by the Sydney Water Commission.

In examining a water chemically with the view of determining its suitability for a town supply, it is rarely necessary to go through the tedious operations required in a full analysis. Every useful end will, in almost all cases, be served by a statement of certain leading particulars. In the first place, the appearance of a water should be noted, that is to say, its condition as to colour and transparency, and whether a sediment falls on standing. The sediment should be examined under the microscope, to ascertain if there

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be living organic germs or animalcules present, as, from the character of these, we may draw useful inferences regarding the organic matter in the water,—whether it be of a harmless, inert nature, or highly azotised, and in a state of putrefactive change. It may be here stated that in none of the waters now under consideration did the organic matter appear to be of the latter character.

Next, the taste and smell of a water should be noted, although here we must guard against hasty inferences from specimens kept for some time in close vessels. A water containing organic matter and earthy sulphates may, in such a case, generate a little sulphuretted hydrogen, causing a bad odour and taste which the water originally did not possess; and the temperature of a water when tasted is of some consequence, for if this be over 70° there may be some disagreeable impression on the sense of taste, which at a lower temperature might be absent. For a town supply, a water should have no smell or taste whatever; and what is really meant when a water is said to have a good taste, is simply that it has no taste at all.

Irrespective of any possible injurious effects on health, it is of great consequence that a water intended for domestic use should be free from taste and smell, and be pleasant to the eye. It should be colourless, bright, and sparkling, and should deposit no sediment on standing. A water may be wholesome in the absence of these qualities, but people will be deterred from using it as a beverage, and will be tempted to substitute fermented and distilled liquors, to the detriment of health and morals.

After the physical qualities of a water, we may proceed to examine the impurities dissolved in it. The total amount of dissolved solid matter is readily ascertained by evaporating a known quantity to dryness at 212°, and weighing the residue. It is customary then to heat this residue to low redness, in order to destroy organic matter; and after weighing again, we put down so much of the total solid matter as fixed, and so much as volatile. The loss on ignition represents the whole of the organic matter, and usually something over. If there be earthy carbonates present, or chloride of magnesium, there will be a loss of carbonic acid or chlorine, but with certain precautions this loss may be obviated. If there be salts of ammonia or nitrates present, there will be loss which cannot be obviated, but in none of the waters under examination did these occur in any appreciable quantity; and in the following table the volatile matter may be taken as fairly representing the organic matter, or only slightly exceeding it.

The fixed or inorganic portion of the dissolved solid matter requires further examination. In the waters undermentioned this consisted mainly of common salt, with carbonates and sulphates of lime and magnesia, besides a little silica and oxide of iron, and sometimes a minute proportion of phosphate of lime. If the total quantity is not excessive, the exact proportion of these ingredients is of little consequence. The only practical point to determine is the proportion of the earthy compounds that communicate *hardness* to a water. By hardness is meant the property of destroying soap. It is usually represented in degrees, one degree being that amount of hardness communicated to a gallon of pure water by dissolving in it one grain of chalk; five degrees, that amount of hardness communicated by five grains of chalk, and so on.

It is hoped that these preliminary remarks will render the appended table sufficiently intelligible. In the first column is given the source whence the water was derived; in the second column, the date of its collection. The third column gives the total solid matter, in grains per gallon, when dried at 212°; the fourth column, the loss on ignition, slightly in excess of the organic matter; the fifth column, the fixed residue of inorganic matter. The sixth column shows the quantity of chlorine per gallon, in any form of combination. In most of these waters the chlorine is combined chiefly with sodium, forming common salt; and if the numbers in column VI be multiplied by 1.65, the product will show the greatest amount of common salt that could be present in any specimen, and in most cases may be taken as only a little, if at all, in excess of the common salt actually present,—the chief exceptions being George's River at Liverpool, Nepean at Blaxland's Mill, South Creek, and the Woronora, all of which contained earthy chlorides in notable proportion. The water from the Mulwarree Ponds is remarkable for containing more sodium than the chlorine present can take up.

In the case of the water supplied to Sydney at present from Botany, it was thought desirable to make a full and careful analysis. The sample chosen for this purpose was drawn from a pipe at the gate lodge of the University, on the 1st November, 1867. There had been no rain, or only a mere sprinkling, for three weeks, and the water was in fair average condition. Temperature of specimen when drawn, 71°. When viewed through a considerable bulk it showed a brownish colour, and it had a faint taste of peaty matter. The following table shows the nature and proportions of the earthy and saline part of the solid residue obtained on evaporation:—

	Grains per gallon.
Chloride of sodium (common salt)	2.863
Chloride of potassium.....	0.112
Chloride of magnesium	0.118
Carbonate of magnesia	0.059
Sulphate of magnesia	0.128
Sulphate of lime	0.233
Silica	0.222
Peroxide of iron, with trace of phosphate of lime	0.082
Total inorganic matter	3.817

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By direct estimation the total solid residue was found to be 5·2 grains per gallon. On ignition, this lost 1·5, leaving 3·7 for fixed salts, and showing that about one-tenth of a grain had been driven off in excess of the organic matter. The hardness of this specimen was not directly determined, but probably it was seven-tenths of a degree. A trace of ammonia was detected.

It is probable that the waters derived from the drainage of sandstone districts would be found not to differ materially in composition from the Sydney water, but other rocks would give drainage of a different character; and, as Wianamatta deposits abound in the county of Cumberland, it was thought desirable to make a detailed analysis of a water derived from these deposits. South Creek was chosen for this purpose, as it drains a district covered entirely by Wianamatta beds. The specimen analyzed was taken on June 10th, 1868, when the creek was in its average condition. The water was clear and colourless, no smell, taste faintly saline, but not unpleasant. The components of the dry residue may be represented as follows:—

	Grains per gallon.
Chloride of sodium	25·72
Chloride of magnesium	3·45
Carbonate of magnesia	2·48
Carbonate of lime	2·00
Sulphate of lime	1·10
Silica and peroxide of iron	1·10
Total inorganic matter.....	35·85

The total solid matter found on evaporation was 38·7 grains; subtracting the above 35·85 from this, leaves 2·85 for organic matter. There may have been a little potash in this water, but it was not looked for, and if present it would go, in the above analysis, to the credit of the common salt. The hardness was 9°.

Action on Lead.—As lead is still used to a considerable extent in the distribution and storage of water, it is of consequence that the water adopted for the supply of Sydney should have no undue action on this metal. The amount of action was determined in the following manner:—In a certain number of the waters submitted for examination, a piece of sheet lead, exposing 20 square inches of surface, was immersed in a pint of each specimen, and allowed to stand 24 hours; the proportion of lead dissolved in the water was then determined. Examined in this way, different specimens of Sydney water, drawn at different times and places, were found to acquire a proportion of lead varying from one-tenth to one-fifth of a grain per gallon. The worst water examined was that of the Woolli Creek, which took up about one grain per gallon. The Woronora took up about one-tenth, and the Cataract the same. The Warragamba and the Nepean at Penrith had about the same action, each taking one-twelfth. Water from Pheasant's Nest took one-eighteenth; George's River above Liverpool Dam, one-thirtieth; and the Grose, a mere trace. With the exception, then, of Woolli Creek, the Sydney water was the worst of the running streams examined; which is so far satisfactory, because we already know that Sydney water may be conveyed through a moderate length of lead piping without dissolving so much of the metal as to be injurious. Lead cisterns even may be used with impunity for storing the Sydney water, provided they be well painted. White zinc paint seems well adapted for this purpose. And water that has been contaminated with lead in any way may be effectually purified by filtration through sand.

Separation of Clay.—Specimens of water taken at different times from the heads of Prospect Creek were always found to be nearly opaque from finely diffused clay; and this clay separated so slowly that the water was not clear after standing some weeks. Also, when clay from the adopted site of the storage reservoir at Prospect was diffused through Sydney water, it was found to be equally long in settling; while clay from the site of the University, similarly diffused, settled and left the water almost clear in a few days. Filtration through a depth of 9 inches of fine sand effected little or no improvement in the water containing Prospect clay; but when alum was dissolved in this water at the rate of 2 grains to the gallon, separation of the clay began very speedily, and within 24 hours the clay had completely subsided, leaving the water clear. On comparing the amount of dissolved solid impurity in the water, before and after the action of alum, it was found that this dissolved matter had increased at the rate of 1·1 grain per gallon. The crystallized alum contains 44 per cent. of water, so that it would appear that the alum had left all its solid matter in the water; but, on the other hand, there may have been double decomposition, and the alumina may have been precipitated, leaving some other base in its place. This point I have not yet determined.

J. SMITH, M.D.

University of Sydney,
July, 1869.

TABULAR VIEW OF THE COMPOSITION OF WATERS ANALYZED BY PROFESSOR SMITH FOR THE COMMISSION.

I.	II.	III.	IV.	V.	VI.	VII.	VIII.
Source of Specimen.	When collected.	Grains per gallon.				Hardness.	Remarks.
		Total Solid Matter.	Volatile Matter.	Fixed Matter.	Chlorine.		
Sydney Water :—							
Tunnel Mouth	15 Oct., 1867	5·3	1·1	4·2	2·08	.....	} Taken in rather a dry season. 4 inches of rain fell in September, 1867, and only 1¼ inch for the remainder of the year.
Engine Pond, Botany	15 Oct., 1867	5·2	1·6	3·6	1·86	.....
Pipe, No. 8, Glebe Road	16 Oct., 1867	4·9	1·5	3·4	1·86	.....	} Engine pond low. Water must have been contaminated with sea-water.
Pipe, University Gate	1 Nov., 1867	5·2	1·5	3·7	1·82	.....
Engine Pond, Botany	— Dec., 1867	9·9	1·9	8·0	3·99	.....	} Four days after heavy rain, water slightly milky. Moderate rains; water of a faint tawny colour—brown sediment.
Pipe, 8, Glebe Road	13 April, 1868	6·0	2·0	4·0	2·02	0°·8	
Pipe, University Gate	4 June, 1868	5·4	1·4	4·0	1·91	0°·7	} Slight colour when viewed through a large bulk. Rainy weather; water of a faint tawny colour.
Do.	11 Nov., 1868	4·7	1·2	3·5	.....	0°·6	
Do.	10 June, 1869	5·0	0·8	4·2	2·05	0°·6	} Slightly coloured. Clear and bright—no taste or smell—no sediment.
Do.	8 April, 1869	5·6	1·2	4·4	2·13	.....
Pipe, 183, Macquarie-street	13 April, 1869	5·6	1·4	4·2	.....	0°·9	} Taste and smell have slight taint of organic matter. Clear and bright—taste not altogether satisfactory.
Woronora River	20 Nov., 1867	6·1	1·2	4·9	3·03	1°·3	
George's River, Liverpool Dam	4 Nov., 1867	15·0	2·6	12·4	6·52	.....	} Do. taste and smell unexceptionable. River low.
Do. three miles above Liverpool	24 Oct., 1868	26·2	5·8	20·4	12·26	8°	
Do. junction of Toggerai	2 June, 1868	6·1	1·7	4·4	2·53	1°·1	} Colourless—trifling sediment. Two weeks after a flood. Clear—no smell—softish taste.
Catacart River, Loddon Crossing	— Dec., 1867	5·4	1·1	4·3	2·45	0°·6	
Do. near junction with Nepean	28 Feb., 1868	4·3	1·4	2·9	1·64	0°·7	} Clear and bright—faint taste of organic matter.
Do. Broughton's Pass	6 Nov., 1868	5·8	2·0	3·8	2·27	0°·7	
Do. do.	16 Mar., 1869	6·4	1·6	4·8	2·63	1°	} Do. no taste or smell.
Nepean, above Pheasant's Nest	2 Oct., 1868	4·6	1·3	3·3	1·53	1°·4	
Cordeaux, do.	2 Oct., 1868	4·2	1·3	2·9	1·70	0°·7	} Do. do. Do. do. River pretty full.
Nepean, below Pheasant's Nest	8 June, 1869	4·2	1·0	3·2	.....	0°·8	
Do. at Douglass Park	28 Feb., 1868	4·7	1·3	3·4	1·47	1°·9	} Two weeks after a flood. Clear—softish taste. No colour, taste, or smell—slight sediment.
Do. at Blaxland's Mill	8 Nov., 1867	14·8	2·0	12·8	7·20	5°·8	
Do. at Penrith	11 Mar., 1869	10·0	2·2	7·8	2·50	3°·4	} Dirty white, almost opaque, from diffused clay. Faint tawny colour—tastes slightly of organic matter.
Couridjah Lagoons	7 Mar., 1868	3·7	1·8	1·9	0·65	None.	
Wollondilly, near Goulburn	26 April, 1868	12·4	.....	.....	1·56	8°	} Opalescent from fine clay. Taste not quite satisfactory. Contains a notable like the last. Iron abundant. [proportion of iron and carb. acid.]
Mulwarree	27 April, 1868	9·7	2·7	7·0	1·09	2°·2	
Paddy's River	27 April, 1868	5·3	1·3	4·0	1·26	2°·3	} Clear—no taste or smell. Slightly coloured—faint taste of organic matter. Iron notable.
Wingecarribee	27 April, 1868	6·8	3·0	3·8	1·28	2°·1	
Cox, below junction of Lett	14 June, 1868	3·7	1·0	2·7	0·49	1°·4	} Very slight milkiness—no taste or smell. Clear and bright—no taste or smell—slight sediment.
Warragamba, near mouth	7 Nov., 1867	6·8	1·6	5·2	0·87	4°	
Grose	9 May, 1868	3·8	0·8	3·0	0·87	0°·65	} Do. taste and smell unexceptionable.
Colo	21 May, 1868	3·8	1·0	2·8	1·04	0°·8	
Wheeny, below junction of Little Wheeny	20 May, 1868	4·8	1·2	3·6	1·91	1°·8	} Do. do. Do. do.
Do. at Tabarag Gap	29 Sept., 1868	3·64	0·9	2·74	1·42	0°·65	
Burralow Creek	28 Sept., 1868	3·82	1·27	2·55	1·28	1°	} Do. do. Clear—soft saline taste.
South Creek	10 June, 1868	38·7	5·8	32·9	18·19	9°	
Cook's River, at Canterbury	11 Nov., 1868	37·3	5·2	32·1	15·71	7°·3	} Slightly milky—taste not agreeable. Clear and bright—taste good.
Woolli Creek	12 June, 1869	20·0	4·0	16·0	8·75	3°	
Prospect Creek, site of Reservoir	— Feb., 1869	50·0	.....	.....	18·61	.....	} Opaque from diffused clay—creek not running. As before. Much rain of late, but creek not running.
Do. do.	19 May, 1869	24·0	5·4	18·6	10·24	.....
Do. near Bull's Hill	— Aug., 1868	14·7	3·0	11·7	.....	.....	} Like the last. Creek not running. Slightly coloured.
Yan Yean, Melbourne	9 Sept., 1868	8·1	1·4	6·7	2·52	1°·6	

REPORT by Mr. Bennett to the Sydney Water Commission on the Botany Water Supply and proposed improvements thereof.

IN accordance with arrangements made at the Meeting of the Commission on 11th July, 1868, I now submit Report on the Botany Water Supply, with the accompanying drawings, viz. :—

- No. 1. General plan.
- No. 2. Section from Crown-street Reservoir to Botany.
- No. 3. Section Botany to Long Swamp and Bird's Gully.
- No. 4. Survey of site of proposed Reservoirs at Cemetery Reserve.
- No. 5. Survey of Dams, 1, 2, 3, 4, 5, 6.
- No. 6. Plan of proposed Reservoir at Strawberry Hills.
- No. 7. Plan of proposed Dam and overflow at Lachlan Swamp.

The shedwater line and dams on General Plan are from actual surveys—the filling in from maps of the Survey Department—the sections are also from actual surveys.

The extent of the basin from which the present water supply of Sydney is derived amounts to about 4,249 acres.

An addition of about 1,224 acres can be made to this area, by intercepting near Bunnerong the water from the Long Swamp, and conveying it by a pipe partly along Bunnerong Road to the Engine Pond.

That this course is more advisable than to convey the water from the Long Swamp into Bird's Gully by a cutting, is evident from the section. An excavation 13 feet deep, for more than a mile, would be required to drain it northward; and to secure any reservoirage, a dam of much greater height than is now proposed, and a less available range, with an addition to the watershed of only 678 in lieu of 1,224 acres, the additional 546 acres being obtained below the site at which it would be necessary to put dam in order to convey the water northwards to Bird's Gully.

All the country to the southward and eastward of the shedwater on plan drains over the surface into the sea or Botany Bay, except the Seventy-four Swamp, the water from which must percolate into the sea, as its level is much lower than that of the outlet of the Long Swamp, into which it should drain to reach Botany.

It is extremely difficult to define the western boundary of the watershed, as there is no overground outlet from the narrow valley between the intermediate watershed of the Lachlan and the Waterloo Swamps. 54 acres of the southern portion certainly goes into the Lachlan Swamp, and it is assumed that the northern 169 acres included in watershed on plan percolates through the sand into the Botany Stream.

The external drainage of the north-western watershed is conveyed into Shea's Creek, the waters of which cannot be made available, as they are so contaminated by woolwashing and manufactures; but in the event of the Cemetery Reservoir being adopted, its area and that of its watershed (80 acres) must be added to the rain basin; and as this addition cannot very much affect the gross results, it has, for simplicity, been included in all the calculations, even where the Cemetery Reservoirs are not contemplated.

The drainage from the northern external slopes of the watershed flows over ground into Sydney Harbour, with a steep slope in that direction, rendering percolation very improbable.

It would not be possible to increase the area of gathering ground by drains round the exterior slopes of the hills bounding basin, discharging over the lowest summits, as the sides of those hills are so porous and absorbent that the water never flows in drains cut along them.

Having determined on the greatest area of gathering ground available, the next question to be considered is the quantity of water to be obtained from it.

It is clear, from the description of the catchment, that it is most unlikely any addition is made, by either springs or percolation, from any part of the surrounding district. In the evidence taken before the Select Committee of the Legislative Assembly in 1862, it was stated that there was a probability of the rainfall being supplemented by springs from the Blue Mountains. Apart from the fact that no springs have been discovered

discovered anywhere on the surface of the basin, where they would most unquestionably be found if originating in so elevated a source, geologically it is most improbable, from the relative position of the strata, that springs originating in the Blue Mountains would be met with in the Botany Swamps; the springs discharging into the tunnel are mere percolations of the surface water, and in the present state of the surface would not be at all a desirable addition to the supply.

As it cannot be considered safe to rely on a supplement to the supply from springs or other sources, in a basin so isolated from higher ground, the quantity of water to be dealt with can only be arrived at from the rainfall. As a rain gauge has been kept at Botany only since May, 1868, it will be necessary to assume that the gaugings at Sydney represent the rain at Botany for previous years; the difference between the gaugings at both places, from May, 1868, to March, 1869, being about 12 per cent., and as those at the Observatory are in excess, the supposition favours Botany.

As permanence is the one essential requirement for a City Water Supply in this dry climate, it will be necessary, in calculating the amount to be derived from the rainfall of any given area, to deal only with the driest period of which there is any authentic record; this, as far as can be ascertained, was from the beginning of November, 1848, to end of February, 1850, sixteen months, during which time 27·99 inches of rain are registered. Much drier seasons than this are stated by old colonists to have occurred—1812–1813 and 1839; but as this is the driest period during which the rain was registered, it may be assumed as the minimum rainfall. A period of months has been selected for consideration, instead of a cycle of years, as it would be impossible to obtain a reservoir in the basin large enough to store the water from year to year.

The total area, including basin of Cemetery Reserve, which can be made available, being 5,553 acres, 28 inches of rain will give a rainfall of 3,519 million gallons; or presuming that it were possible to utilize every drop of water falling on the shedwater *as extended*, and without any allowance for waste, absorption, or evaporation, an average of 7,271,125 gallons per diem for 484 days of drought.

To enable an accurate determination to be arrived at of the proportion of this rainfall available, detailed and constant observations of the quantity supplied by the engines and the tunnel, together with the quantities going to waste over the weir for some definite period, would be required.

It has not been possible for the Commission to obtain such observations during the drought of '68–9, by their own agents; as the control over the flow afforded to the Corporation by the dams, sluices, and tunnel, and the fluctuations in discharge caused by opening drains and cutting into swamps, so disturbed the train of the stream as to render observations impossible, except made by persons present day and night at the several points of discharge, or by self-registering instruments, the records of which, extending over so short a time, would not have afforded any very definite data.

On the 1st February, 1869, the Lachlan Swamp was quite dry on the surface. A drain, 4 to 6 feet in depth, going to the surface at the deepest part of swamp, had been cleaned out the preceding day, and was discharging at a rate not exceeding 135,000 gallons per diem, from an area of about 200 acres; this evidently being the water which had been stored in the swamp and liberated by the deepening of drain, which it was hardly possible to lower any further without going below the level of tunnel.

The dams, 4, 5, and 6, were quite empty, and drains, 2 to 3 feet in depth, were being scraped through the mud and marl in the bottom. The discharge observed at No. 4 dam was at the rate of 169,232 gallons per diem (62 gallons per acre per diem) from an area of 2,701 acres, exclusive of Lachlan Swamp (after a period of five very dry months). On the 3rd February, this was increased to 1,763,917 gallons per diem, by the deepening of most of the watercourses above the dams.

At low tide the engine pond was as low as could be permitted, the speed of the engines being reduced at high tide to allow the water to rise in engine pond, and prevent percolation of sea-water. The engines were also occasionally stopped at night, and for more than a month the streets were not watered.

The upper engine pond was used for the adjustment of the supply; and between the 1st and 3rd February, the watercourse between it and No. 4 dam was cleared, and deepened about 18 inches, raising the flow to three million gallons per diem—about one million and a quarter being due to the valley between No. 4 and engine pond. This resulted from a deepening of the watercourses, averaging 18 inches throughout the basin, and would have kept up the supply for perhaps a week, when another deepening would have been necessary, to draw on the gradually decreasing stores of this subterranean reservoir. Had not rain fallen most fortunately and opportunely on the 5th February, also on the 10th, and heavy rains on the 11th and 12th (3·3 inches in all), the citizens would have had an opportunity of learning, by bitter experience, how far this process could have been continued. In most cases the cuttings had gone through the peaty surface soil, and were on to the white marly sand—by no means so spongy or retentive of water as the upper soil.

To

To give some idea of what the state of things would have been, under the same circumstances, in January or February, 1850, the monthly rainfall of the two periods is given:—

	1848.		1867.
November.....	0·48	.....	0·20
December.....	2·92	.....	0·85
	1849.		1868.
January.....	0·57	.....	4·52
February.....	0·81	.....	15·30
March.....	1·18	.....	0·85
April.....	1·13	.....	0·06
May.....	5·61	.....	5·03
June.....	1·80	.....	3·08
July.....	3·48	.....	4·80
August.....	1·66	.....	2·60
September.....	1·33	.....	2·01
October.....	1·95	.....	1·46
November.....	1·56	.....	2·42
December.....	0·41	.....	0·92
	1850.		1869.
January.....	1·37—(26·26).....		1·03—(45·13)
February.....	1·73	.....	7·21
	—————		—————
	27·99		52·34

Up to the 1st February, in both periods, the rainfall was 26·26 and 45·13, though with the greater rainfall and the assistance of the reservoirs, the utmost difficulty was experienced in obtaining a supply in '69.

It may be urged, however, that a very large proportion of the entire year's fall came down in February, 1868, and ran into the sea, and that the rainfall in the last four months was, respectively, 5·29 and 5·83, very nearly the same; but in the preceding four months it will be seen that the total fall in 1868 was 75 per cent. more than in '49.

From these facts two inferences may be drawn: either that the sands do not possess the great storing power attributed to them, or the flow on 1st February, 1869, would have been much greater; or, on the other hand, granting this storing power, that the supply in February, 1850, would have been little more than one-half what it was in 1869, which was insufficient.

With reference to the statements as to quantity of water going to waste at Botany, I have taken out the quantities from the dimensions given in Mr. Bell's table, (Appendix A), and with corrections for modes of measurement of head and of sluice opening, and for tidal backwater, and with coefficients of contraction and discharge which seem to me reasonable, the results are as shown in the following Table, which also contains the same calculations from October, 1867, to end of May, 1869, and the consumption and rainfall for each month.

	Waste.			Consumption.		Grand Total used and wasted per Month.	Depth in inches on Catchment accounted for.				Rainfall.	
	Discharge through Sluice, per Month.	Discharge over Weir, per Month.	Total to waste, per Month.	Pumped to Sydney, per Month.	Estimated Flow through Tunnel.		Wasted per Month.	Used per Month.	Total.		D.	
	Million gallons. A.	Million gallons. A.	Million gallons. A.	Million gallons. B.	Million gallons. C.	Million gallons.	Inches.	Inches.	Inches.		Inches.	Million gallons.
1867.												
25th to 31st March	195.3	4.3	199.6	17.2	2.0	218.8	2.075	0.199	2.27		4.46	428.9
April	529.0	35.0	564.0	67.5	8.5	640.0	5.864	0.790	6.65		17.50	1683.0
May	381.2	54.3	435.5	69.7	8.8	514.0	4.528	0.816	5.34		3.83	368.3
June	673.4	104.9	778.3	67.5	8.5	854.3	8.092	0.790	8.88		12.64	1215.6
July	430.1	100.0	530.1	73.2	8.8	612.1	5.511	0.852	6.36		2.62	252.0
August	388.4	138.0	526.4	73.2	8.8	608.4	5.472	0.852	6.32		0.98	94.2
September	419.2	126.5	545.7	70.8	8.5	625.0	5.674	0.825	6.50		3.35	324.2
October	285.2	60.2	345.4	106.4	8.8	460.6	3.592	1.197	4.78		0.21	20.2
November .....	.....	6	6	103.0	8.5	112.1	0.065	1.159	1.22		0.20	19.9
December .....	.....	.....	.....	106.4	8.8	115.2	.....	1.197	1.30		0.85	81.8
Total, 25th March to 31st December	3301.8	623.8	3925.6	754.9	80.0	4760.5	40.814	8.68	49.50		46.66	4487.5
1868.												
January .....	.....	.....	.....	103.8	8.8	112.6	.....	1.17	1.17	{ Dams burst on 17 February; their contents, 70 millions, added to calculate discharge, to compensate for water running to waste across paddock. }	4.52	434.7
February	300.4	12.7	313.1	93.7	8.0	414.8	3.25	1.05	4.30		15.30	1471.4
March .....	.....	15.6	15.6	103.8	8.8	128.2	0.162	1.17	1.33		0.85	81.7
April .....	.....	4.6	4.6	89.7	8.5	102.8	0.047	1.02	1.07		0.06	5.8
May	137.8	4.4	142.2	92.7	8.8	243.7	1.479	1.06	2.54		5.03	483.7
June	50.7	2.0	52.7	89.7	8.5	150.9	0.547	1.02	1.57		3.08	296.2
July	21.9	14.4	36.4	93.1	8.8	138.3	0.378	1.06	1.44		4.80	461.6
August	26.9	16.4	33.2	93.1	8.8	135.1	0.345	1.06	1.40		2.60	250.0
September .....	.....	15.5	15.5	90.1	8.5	114.1	0.161	1.02	1.18		2.01	192.3
October .....	.....	.....	.....	129.0	8.8	137.8	.....	1.43	1.43		1.46	140.4
November .....	.....	.....	.....	124.9	8.5	133.4	.....	1.38	1.38		2.42	232.7
December .....	.....	.....	.....	129.0	8.8	137.8	.....	1.43	1.43		0.92	88.5
Total	537.7	85.6	613.3	1232.9	103.6	1949.5	6.369	13.89	20.25		43.04	4139.3
1869.												
January .....	.....	.....	.....	132.9	8.8	141.7	.....	1.47	1.47	{ The flow in June will, no doubt, compensate for this deficiency. }	1.03	99.1
February .....	.....	.....	.....	120.0	8.0	128.0	.....	1.33	1.33		7.21	693.4
March .....	.....	2.8	2.8	132.9	8.8	144.5	0.029	1.47	1.50		5.18	498.2
April .....	.....	39.0	39.2	102.2	8.5	150.0	0.407	1.15	1.57		6.88	661.7
May	283.2	65.7	348.9	106.0	8.8	463.7	3.628	1.19	4.82		12.94	1244.5
Total	283.2	107.5	390.9	594.0	42.9	1027.9	4.084	6.61	10.69		33.24	3196.7

A. Quantities through sluice and over weir calculated from dimensions deduced from table attached to Mr. Bell's evidence, from 25th March to October, '67; the remainder, from the dimensions and times given in Mr. Westcott's return as copied by Mr. Wells; corrections for tide, from Fort Denison Register. B. From return of quantities pumped weekly. C. Estimated at 2,000,000 gallons per week. D. Rainfall, from Sydney Observatory Tables.

48—0 [335]

527

The discrepancy between the discharges of '67, as corrected, and '68, is so great that it is but reasonable to suppose that there has been some constant error in the observations of the sluice opening from March to October, 1867. This seems the more probable, as the remaining observations agree very closely as to proportion of rainfall with the result of the observations in other countries, and with the very accurate experiments made by Mr. Bell, in 1856, on a weir designed by him for this purpose, the result of which showed for the period:—

From 18th July to 31st December, 1856—A total flow and consumption of 2·316 inches, with a rainfall of 3·43 inches	} A proportion of	·6752
That by the table of corrected calculations for 1867—Being a total flow and consumption of 49·50, with a rainfall of 46·66		
And for 1868—20·25, with a rainfall of 43·04	" "	·4705
And for 5 months of 1869—10·69, with a rainfall of 33·24	" "	·321

The small proportion of 1869 will be, no doubt, increased considerably by the large proportion of flow to rain in June, the difference being stored in the sand and reservoirs and gradually discharged. Setting aside this result, and taking those of '56 and '68, years of very nearly the same rainfall, the coincidence in the results is pretty close, and the disparity which does exist appears only to be a guarantee of their accuracy as it can very fairly be attributed to the subsequent alteration in the character of the swamps, the cutting into which has, year by year, so dried their margins as to decrease their area very materially, killing all the aquatic vegetation, and allowing the sun to bake the surface hard, on which the rain falling flows off as if off iron, and the sand not being shaded by vegetation has all the surface moisture at once evaporated by the scorching sun and drying winds, to the full force of which the removal of the aquatic plants has exposed it.

The injury to the swamps is still further increased by the trampling of cattle and the destruction of the timber and shrubs on the hills by fires, &c., which has exposed the sand to be blown on to the flats, filling the interstices of the natural peaty soil and making it impervious to rain, all tending to the rapid discharge of floods and decrease of absorption.

It has, on the other hand, been urged that by the removal of the vegetation the evaporation from the surfaces of plants has been reduced, but it is not considered that this can compensate for the loss by the rapid discharge of floods.

To illustrate further the probable accuracy of the results of '57 and '68, the following Table of Discharges, as measured in other countries, is appended.

TABLE of Rainfall, and proportion collected.

Locality.	Area of Catchment.	Rainfall.	Flow.	Proportion of rain to flow.	
	acres.	inches.	inches.		
Loch Island Reevy	3,300	60 to 70	48 to 50	·753	As collected in reservoirs. Reservoirs containing 290,000,000 gals., filled in six months.
Longdendale	5	55½	49½	·892	Flow as ascertained by streams.
Swineshaw Valley .....	.....	49½	37	·755	
Rivington Pike, Liverpool	10,400	56½	43 to 44	.....	Quantity collected in reservoirs, 36 inches.
Ashton Waterworks	378	40	.....	·384	Stored.
Belfast	980	32	.....	·522	Used.
Bolton	1,041	50	.....	·619	Used.
Dublin, Vartry	14,000	45	.....	·500	Used.
Dunkenfield	383	36	.....	·500	Stored and used.
Glasgow	43,000	60	.....	·402	Is used.
Greenock	5,043	60	.....	·603	Has been observed to run off into reservoirs.
Huddersfield	1,000	33	.....	·537	Is stored and used.
Liverpool	10,400	55·5	.....	·436	Is stored.
Macclesfield	2,000	40	.....	·526	Is used.
Manchester	18,900	37	.....	·617	Is actually used, Mr. Bateman is of opinion that three-fourths could be made available.
Oldham	2,700	35	.....	·415	Is used.
Paisley	790½	56·33	.....	·548	Is used. Mr. Copeland thinks 84 per cent. could be utilized.
Plymouth	4,000	44	.....	·343	Is used for town purposes.
Preston	3,000	43	.....	·232	Is used.
St. Helen's (Old Works)...	280	30	.....	·122	Stored and used.
Southampton	120	23	.....	·333	Collected.
Wigan	2,200	40	.....	·26	Used.
Woodburn, near Belfast...	3,405	33·8	217	·606	
(a) Vehar Reservoir, Bombay.	3,515	102·0	53·4	·523	Average.
(b) London .....	.....	84	32·5	·387	Dry season, 1864.
				·666	

(a) These observations are taken from the Report of the Executive Engineer on the improvement of the present supply to Bombay, published in July, 1868.

(b) The result of the frequent and varied measurements during the discussion of the best mode of draining London, when it was admitted on all sides that but two-thirds of the rainfall reached the drains or could be accounted for, notwithstanding the impervious surface exposed by the slated roofs and paved streets and yards.

The

The observations at Bombay are the only accurate records of flow into a large reservoir in a hot climate which we possess, and were taken in a year of average rain; but in 1864, when the monsoon was deficient, out of 84 inches of rain on the catchment, but 32·5 flowed into the reservoir, though the distance was short, the ground steep, the formation basalt, and denuded of any soil that could be washed away—all conditions most favourable to discharge.

It will be observed on the basin of the Vehar Reservoir, the proportion of flow to rainfall decreases in a much more rapid ratio than the rainfall itself.

The flow, with a fall of 102 inches, being 52·3 per cent.,
and with a fall of 84 " " 38·7 "

The proportionate flow under the same circumstances, with a fall of 21 inches, as in this country in 1849, would be but very trifling indeed, and would entirely depend on how the rainfall was distributed over the period under review.

The fact of the absorbent nature of the sandy soil, which is held to be one of the greatest advantages of the Botany shedwater, would, in a year of extreme drought, with partial gentle rains at intervals, be rather a disadvantage than otherwise, as all the moisture having been withdrawn by the parching winds and sun, the sand would absorb a considerable amount of the occasional rainfall before the level of saturation was raised to the discharging point.

But in order to make the strongest possible case for Botany supply, it will in the first instance be assumed that one-half of the rainfall in such a dry year will flow into the reservoirs and engine pond—being more than the proportion in the year of average rain, 1868; and taking it for granted, in order to illustrate the maximum capabilities of the shedwater, that it would be possible and advisable (neither of which can be admitted) to carry out the whole of the reservoirs projected as follows:—

	Contents in millions of gallons.	Superficies in square feet.
Cemetery Reservoir	850	3,484,800
Engine and Upper Ponds	25	1,257,048
Nos. 1, 2, and 3 Dams, if restored	70	2,322,050
Nos. 4, 5, and 6, as they exist	72	2,559,878
Nos. 7, 8, 9, 10, 11, 12, and 13 Dams, as proposed by City Engineer	232	6,200,000
Reservoir at Long Swamp	245	4,378,730
Covered Reservoir at Newtown	9	covered
Reservoirs at Crown-street, Waverley, Paddington, and Hyde Park	41	covered
	1,544	20,202,506

Assuming further that these reservoirs were full at the commencement of this period, and that the rain fell at such intervals as would admit of the reservoirs conserving completely the 50 per cent. of rainfall estimated as flow, the quantity supplied would stand thus:—

	Millions of gallons.
Total contents of reservoir at commencement of period	1,544
Half total rainfall, sixteen months, on 5,094 acres	1,614
The entire rainfall on 459 acres of reservoirs	291
	3,449
Less evaporation from reservoirs at the rate of 6 feet per annum, from a water surface of 459 acres exposed for one-half of the period, say 4 feet	498

2,951 millions of
gallons

being at the rate of 6,097,107 gallons per diem for 484 days. So that, granting all that can possibly be assumed by the most sanguine advocates of the retention of Botany as a supply, and presuming that all the works proposed by them were executed, as well as an extension of the shedwater not immediately contemplated by them, it is clearly shown that, in the period in question, the most that could be hoped for would be an augmentation of 46 per cent. to the quantity now being supplied, to secure which it is admitted it will be necessary to incur the following expenditure:—

Reservoirs at Cemetery Reserve	£56,000
Repairs of Dams, Nos. 1, 2, and 3	3,000
Construction of Nos. 7, 8, 9, 10, 11, 12, and 13... ..	8,000
Open Reservoir at Waverley	9,000
Covered Reservoir at Newtown	24,000
Extension, Paddington and Crown-street	40,000
Hyde Park Reservoirs	55,000
	195,000
Proposed addition to Shedwater, Dam at Long Swamp, and Pipes to Engine-house	14,000
	£209,000

To

To this amount must be added the estimated cost of all the alienated land in the shed-water; all the unbuilt portions of which it would be absolutely necessary to resume, should Botany be retained as a permanent source of supply, as follows:—

Say half the alienated land in Randwick and Waverley, the remainder being built on...	307
Williams' and Kellet's Grant...	7
Terry's Grant	402
Winder's Grant...	388½
Lord's Grant	395
Church and School Lands	1,865

3,364 acres

valued at £47,209.* So that, conceding the possibility of executing all those works in a permanent manner for the amounts estimated, the entire cost of securing a daily supply of 6 millions of gallons, in addition to the amount already expended, would be,—

For additional works	£209,000
For land	47,209

Total... .. £256,209

of absolute outlay; and contrasting this scheme with a gravitation supply, the capitalized cost of pumping should be added, being 6 millions of gallons per diem, at (say) £4 per million for (say) fifteen years, including coals, wages, wear and tear, cost of replacing boilers, engines, &c.

£131,400

£387,609

On the other hand, should the Government carry out any other scheme of water supply, there would be available for sale or other purposes,—

172½ acres Lachlan Swamp.	
475 „ of unalienated land north of Racecourse, including Common.	
219 „ „ „ „ south of Racecourse.	
41 „ Suburban lots, Randwick.	
74 „ Repurchased from Lord.	

981 acres, valued at £25,750.

So that, in contrasting a hypothetical supply of 6,000,000 of gallons daily from Botany, with that of an equal supply from any other source, the cost must be reckoned at £413,359, independent of any credit to be given for the 30-inch main, the engines and engine-house; the latter of which could be used for other purposes, and the former with advantage be worked into any other scheme.

A very large proportion of the land now reserved might be made very valuable as market gardens (so much required for the more plentiful supply of Sydney during dry seasons) by pumping or discharging by gravitation a portion of the sewage to be brought, as suggested to me by the Surveyor General, in a pipe through the tunnel, which would not be required in the event of a supply being obtainable elsewhere; thus securing a considerable revenue, and affording the only means yet known of utilizing sewage economically. This would also, to some extent, obviate the pollution and filling up of the harbour.

Having discussed the quantity to be derived during a dry season,—

1st—From the entire rainfall,—

2nd—From the probable flow, assumed as 0·5 of the rainfall, conceding the existence of all the reservoirs proposed,—

It now remains to set forth what may safely be calculated as the maximum supply during such a dry year as 1849, presuming that the reservoirs deemed possible and advisable to make were constructed.

The proportion of flow to rain in the average season of 1868 being 47, or about one-half, and the decrease at Bombay, with a diminution of 18 per cent. in the rain, being 13·6 per cent., the proportionate decrease in the case of Botany would be 49·8 per cent., reducing the flow to 24·8 per cent., or one-fourth of the rainfall; but it is considered this would be a rather small proportion; so that one-third of the rainfall has been calculated on, and may, it is considered, reasonably be relied on even in the driest years.

One-third of the rain would give, during the dry sixteen months,—

		Million gallons.
From the Lachlan Swamps	923 acres	195
Long Swamp	1,224 „	258
Remainder of Catchment	3,468 „	732
Millions of gallons		<u>1,185</u>

Having determined on the probable quantity of water obtainable, the best mode of conserving it is the next consideration.

The

* This valuation has been made by an officer of the Survey Department, and is very low, being an average of but £14 per acre, though the ex-Surveyor General stated, in his evidence before the Special Committee of 1862, that the average price given for the Randwick allotments at the Government land sales was over £100 an acre.

The primary requirements for any storage reservoirs in this climate are,—

- 1st—Impermeability ;
- 2nd—Depth, to reduce the evaporating surface ; and, for the reservoirs in this particular instance, elevation, and proximity to the locality to be supplied, so that the water may be delivered at the point of consumption with as much pressure as possible.

The chief storage reservoirs proposed in the last evidence of the City Engineer are those at the Cemetery Reserve, and at Hyde Park ; the other reservoirs and extensions coming more under the head of service than storage reservoirs.

Detailed surveys of the Cemetery Lagoons have been made, and they prove the impossibility of getting, at any reasonable cost, a reservoir to contain 850,000,000 gallons, at the elevation proposed of 137 feet ; as, to dam the Southern Lagoon to that height, an embankment of 20 feet high for a length of 32 chains would be required on a surface of pure sand, which would have to be removed to a depth of at least 10 feet to reach the indurated sand, and that could not be trusted as a foundation for a dam 30 feet high.

The Northern Lagoon, if embanked 40 feet at the present outlet, and 20 feet on the saddle, excavated to uniform slopes of 3 to 1, and puddled and bricked all over, might be made to contain 307,000,000 gallons, with a surface level of 137 feet. The probable cost would be £70,000 with dams puddled ; but the risk of such constructions in a soil chiefly consisting of pure white sand would be so great, that their execution could by no means be recommended, even if it were imperative to continue the supply to Sydney from Botany.

The Cemetery Reserve site is in many respects a very advantageous one for a reservoir, and it is with considerable reluctance an unfavourable opinion is expressed of it, but in addition to the difficulties of construction, there is the necessity of pumping from Botany every drop of water to be stored, only the upper 10 feet of which would gravitate to Crown-street, containing (say) 90,000,000 gallons, or not quite one-third of the entire ; the remainder would have to be pumped a second time either to Crown-street or to the high levels at Paddington and Waverley heights, varying from 76 to 113 feet to Paddington, and 183 to 207 to Waverley.

With reference to the districts most requiring improvement in their supply, the Glebe, Redfern, Newtown—this reservoir is not well placed ; so that, well-situated as it is in many other respects, its low level, and want of shedwater, as well as the comparatively great cost of construction, from the unfavourable character of the soil, preclude its further consideration.

The proposed reservoirs in Hyde Park would be at a comparatively low level ; their construction would involve an expenditure hardly commensurate with the amount of storage, a great interference with the traffic during the progress of the work, and probably large claims for compensation for real or fancied injuries to the property in this vicinity. It is considered that every end to be gained by their execution could be attained at much less cost, by providing a large storage reservoir at the Lachlan Swamp.

This reservoir to be formed by the construction of a dam on the site shown on plan, two rows of sheet piles with chisel-pointed shoes to be driven so as to enter the soft rock, the sand to be then dredged out by a small engine running on rails laid on top of piles, temporary strut frames to be inserted to keep piling in its place, the trench to be then puddled up, all internal timbers being carefully removed as the work proceeded, all material within the limits of reservoir excavated to the level of 107 feet over datum, a waste weir of 44 feet in length and two sluices, together capable of discharging two-thirds of the maximum of 20 inches of rain at a depth of 18 inches, to be provided on the rocky ground at the eastern end of dam, with a tunnel at a low level to empty the reservoir completely when required ; the entrance to the present tunnel to be built round with a masonry tower with inlet valves, to control the flow of water ; arranged so as to make the head in reservoir available for delivery.

An 18-inch pipe to be laid through the tunnel, to draw off the water to a level of 107 feet ; all below this level could in dry seasons be pumped to Waverley.

There would thus be secured a storage reservoir to contain 278,000,000 gallons, chiefly at an elevation of 107 to 115 feet, or within 22 feet of the height proposed for the Cemetery Reservoir, commanding all the city below level of Hyde Park with a good pressure and abundant supply, and saving the pumping from Botany of all the water falling north of this dam, and providing a reservoir in the most advantageous position for pumping to the high levels at Waverley and Paddington.

As a necessary adjunct to this reservoir, a pair of thirty-horse power horizontal double-acting engines and pumps should be placed in a suitable position to pump, when working together, 1,000,000 gallons per diem to Waverley or Paddington as required.

For the western portion of the city, the Glebe, Redfern, and Newtown, I would propose to have a reservoir on the Strawberry Hills, at the head of Riley-street, near Messrs. Goodlet and Smith's pottery. The sandhill there to be removed, and the reservoir excavated to a level of 150 feet over the sea, at or near which the shale substrata will be reached over the whole area.

It is proposed to make a brick-in-cement or stone retaining wall, and to concrete the bottom. This reservoir is calculated to contain 29,000,000 gallons, at a level from 150 to 166 feet, in a most favourable position for the supply of the south-western suburbs, where the want of water was most complained of last year. The height being intermediate between Paddington and Surry Hills, will not try the engines and machinery so much as pumping to Paddington ; and the removal of the sandhill will be a great benefit to the vicinity, the city, and more especially the harbour, as at present it serves to feed the southerly squalls with sand, to be deposited in the streets, and ultimately washed into Darling Harbour and Sydney Cove.

This

This reservoir may be left open, as it is not considered necessary to roof in so large an area, and no serious injury to the purity of the water is anticipated, even though the vicinity should be covered with buildings; there are none likely to be above the reservoir, and there are many instances of uncovered reservoirs for supply of towns. The depth would be considerable compared with the area, so that evaporation would not be more than ordinary, and if found absolutely necessary it could ultimately be covered.

In addition to the reservoirs at Lachlan Swamp and Strawberry Hills, a storage reservoir could be constructed at the Long Swamp, near Bunnerong, to receive and store the waters from the greater portion of the Church and School Estate.

The dam to be constructed in the same manner as that proposed at the Lachlan Swamp, to be 17 feet high, and contain 245,000,000 gallons; the water being conveyed, when required, to Botany by a 15-inch pipe.

It is not considered advisable to extend the Crown-street Reservoir, as that at the Lachlan will answer all purposes; but the proposed reservoir at Waverley should be constructed, and when required, that at Paddington enlarged.

With reference to the dams already constructed on the Lachlan Stream, it would not be considered safe to expose them to a greater head of water than 8 feet, as puddle not having been carried down to the impermeable substrata, the hydraulic pressure acts more or less through the sand; and though the dam itself is kept down by the weight of sand above, there is nothing to prevent the peat down stream being forced up, and the quicksand (which it will be when the pressure exceeds a certain limit) under dam from being blown out. It is very evident a slight addition to the pressure on No. 4 would produce this effect.

It will be absolutely necessary, in order to prevent the floods overtopping dams or rising to such a height as will cause them to blow up, to lengthen the overflow to 80 feet, and put two sluices in each dam.

The depth, therefore, being limited to 8 feet at the pipe, the average depth when water is level with weir will not exceed 6 feet, and that being the probable depth of evaporation in the dry period, the utility of those dams, in a long drought, is very questionable, and can only be confined to raising the limit of saturation in the sand. This command will be by no means equivalent to the height of the dam, on account of the comparatively considerable slope of the country; so that, though the contents of those dams is taken into consideration in the calculation for supply, no great reliance is placed on their stability or staunchness; and it is not recommended that the injured ones should be restored further than by patching up the best with the available materials from the others.

With reference to a large storage reservoir to be formed by a dam on the site of No. 4, the elevation is not sufficient to warrant its construction, as the height to be pumped to the high levels would be nearly as great as it is now, and the water for the low levels should flow to Botany, to be then pumped as at present.

A storage reservoir at Botany would answer all the purposes of one at No. 4; and in the event of Botany supply being continued, the present upper and engine ponds are capable of considerable enlargement; but the depth being restricted to the difference between the engine well and the Botany Road, sufficient range could not be obtained to counterbalance the evaporation. In addition, the water from three-fifths of the basin being intercepted and stored, except in very wet seasons, the flow from the intermediate country over what can be stored in Nos. 4, 5, and 6, and the engine ponds, will not exceed what the engines can pump up, and in wet seasons there will not be any great necessity for storage.

It is considered that the storage reservoirs proposed at the Lachlan, the Long Swamp, and the Strawberry Hills, with the service reservoir at Waverley, and the enlargement of Paddington reservoir, will admit of the conservation of all the available water from the respective districts, in the cheapest and most effective way. When those reservoirs are constructed, the rainfall and storage would stand thus during the dry season of 48, 49, 50:—

	Million gallons.	Superficial area, sq. feet.
Storage reservoir at the Lachlan Swamp to supply low levels, and to pump to Waverley and Paddington	278	4,530,000
Storage reservoir, Long Swamp	245	4,378,730
Dams 4, 5, and 6, to Engine and Upper Pond	97	3,816,926
Reservoir at Waverley	5	40,000
Paddington and Extension	8	covered
Reservoir at Strawberry Hills... ..	29	298,452
Crown-street Reservoir... ..	3½	covered
	<hr/>	
	665	13,064,108
		Million gallons.
Assuming reservoirs full, contents at commencement of period...	665	
One-third total rainfall on 5,253 acres	1,108	
The entire rainfall on 300 acres reservoirs	189	
	<hr/>	
		1,962
Less evaporation from reservoirs, at the rate of 6 feet per annum, from a water surface of 300 acres, exposed for half the period, say 4 feet		325
		<hr/>
		1,637

being at the rate of 3,382,231 gallons per diem, for 484 days.

Previous

Previous to going into the question of cost, it would be advisable to reconsider if the proportion between the reservoirs and the gathering ground is so adjusted as to admit of the conservation of the entire available rain, without incurring needless expense in making too large reservoirs.

With reference to the rain basin of the Lachlan Swamp, the reservoir, if empty, would hold nearly one-half of the entire rainfall in the period, though it has been considered safe to rely on one-third only.

The reservoir at Long Swamp will only hold between one-fourth and one-seventh, or 0·137 of the rain falling, so that the surplus must run down and be discharged into the engine pond, and thence pumped to Sydney; this portion may therefore be considered in conjunction with the remainder of the catchment.

The accompanying table will show the disposal of the rainfall of 28 inches on 4,646 acres, during the period in question. Commencing with the reservoirs containing 395,000,000 of gallons full, and drawing off daily 2,800,000 gallons, being five-sixths of the estimated daily supply, the remaining one-sixth being supplied from the Lachlan Swamp.

TABLE showing probable Supply and Consumption from the Botany Catchment, exclusive of Basin of Lachlan Swamp, with rainfall equal to that from November, 1848, to February, 1850.

Date.	Depth of Rain.	Total Quantity.	Available Quantity.	Consumption.	Increase.	Decrease.	Quantity in Reservoirs.
	Inches.	Million gallons.	Million gallons.	Million gallons.	Million gallons.	Million gallons.	Million gallons.
1848.							
November	0·48	51	17	84	.....	67	395
December	2·92	307	102	86·8	15·2	.....	328
1849.							
January	0·57	60	20	86·8	.....	66·8	276·4
February	0·81	85	28	78·4	.....	50·4	226
March	1·18	124	41	86·8	.....	45·8	180·2
April	1·13	119	39	84	.....	45	135·2
May	5·61	590	196	86·8	109·2	.....	244·4
June	1·80	189	63	84	.....	21	223·4
July	3·48	366	122	86·8	35·2	.....	258·6
August	1·66	175	58	86·8	.....	28·8	229·8
September	1·33	140	47	84	.....	37	192·8
October	1·95	205	68	86·8	.....	18·8	174·0
November	1·56	164	54	84	.....	30	144
December	0·41	43	14	86·8	.....	72·8	71·2
1850.							
January	1·37	144	48	86·8	.....	38·8	32·4
February	1·73	182	60	78·4	.....	18·4	14·0

To facilitate calculation, it has been assumed that the evaporation and the two-thirds extra rain in Reservoirs balance.

TABLE showing supply and consumption from the Botany Catchment, exclusive of basin of Lachlan Swamp, with rainfall equal to that, from November, 1867, to February, 1869.

Date.	Depth of Rain.	Total Quantity.	Available Quantity.	Consumption.	Increase.	Decrease.	Quantity in Reservoir.	Quantity going to waste.
	Inches.	Million gallons.	Million gallons.	Million gallons.	Million gallons.	Million gallons.	Million gallons.	Million gallons.
1867.								
November ...	0·20	21	7	84	.....	77	395	
December ...	0·85	89	30	86·8	.....	56·8	318	
1868.								
January	4·52	474	158	86·8	71·2	.....	332·4	
February	15·30	1,606	535	81·2	453·8	.....	395	391·2
March	0·85	89	30	86·8	.....	56·8	333·2	
April	0·06	6	2	84	.....	82	256·2	
May	5·03	528	176	86·8	89·2	.....	345·4	
June	3·08	322	107	84	23	.....	363·4	
July	4·8	504	168	86·8	81·2	.....	395	54·6
August	2·6	273	91	86·8	4·2	.....	395	4·2
September ...	2·01	211	70	84	.....	14	381	
October	1·46	153	51	86·8	.....	35·8	245·2	
November ...	2·42	254	84	84	.....	.....	245·2	
December ...	0·92	96	32	86·8	.....	54·8	190·4	
1869.								
January	1·03	108	36	86·8	.....	50·8	139·6	
February	7·21	757	252	78·4	173·6	.....	313·2	

It will be seen that, in February, 391 million gallons would run to waste, or to furnish additional supply which would have been given at the rate of two million gallons per diem, during January and February, 1868, making the supply from this portion of Catchment 4·8 million gallons for those two months; so that about 273 million gallons might run away, or be pumped through Paddington Reservoir into the Lachlan Swamp; during the remainder of the year there would be no waste, as the supply would be supplemented to the extent of the excess.

In addition to the construction of the Reservoirs at the Long Swamp, Lachlan Swamp, Strawberry Hills, and Waverley, and the enlargement of the Paddington Reservoir, it would be necessary to fence the whole of the land reserved and to be resumed, and all the roads through same, to plant the summits of the hills, more particularly on the north-western side, and to plant round the reservoirs.

The cost of the whole would be,—

Long Swamp Reservoir and pipe.....	£14,000	0	0
Lachlan Swamp Reservoir, and pipe through tunnel	42,442	0	0
Engines and Mains to Waverley and Paddington	9,000	0	0
Reservoirs and Mains at Strawberry Hills, including compensation for property required	39,000	0	0
Open Reservoir at Waverley.....	9,000	0	0
Enlargement of Paddington (Mr. Bell's Estimate)	20,000	0	0
Fencing and planting.....	3,000	0	0
Total for Works.....	136,442	0	0
Compensation for land	47,209	0	0
	183,651	0	0
Total outlay, to which must be added, as in the previous cases, value of land which will be available if another supply is adopted	25,750	0	0
	209,401	0	0
And the capitalized cost of pumping $3\frac{1}{2}$ million gallons per diem, at £5 per million gallons, for fifteen years	90,000	0	0
So that, for a minimum supply of $3\frac{1}{2}$ millions, the comparative cost would be	£299,401	0	0

On the 2nd March, 1869, the engines were tested, to ascertain, by measurement of reservoir, the exact quantity pumped; but the time allowed being only two hours, the result of the test was insufficient to base any very close calculations on. As far as could be observed, the engines were performing the work attributed to them, but there were many sources of error in the observations, which could not be eliminated during so short a trial. There is, however, no reason to apprehend that the engines will not suffice to pump all the water that they may be required to lift during the standard dry year; but to enable full advantage to be derived from the reservoir at Strawberry Hills, and the enlargement of Paddington Reservoir, the supplementary engine at the Lachlan would be necessary to relieve the Botany engines of the lift to Paddington and Waverley, and allow them to keep the Strawberry Hills Reservoir full, when not supplying the immediate wants of the city.

In years of average rains, however, the power of the engines will be the limit of supply, as all the surplus flow from the reservoirs which the engines cannot pump for extra supply must be allowed to go to waste.

CONCLUSION.

To recapitulate the foregoing, it is shown,—

1st. That all the rain on catchment and additions in the standard dry period, without any deduction whatever, will only give an average of 7,260,205 gallons per diem.

2nd. That, presuming all the projected reservoirs could be built (the possibility of which cannot be admitted), and were full at the commencement of the standard period, and that the very large proportion of half the rain was utilized, the supply would only be 6,000,000 gallons, to be obtained at a cost of—

£209,000 for works,

£47,209 for land to be resumed,

with the capitalizing of the cost of pumping, and value of land at present reserved, making a total of £413,359.

3rd. That the safe supply, to be depended on in the standard dry period, would be but an average of $3\frac{1}{2}$ million gallons, and that the cost of securing this would amount to—

£136,000 for works,

£47,209 for land to be resumed,

with the capitalizing of the cost of pumping and value of land already reserved, making a total of £299,401.

The quantity fixed by the Commission as the probable requirement of Sydney and Suburbs in some years hence, being 12 million gallons per diem, the figures given demonstrate sufficiently how inadequate the Botany watershed, however improved, is to afford the necessary quantity; the fact that, without any very great extension of area or of population, the consumption has doubled in four years, quite justifies the Commission in fixing 12 millions as the limit of supply, when it is extended to the suburbs, with only a reasonable allowance for the increase of population and growth of the city.

A copious supply of water is of more importance to Sydney than perhaps any city in the world, as, independent of its importance for all sanitary and other ordinary purposes of a water supply, it is indispensable for the preservation of the harbour, as when the supply of sand is cut off by the substitution of a basin of water for the Strawberry

Strawberry Hills, and the removal of the sandhill near the Barracks (now in progress as part of the Moore Park improvements), the constant and general use of hydrants will wash the dust and sand daily in small quantities into the gully-shafts, whence it can be removed by hand, instead of, as at present (except in the principal streets), accumulating until a southerly squall or thunder-storm sweeps it into the harbour or washes it into the gully-shafts, choking them up in the first few minutes, and leaving the great bulk of the material to be washed at once over the surface into the harbour.

Only second in importance to quantity is the quality of a water supply; and however pure the supply from Botany is at present, it is clear that even with the purchase of all the lands unbuilt on, the quality of the water will not improve, as the drainage from the lands partially built on, and from the Randwick Cemetery, will be getting more objectionable every year.

Much of the injury to the purity of the water, as described by Messrs. Trickett and Bowden, in the evidence before the Select Committee of 1862,—the deposit of dead animals, night-soil, and the digging of gravel-pits,—has since been obviated, and would be almost entirely prevented by fencing and strict supervision; but the sewerage of the portions of the watershed built on, for the discharge of which Mr. Bell, in his evidence before the same Committee, proposed to provide a brick sewer one mile in length, across from Randwick to Shea's Creek, would still remain; and as it would be necessary to allow a portion of the rainfall for flushing this sewer, each year the supply, as well as growing gradually more impure, would also be decreasing. At the same time, as the sewer could not take all the storm waters, they would, with the washings of the stables, pig and cow houses, and other offices, be swept occasionally into the water supply; and though great reliance is with justice placed on the purifying properties of the sand, still, like any other filter, it is liable to get saturated with filth, which it would do in the course of years, when the water would flow into the reservoirs as it came from the stables. There is also another increasing source of injury in the washings of the roads, which Mr. Bell has found to discolour the water after heavy rains.

Of the fourteen gentlemen examined before the Commission as to the condition of the Botany Swamps, seven—Messrs. Lord, Pierce, Woods, Mansfield, Atkinson, Speer, and Lucas—stated that they considered the Botany supply wholly inadequate; three—Messrs. Moore (Mayor), Murphy, and G. Hill—were not quite so conclusive, but they considered the swamps could, by improvement, be made to suffice for a time. Mr. Buckland thinks "it would be well for the present generation to do that which will supply the present generation, and the one which will immediately succeed it, and leave posterity to undertake the larger work"; and the Rev. Mr. Clarke had not examined the swamps closely enough to give a satisfactory answer.

Though it is much to be regretted that the statements as to the discharges are not more absolutely conclusive, in the absence of any detailed gauging by the Commission, of the consumption, discharge, and rainfall extending over a cycle of seasons, still the opinions of the above-named gentlemen, with experience varying from fifty years downwards, may be considered to bear out the results of the foregoing calculations, all agreeing that, sooner or later, a water supply must be sought elsewhere.

The only difference of opinion appears to be as to *when* the change should be made. For many reasons, it is desirable it should not be delayed longer than is necessary for the full ventilation of the question, and the collection of further data, the observations for which should be systematically commenced at once, by the establishment of local rain-gauges, and accurate means of gauging daily discharges at all the points where such information is necessary; *the observations to be continued without intermission*, until the completion of the new works would enable a permanent record to be established. Such information would be of the utmost value—in the first instance, to give greater confidence to the Government in finally determining on the means to be adopted for supplying Sydney, and next, in furnishing data for other works of a similar character which must be undertaken throughout the Colony before long.

As the works, even when commenced, will take some years to execute, some steps should be taken to avert or mitigate the ruinous consequences of a water famine in the interim.

It is obvious that the most advisable expenditure would be on some work which, while supplying our immediate wants, could be utilized in any alternative scheme that might ultimately be adopted.

The reservoir at Strawberry Hills would answer the purpose well, and should, it is considered, be at once put in hands, so as to permit of its being made available as soon as possible. The reticulation from this basin could also be made to answer the ultimate supply, both as to pressure and direction.

One of the injured dams on the Lachlan Stream might also be restored from the wreck of the others, as a temporary measure, and some additional provision be made for the discharge of floods at Dams 4, 5, and 6, by the lengthening of waster and the construction of sluices.

If the interval before the introduction of a new supply was so long as to require a further supplement to the present delivery, the enlargement of the Paddington Reservoir might be proceeded with; and if a still further increase was necessary, the reservoir at Waverley might be constructed, which would necessitate the temporary raising of the present embankment at the Lachlan Swamp, and the purchase of a thirty horse power engine to pump to Waverley and Paddington.

The merely temporary works to be constructed in the cheapest possible way, and so that any stone, iron, or timber could be converted to other uses. The engine for temporary purposes would resell for its value, when its services were no longer required.

The cost and effect of the works to prevent a water famine during the discussion on and construction of any other plan that may be adopted, would be—

1. Reservoir at Strawberry Hills	£39,000
2. Repairs of injured Dam, Lachlan Stream	2,000
3. Enlargement, Paddington Reservoir.....	20,000
4. Reservoir at Waverley.....	9,000
5. Temporary Raising Dam at Lachlan Swamp	2,000
6. Cost of Engines and Main to Waverley and Paddington	9,000
	£81,000

The 2nd and 5th being but temporary works, at a cost of £4,000; the remainder all being available for the new supply.

Their execution would, it is considered, afford a sufficient supply to the present area in all but the driest years, when, though they might not give the full quantity, they would prevent any absolute privation.

In conclusion, an apology is offered for the length of this paper, and for the manner of treating the subject. It has been necessary, for the purposes of argument as to their effect, to assume that certain proposed measures could be carried out, and to admit that larger supplies could be obtained than was considered likely; but this has been done with the object of more completely demonstrating the fallacy of the numerous theories and statements, showing that, even with the aid of all those measures and assumptions, the quantity to be obtained would be inadequate, and the necessary outlay considerable.

It was also necessary to refer at some length to the numerous alternative projects which have been brought under the notice of the Commission, for the increase and proper conservation of the water.

As this paper deals only with the Botany question, all reference to other means of supply, or discussion of the unit of supply, has been studiously refrained from.

It is but right to add, that the engines, mains, and reservoirs at Crown-street and Paddington, are in very excellent order, and are most creditable to all connected with their construction and management.

W. C. BENNETT.

REPORT BY MR. MORIARTY ON THE UPPER NEPEAN SCHEME.

To the President and Members of the Sydney Water Commission.

Gentlemen,

In attention to your minute of the 11th July, 1868, which delegated to Mr. Grundy and myself the task of working out the details of the project for supplying the city of Sydney and Suburbs with water, by gravitation, from the heads of the river Nepean, and its tributaries, the Cordeaux and Cataract, I have caused the necessary surveys and levels, plans, and estimates of my portion of the work to be prepared, and have now the honor to submit them for your consideration.

It was agreed that Mr. Grundy should undertake the surveys and the preparation of the plans of the central part of the line of canal—that is to say, of the portion lying between Menangle and Prospect; I taking the upper length, or that from the Nepean to Menangle, as well as the lower part from Prospect to Sydney.

The surveys and plans have taken a long time to complete, but not, I think, unduly so, considering the minuteness and accuracy of detail required under the circumstances, and which, in any project for hydraulic works of such magnitude, cannot safely be dispensed with. It may perhaps, at the first view, seem that too much elaboration and too much expense have been gone to, in regard to a project which may not, after all (however favourably viewed by its designers), secure the approval of the Government or Parliament; but a very little consideration will show that, in a matter of so great importance to the comfort and well-being of the community as that to which our attention is now directed, no pains should be spared, no care omitted, and no moderate expenditure grudged, to ensure the most thorough and searching preliminary inquiries. It is indispensable not only that the practicability of the project which we put forward should be thoroughly demonstrated, but that a close approximation to its probable cost should have been arrived at; and it is to be hoped the scheme now before the public, is so far matured as to warrant the anticipation of its being able to withstand the criticism to which it doubtless will and ought to be subjected—a criticism not from impartial or sceptical judges only, but also from those who, having from the first formed other views, can scarcely be expected to look without some prejudice on this.

The plans have been prepared in a similar manner, and with the same degree of minuteness of detail, as would be required by the Standing Orders of the House of Commons for works of the like character submitted for its sanction.

The Nepean, Cordeaux, and Cataract, take their rise on the western slopes of the Illawarra Ranges, and receive the drainage of the elevated tract of table-land which extends from Madden's Plains, near Bulli, on the north, to Mittagong on the south—a length of about 30 miles, and having a mean width of about 13 miles. The country above the points at which it is proposed to intercept the drainage has an area of about 354 square miles, or 226,560 acres. Its mean elevation is about 1,800 feet above the sea level, and its surface for the most part is a barren plateau of the Sydney sandstone formation, sparsely clothed with a stunted vegetation of eucalyptus epacridaceæ,

epacridaceæ, and proteaceæ. Near the range on its eastern side it spreads out into numerous swamps very similar to those of Botany, except in being much more elevated and extensive, while along its western margin the plateau is furrowed and seamed by the various tributaries which fall from the table-land down into the deep and precipitous gorge in which the Nepean flows almost from its source till it emerges in the open country near Menangle.

No country could possibly be more suitable as a gathering ground for a water supply of a large city than this, whether having regard to its extent, geological formation, great elevation, proximity to the sea, or the character of its vegetation; it is utterly unfit for agricultural purposes, and must ever remain so, by reason of its irreclaimable barrenness. It is equally useless for pastoral purposes—is, in fact, destitute of every quality which could render it fit for the occupation or habitation of man—But as a gathering ground for a water supply it is perfection: the numerous and extensive swamps so favourably situated to catch every coast shower, perform the twofold purposes of reservoirs and filters: in the deep rocky gorges where the streams unite, evaporation and absorption are reduced to a minimum; and while there is nothing to contaminate, the whole conditions to which it is exposed are most favourable to the purification and thorough aeration of the water. It is not to be wondered at, then, that the stream issues from its rocky channel cold, and clear, and bright as crystal. And beyond these advantages, the steady and nearly uniform dip of the stratification, and of the whole surface of the country, from the culminating point at Mittagong down to Sydney, presents every facility which could be desired for the cheap and easy conveyance of the water by gravitation. Indeed, in looking for the source of a supply of water by gravitation, the eye is first and inevitably attracted to the high country behind Wollongong and Kiama, the streams from which flow so invitingly towards Sydney; and a closer examination of the natural features discloses all the more strongly its suitability, for it is seen that the mountain ranges as well as the streams—not only in their general direction, but also in their elevation and rate of fall towards Sydney—are most favourable for bringing down the water by gravitation. It was these obviously great natural advantages which, at so early a period of our inquiries, drew the attention of the Commission in this direction, and it was soon found that it would only be necessary to intercept the water of one or other, or all those systems of which I have spoken, divert it on to the dividing range which separates the Nepean from George's River, and, following the natural slope of the country, lead it into Sydney by gravitation.

The Nepean, from its source to its junction with the Cordeaux at Pheasant's Nest, flows in a channel nearly parallel to, and distant about 16 miles from the coast range of Illawarra; from this point it winds away to the north-west, and after a circuitous course round the county of Cumberland, falls into the sea at Broken Bay.

At Pheasant's Nest, which is 425 feet above sea level, it is proposed to place a low dam in the channel of the river, below the junction of the Cordeaux, so as to raise the water 10 feet, and divert so much as may be required, by means of a tunnel, $4\frac{1}{2}$ miles in length, into the channel of the Cataract at Broughton's Pass, where we should have the three streams united, at an elevation of 421 feet above the sea, or 280 feet above the top level of the water in the Crown-street Reservoir; by another low dam in the Cataract, it is proposed to turn the water into a second tunnel of $1\frac{1}{2}$ miles in length, which would bring it out on the southern slopes of the main dividing range separating the waters of the Nepean from those of George's River, along and following which it would be conducted, now on one side of the range, again on the other, as the country is found most favourable for the line of the canal and the other works, down to Prospect, where it would be received in a reservoir capable of containing 7,000 millions of gallons; leaving which again, it would be conveyed, partly by open canal and aqueduct, partly by piping of large diameter, along the high ground forming the watershed between Cook's River and Parramatta River, into the reservoirs at Sydney—the whole way by gravitation.

However patent that the Nepean and its tributaries thus apparently possess all the requirements for a gathering ground of a great water supply, in extent, elevation, geological structure, proximity to the sea, and the direction of its drainage, these have not been considered sufficient to warrant its selection in preference to all others, without the further guarantee of actual measurements of the discharge of the rivers themselves, made during an unusually dry season, and continued to the present time, that the required quantity of water might be relied upon. For this purpose, gauges were erected on the Cataract and Nepean, which have been recorded regularly. The daily and monthly discharge of each river will be found in the tables attached hereto; and, as the Honorable the Secretary for Public Works, recognizing the great importance of having the gauging of these rivers continued, has been pleased to approve of my recommendation that a small sum should be devoted to this purpose, the measurements of the discharges will be continued as long as may be considered necessary. A rain-gauge has been fixed at Wilton, which is registered daily.

Before entering on the details of the subject, it will be interesting to consider how the present project, if carried out, would compare with the proposed or existing water supplies for the principal cities or towns in England and elsewhere, as regards extent of gathering ground and available rainfall. The area of the country drained by the Nepean is, as we have seen, 226,560 acres. The returns of rainfall, published at the Sydney Observatory, show that the mean of the twenty-eight years ending December, 1868, was $49\frac{1}{2}$ inches; the least fall in the whole period being that of 1849, in which only $21\frac{1}{2}$ inches fell. Let us now see how these figures will compare with other water supplies.

Sydney

Sydney and Suburbs:—Inhabitants, 120,000; proposed daily supply, 12 million gallons; drainage area, 226,560 acres; average rainfall, $49\frac{1}{2}$ inches. London:—Inhabitants, 3,000,000. By Mr. Bateman's project for the supply of London with water from the heads of the Severn, the main southern branch of the aqueduct receives the drainage of the Severn proper, having an area of about 64,192 acres, and a mean rainfall of 70 to 80 inches per annum, of which it is proposed to intercept and store 36 inches, which is calculated as being sufficient to furnish 130 million gallons per day, while the northern aqueduct, receiving the drainage off Cader Idris and Aran Mowddy, about 66,380 acres, is looked to as capable of supplying 130 million gallons per day; the storage reservoirs proposed to be constructed being estimated to hold 120 days' supply. By the other plan, recommended by Messrs. Hemans & Hassard, which advocates bringing the water into London from the Cumberland and Westmorland Lakes, it is estimated that a supply of 250 million gallons per day may be derived from a drainage area of 113,280 acres, the mean annual rainfall on which is taken at 80 inches, of which it is expected that 66 inches will be saved.

The Loch Katrine Basin, from which Glasgow is now supplied, receives the drainage of about 43,000 acres, the average annual rainfall on which is taken at 78.12 inches, the mean of three successive dry years being 66.2 inches. From this source, 23 million gallons are now daily delivered for town supply, and 40 million gallons for compensation to mill-owners and others, 63 million gallons in all, at which rate of consumption, 130 days' supply is stored in the lakes, and, of the entire 60 inches of rainfall, .402 is used.

Greenock is supplied from a drainage of 5,043 acres, the average annual rainfall on which is 60 inches, of which .603 has been observed to run into the reservoir.

The 550,000 inhabitants of Manchester receive their supply of water from the River Medlock and its tributaries. The drainage area of the watershed, which is for the most part of the millstone grit formation, is about 18,900 acres in extent. Off this area, 12 million gallons of water are daily delivered for town supply, besides $2\frac{1}{2}$ million gallons for compensation to mill-owners. Of the whole annual rainfall, which is taken as averaging 45.78 inches, .617 inches are used.

Liverpool is partly supplied by pumping from wells in the red sandstone, but principally from the Rivington District, from which latter 12 million gallons are daily supplied; the drainage area is estimated at 10,400 acres. 120 days' consumption is stored in the reservoirs; and of the mean annual rainfall of 46.23 inches, .436, or nearly half, is saved. The supply is now however considered as wholly inadequate; and Liverpool is looking to Bala Lake, in North Wales, a distance of seventy-eight miles, for its future supply, which is estimated at 60 million gallons per day.

Dublin, with a population of 340,000 souls, now receives its supply from the river Vartry, which, off a drainage area of 14,000 acres, furnishes 20 million gallons daily, besides compensation to mill-owners. The storage reservoirs are capable of containing 120 days' consumption at the above rates; and, of the mean annual rainfall of 60 inches, .402 is saved.

Plymouth, supplied from the Dartmoor Hills, receives the drainage of about 4,000 acres, the average annual rainfall on which is found to be 44 inches, of which, .343, or about one-third, is used for town supply.

Melbourne is supplied from the River Plenty, the waters of which are turned into the Yan Yean. The drainage area above the reservoir is about 40,000 acres, to which must be added the watershed of the Yan Yean, making in all 44,650 acres. The daily consumption of Melbourne may be taken at 6 to 12 million gallons, equal to about $\frac{1}{4}$ th of the mean annual rainfall, which is 25.61 inches. The mean annual rainfall of the dry group of years, 1865 to 1868, was only $20\frac{1}{2}$ inches. In 1866, after the long-continued drought, the water in the reservoirs was found to have been lowered 5 feet 3 inches. The Yan Yean, it must be remembered, cannot receive the whole of the drainage of the Plenty, as, in consequence of the water only being admitted through a short canal and tunnel, the freshets and floods, by which most of the rainfall would be carried off, are to a great extent shut off from the reservoir, and it is only the permanent stream which can be availed of.

It will be seen from the foregoing, how incomparably superior, in all the essential conditions, would be the water supply to Sydney, from the sources herein recommended, to that which is relied upon as sufficient in any of the great cities just enumerated. The watershed of the Nepean being, we have seen, nearly double as great as that of the heads of the Severn, from which it is proposed to supply London by one project; and just double that of the Cumberland and Westmorland Lakes, from which the other plan proposes to supply it; five times greater than the watershed of Loch Katrine; twelve times greater than the watershed of the Manchester supply; sixteen times greater than that of Dublin; twenty-one times greater than that of Liverpool.

Having just seen that as regards extent, the gathering ground on the heads of the Nepean and its main affluents is far greater than is considered sufficient for the supply even of London, it now remains to consider how we should compare with the towns I have named in regard to the amount of rainfall to be relied upon. It will have been observed that the rainfall on the gathering grounds referred to is unusually high;—with the exceptions of Manchester, Plymouth, and Melbourne, (which are lower,) they are far higher than we find recorded in the Observatory returns at Sydney; but then they are exceptional places,—the mountains of Wales, Cumberland, and Westmorland, the west of Scotland, and of Ireland, are most favourably situated for catching and precipitating the rain brought up by the S.W. winds. With regard to most of the other parts of England the rainfall is much less than with us. Of fifty-five towns and districts, of which

which the maximum, minimum, and mean rainfall are given in Mr. Beardmore's tables, there are only eight of which a greater rainfall is recorded than we have in Sydney; the others are considerably below it. The mean fall at Sydney for the twenty-eight years is $49\frac{1}{2}$ inches; whereas the mean of the English towns is only 33·03, that of Melbourne 25·61 inches.

It will perhaps be objected that, there being no records of rainfall on any part of the watershed of the Nepean, we are comparatively in the dark as to this most important part of the inquiry, and that the gauging of the rivers has been of too short duration to warrant any inferences being drawn from it as to what would be the supply in very dry seasons; but a little consideration will, I think, show that these objections are not of much weight, and that we shall be fully justified in assuming the rainfall on the basin of the Upper Nepean and its tributaries to be at least equal to what is recorded as falling at the Sydney Observatory, and, basing our calculations thereupon.

It is clearly proved by the records of other countries, notably so of England, that the three main conditions favourable to the deposition of rain are—proximity to the sea, elevation, and being situated on the lee or opposite side of the mountains to that from which the rain-winds come. These conditions are all found, in an eminent degree, in the tract of country in question. Mr. Bateman, in his pamphlet on the proposed schemes for supplying water to the metropolis from the upper tributaries of the Severn, observes, with reference to the rainfall on mountain ranges—"Generally it is found that the greatest rainfall in any country takes place in that portion of it which is towards the quarter from which the prevailing winds blow; in the case of a mountain chain, on the contrary, the greatest amount of water is deposited on that side of it which is generally to leeward. This latter fact being apparently due to the warm moist air being deflected upwards by the hills into a colder portion of the atmosphere, the formation of rain-clouds is a necessary consequence, and these discharge their contents on arriving over the sheltered valleys on the lee side of the mountains. In England the prevailing winds are westerly. Both the above-mentioned facts would tend to show that a very heavy rainfall might be expected on the eastern side of the Welsh hills, and the observations which have been made fully confirm this." This is also observed of the Cumberland and Westmorland hills. The same law would doubtless obtain here, where the prevailing rain-winds, which are from the S., S.E., and E., blowing the rain-clouds from the sea over the cold summits of the Illawarra Range, would discharge their contents on the sheltered valleys and deep ravines on its lee side, where the Nepean, Cordeaux, and Cataract take their rise. We may, I think, without the slightest hesitation, assume that the rainfall on this part of the country is at least equal in quantity and frequency to what falls at Sydney or Botany, and that most probably it is considerably greater. But assuming it to be only the same as at Sydney, we see how favourable the comparison would be were Sydney supplied from the sources now proposed.

That the comparisons here made are fair, and are fully sustained by observation, is shown by the circumstance that as much water has been measured passing down the Nepean in one day during an ordinary flood, as would (supposing it all stored) supply Sydney for ten years, at its present rate of consumption; but inasmuch as the circumstances do not admit of the flood waters being stored in the rivers—a careful examination of their channels having shown that there are no very favourable sites for storage reservoirs in them—it becomes necessary to look at the question from another point of view; and as it is obvious that the floods must be allowed, as heretofore, to wend their course comparatively uninterrupted to the sea, we must consider how far the ordinary streams will be sufficient, on the subsidence of the floods, to furnish the required quantity. Happily, it is found that these would be far more than sufficient, even were the requirements many times as great; and this brings us to the consideration of the quantities of water shown by actual measurements as passing down the rivers in dry seasons, as upon this depends mainly the character and cost of the works required for conveyance and storage of the requisite supply; for were the streams at all times sufficient, it would be only necessary, by means of an aqueduct of sufficient capacity, to supply any estimated demand, as is done at Aberdeen. But as the rivers might fail in extreme droughts, it becomes necessary to form reservoirs of a capacity to supplement them when at their lowest, so as to supply the estimated deficiency; and the aqueducts must likewise be so adjusted as to admit of advantage being taken of occasional freshets and floods to pour enough water into the reservoir to keep it charged and in readiness whenever called upon.

Before considering the measurements of the discharges of the rivers in detail, it will be right to take a glance at the returns of the rainfall for the same period, and compare them with those for other periods, in order to judge of what would have been the probable condition of things during those times of great drought of which ample evidence has been received by the Commission.

Although in the latter part of 1868, and the beginning of 1869, the supply of water at Botany was so seriously reduced as to give rise to grave apprehension of its total failure, and generally throughout the country the effects of the drought were severely felt, it will be seen, from published returns of the rainfall, that in Sydney and its neighbourhood the season was not a very unusually dry one. The rainfall for the entire year of 1868 was 43·58 inches, which, although less by six inches than the average of the last twenty-eight years, was more than double the quantity which fell in the year 1849, and nearly double the rainfall of 1862; in each of these years the latter months of winter, the spring, and early summer, were unusually dry. There was a similar scarcity in the latter part of 1847, and again in 1854, and for the last three months of 1867. No considerable reservoirs would have been required to supply the estimated consumption of 12 million gallons even during those years; yet, as other years are stated

stated by credible witnesses to have been much drier, it is evident that provision must be made for a very much greater amount of storage than would then have been required. It was only from the 16th of December, 1868, to the 6th of February, 1869, a period of 52 days, that the streams passing down the Nepean and Cataract fell below the quantity usually supplied to Sydney by the present arrangements.

Turning now to the accompanying tables of discharge, we find that, between the 15th September, when the rivers were first observed, and the end of the month, 78 million gallons flowed down the Cataract, and 293 million gallons down the Nepean,—in all, 371 million gallons. The rainfall during the fifteen days was 1·86 inches at Sydney. In the absence of any local observations, I am obliged to take those recorded at the Observatory; but I think I have shown that, although there may be some differences, they would be in favour of the former, and that any inference we may draw from the recorded observations will be more than sustained by the actual rainfall on the country in question. In October, 99 million gallons passed down the Cataract, and 498 down the Nepean, 597 in both, which would be equivalent to about $\frac{1}{3}$ th of the rainfall for the period, which amounted to 1·46 inches. In November, 2·42 inches of rain fell, which caused a fresh, and accordingly we find 1,186 million gallons registered as flowing down both rivers, or about $\frac{1}{6}$ th of the rainfall. In December, 0·92 inches of rain fell—it will be remembered as an unusually hot, dry month—and accordingly the flow in the river fell to 130 million gallons, equal to about $\frac{1}{4}$ th of the rainfall. January, 1869, was also an unusually dry, hot month, 0·96 inches of rain only having fallen; in fact, less rain fell in that month than in any other with the exception of January, 1849, since 1840; it is not to be wondered at, therefore, that the flow in the rivers fell to a minimum, only 63 million of gallons having been measured. Between the 15th September, 1868, and the end of the ensuing February, that is to say, during the five and a half months of summer, the total quantity of water which had passed down the rivers was 6,520 million of gallons—equivalent to about $\frac{1}{12}$ th of the rainfall which was recorded at the Observatory, viz., 14·90 in.

During the latter part of September, 372 million gallons flowed down the rivers, which would have afforded a supply at the rate of 23 million gallons per day; in October, 598 million gallons were measured, which would have allowed 19 million gallons per day. In November, December, and January, 1,380 million gallons are recorded; and, supposing that the surplus of the first month could have been stored to meet the deficiencies of the others, there would have been enough to have supplied 15 million gallons per day for those three months; or if the supply had been equalized from September, there would have been sufficient for an allowance of 16 million gallons per day,—enough to have afforded 133 gallons per day to each person in Sydney. The February measurements show a large increase—sufficient to have supplied 148 million gallons per day, or 1,200 gallons per head. Thus we find, from actual measurements of the rivers, that during the driest months of the unusually dry summer of 1868–69, the supply would have been ample for every requirement of the population; and comparing this with the driest year on record, namely, a similar period of 1849–50, in which, from September to January, 6·62 inches fell, and assuming that $\frac{1}{12}$ th of that quantity would have been available, we find that, during the driest period of the driest year experienced since the records have been kept, there would have been 17 million gallons per day available.

That $\frac{1}{12}$ th of the entire rainfall is a fair proportion to rely upon as finding its way into the river channel, where it would become available, is shown by a table, Appendix A, which has been compiled of the ordinary summer discharge of various large rivers and streams when uninfluenced by any immediate rain, and in which, in the summer, the discharge fell to about $\frac{1}{12}$ th of the total rainfall for the period.

Beardmore's tables show that the measurements of the Thames at Staines give 2·93 in., out of a rainfall of 24·5, or a little less than $\frac{1}{8}$ th of the annual rainfall on the basin of the Thames—which is 3,086 square miles in extent—consisting of chalk, green sand, Oxford clay, oolites, &c.

In the Severn at Stonebench the quantity passing down represented only an annual rainfall of 1·98 in. over a drainage area of 3,900 square miles.

The drainage of the Loddon represented 3·01 in. of rainfall per annum,—the actual average fall being 25·4 in.

The Nene at Peterborough gave 1·88, out of a total annual rainfall of 23·1 in.,—say $\frac{1}{12}$ th.

The measured discharge of the Lea, at Lea Bridge, represented 3·536 in. annual rainfall,—the total rainfall being 24·5.

That the measurements of the Nepean and Cataract represent a smaller proportion of the rainfall than the other rivers enumerated, is to be accounted for by the greater heat and dryness of the Australian summer, which takes up a much larger quantity of the rainfall in evaporation than would be the case in cooler climates.

To supply 12 million gallons per day, an effective rainfall on the drainage area of the Nepean of $\frac{1}{12}$ inch (say 875 in. per annum) only would be sufficient; and, as the least rainfall recorded in any year was that of 1849, when only 21·49 in. fell, we see that, at the low summer standard of $\frac{1}{12}$ th of that quantity, which we have taken, there would have been nearly double the required quantity. This, it must be borne in mind, is taking the very least favourable view of the case, as the $\frac{1}{12}$ th is due to the summer gauging, which is certainly far below what the entire year's measurement would show.

Having shown that the discharge of the river for the five and a half months of summer (that is to say, between the 15th September, 1868, and the end of February following) would represent about one-twelfth of the rainfall for the same period, as registered

registered in Sydney, it now remains to consider the proportion of available to actual rainfall shown by the gaugings of the river to obtain during the remainder of the year, or from 1st March to 15th September, 1869. We have the measurements of the entire year, a year too, during which it will be seen that considerably less than the ordinary mean quantity of the last twenty-nine years has fallen. In March, only 341 million gallons were measured in the river, which would have represented only one-seventy-seventh of the quantity which would have been due to the Sydney rainfall; but then the rains did not extend much further to the southward than Sydney, and must have been very light on the heads of the Nepean. In April, however, in which it will be remembered a heavy flood occurred in the Nepean, the quantity of water estimated as passing down the river was more than would have been due to the rainfall in Sydney; and this, although perhaps at first sight apparently anomalous, is I think quite probable. I say estimated as passing down the river, because all access to the gauges having been cut off for the time, it was not possible to make any accurate measurement of the flood when at its highest; and we have been obliged to take for the basis of the calculation the cross sections and slope of surface of the water as indicated by the flood-marks; and even from the results as given by this data, I have made a very considerable reduction, as the quantities would otherwise have seemed to be very considerably more than would have been due to the rainfall. I merely, therefore, give the quantities as a very rough approximation, but one which is probably far below the actual discharge.

In May we were more fortunate in getting accurate measurements, 26,186 million gallons were measured in the river, while 63,691 million gallons would have been due to the unusually heavy rainfall (12.42 inches) measured in Sydney, that is to say, about one-third of what would have been due to the rainfall was measured in the river. In June, 10,719 million gallons were measured in the river, which exceeded what would have been due to the apparent rainfall. In July the quantity gauged in the river was about one-fourth of the quantity due to the rainfall; and in August, the proportion rose to one-half the quantity due to the rainfall. The whole quantity of water estimated as having passed down the river between 15th September, 1868, and 15th September, 1869, is 87,688 million gallons, equal to .386 of the entire quantity which would have been due to the rainfall for the time, or 54 per cent. on the rainfall for the 6½ months of autumn and winter—*i.e.*, March to September—or 47 per cent. if we reject the doubtful measurements of April. We have seen that, assuming only the small proportion of ⅓th due to the summer gauging, we should have had many times more water than would have been required for the supply of Sydney, at 12 million gallons per day, even in the driest year recorded; and we now see that, taking the proportion due to the entire year, there would have been over twelve times more water available in the dry year of 49–50 than would have been required to have supplied 12 million gallons per day; and in this last year, which was also a dry one, there would have been nearly twenty times as much water as would have been required, or in other words, there would have been sufficient to supply to Sydney two and a half times the same quantity of water that is now delivered to the 3,000,000 inhabitants of London. It will be seen that, in the Cataract alone, as much water passed down as would have sufficed to supply 8 million gallons per day to Sydney.

Attached to this report will be found a statement, in a tabular form, representing the daily discharges of the river, and, compiled from it, a table showing also the monthly discharges. It is right that I should explain how these tables were constructed. During the summer months the gauging of the river was not registered every day. There seemed to be so little variation that it was considered sufficient, in order to avoid unnecessary expense, to send a person to register the gauge only twice a week, the discharge in the remaining days of the week being interpolated so as to divide rateably whatever difference might have been observed in the measurements, whether in the increase or decrease, following the ordinates of whatever curves the weekly measurements gave. In this way results have been obtained less than what the means of the observation would have given, and perhaps nearer the truth. And whenever there has been any doubt as to the results of the measurement of discharge, as in those of April, I have preferred keeping those at what must have been obviously below the truth, so as to be well on the safe side, rather than in any way seem to over-estimate.

We have seen that, in all the essential requirements for a great water supply, the advantages of the present scheme are unrivalled. The water is of the purest quality, and the quantity practically unlimited, only requiring that a reservoir shall be provided to store the surplus of the winter for the deficiency of the dry months of the summer. And this brings us to the consideration of the capacity of the reservoirs required, which must be sufficient to retain a quantity fully equal to the difference between the least permanent supply and the greatest permanent demand for such time as those conditions last. In England it is generally considered sufficient to make provision for the storage of 180 to 200 days' supply; but, having in view the evidence which has been offered to this Commission of the severity and duration of some of the droughts which have afflicted this country—droughts in which the Nepean at Penrith, it is said, ceased apparently to run, and when such a great natural reservoir as Lake George had dried up, I do not think it can be considered that storage for 180 or 200 days would be sufficient—probably double that time would be the safer limit to take—for a population rapidly increasing in numbers as ours is, and in a climate naturally subject to severe and long-continued drought. This is, of course, under the very least favourable view of the case; for the records of the rainfall at South Head and Sydney since 1840 would, if taken as the basis for calculation, show that considerably less storage would suffice. In 1849

only

only 21.49 inches of rain fell, on 140 days; and in January and February of 1850, 1.37 and 1.73 inches of rain fell, in twelve and seventeen days respectively, giving totals of 24.59 inches in fourteen months, in which there were 169 rainy days. In October, 1848, 5.35 inches of rain fell; and again, in December of the same year, 2.92 inches; so that there must have been floods in those months. Again, in May and July of 1849, 5.61 and 3.48 inches fell, which must also have caused floods in the rivers; and in March, 1850, there must have been another flood, as 4.80 inches of rain fell. It will be thus obvious, if the rain records are taken as the basis of our calculations, even in the driest year since 1840, there would have been an abundant supply of water from the Nepean, could it have been stored, and that the only trying periods would have been from January to April, 1849, during which 3.69 inches fell in forty days, and from August, 1849, to February, 1850, during which 10.01 inches fell in ninety-one days. With these exceptions, it will be seen that floods or freshes must have been of almost bi-monthly occurrence during the twenty-nine years recorded; and if we looked only to what would have been the requirements of that period, as judged by the rain tables, we see that storage for a few months' consumption would have been necessary.

But then—is the experience of twenty-nine years sufficient? I think not. We have had, within the last twelve years, in 1857 and 1867, floods the like of which the oldest inhabitants had not seen. May we not also have droughts as unprecedented in their severity and duration? To provide against such a contingency is simply a matter of constructing a reservoir of sufficient capacity: should we be warranted in omitting the precaution? Happily we find that, in this respect also, Nature has provided us with what we require. The proposed reservoir at Prospect is capable of storing 7,000 million gallons, or nearly nineteen months' supply for a consumption of 12 million gallons per day, supposing the rivers to fail wholly; and it is only necessary that the aqueduct connecting the rivers with the reservoir should be capable of keeping it charged, by taking advantage of occasional freshes and floods, to deliver into the reservoir so much more than the daily consumption as would preserve the equilibrium, to supply any quantity ever likely to be required.

The capability of the aqueducts was fixed by the Commission at not less than 70 million gallons per day; and it remains to be seen what would have been the condition of the reservoirs at the end of each month, supposing the works now proposed had been completed and in operation when the gauging of the rivers was commenced. We find by the measurements, that between the 15th September and the end of the month, 372 million gallons passed down the Nepean and Cataract; and, taking the rate of consumption at 12 million gallons per day in Sydney, there would have remained a surplus of 180 million gallons in the reservoirs, over and above the consumption, at the end of the month.

In October, 598 million gallons passed down the rivers, and as we are supposing, would have run into the reservoir, while 372 million gallons would have gone out for the city supply, leaving in all a surplus of 406 million gallons in the reservoir.

In November, 1,186 million gallons passed down, and would have been received into the reservoir, while 360 would have been withdrawn, leaving, with the surplus of the two former months, a balance of 1,232 million gallons to the good.

In December, 131 million gallons would have been received into the reservoirs, and 372 would have gone out, leaving, at the end of the month, a credit balance of 991 million gallons.

January, 1869, only 63 million gallons would have come into the reservoir, and, as before, 372 would have been withdrawn, leaving 682 million gallons in the reservoirs to the good.

In February, 4,170 million gallons ran down the rivers; but inasmuch as they did not commence to rise before the 7th February, from which, till the end of the month, the aqueduct would have been delivering 70 million gallons a day into the reservoirs, while 336 million gallons would have been withdrawn, there would have been 1,706 million gallons stored in the reservoirs on the 1st March, and 2,788 million gallons would have continued its course down the river,—an ample allowance for every requirement of compensation to those persons lower down, whose interests in this question of water supply must have been most carefully considered and jealously guarded, were it not that it is so incontestably proved that there is abundance for all.

In March, 341 million gallons would have run into the reservoirs, 372 would have gone out, leaving 1,675 million gallons in store. It will be observed that there is a great apparent discrepancy in the rainfall of this month, as recorded at the Sydney Observatory, and the quantity of water noted as flowing down the rivers. It seemed difficult of explanation at first, and until, by reference to the meteorological returns published in the *Sydney Morning Herald*, I discovered that the March rains were confined almost entirely to the districts to the north, and that the rain, although heavy at Sydney, did not seem to have extended to the southward. Without this explanation, I should have felt bound to reject the March observations as manifestly incorrect.

As to the quantity of water which flowed down the rivers in April, I am somewhat at a loss, as, in consequence of the great height to which the flood of that month reached, all communication was cut off with those places on the rivers where the gauges are fixed; and all we know is, that the rivers rose some 20 feet above the ordinary level, at the Pheasant's Nest and Broughton's Pass; but it is sufficient for our purpose to know that 1,975 million gallons would have flowed into the reservoir and 360 have gone out, leaving 3,290 million gallons in store in the reservoir, and 35,020 would have flowed down the Nepean. In May 2,249 million gallons would have been received into the reservoir, which, deducting the monthly supply, would have left 5,167 million gallons

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in the reservoir, and 23,937 would have gone down the river. At the end of June there would have been 6,973 million gallons in store, 8,553 would have flowed away. At the beginning of July the reservoir would have been filled, and 2,664 million gallons would have flowed down the river as heretofore, unless otherwise utilized.

Seeing that what would be withdrawn from the river, once the reservoirs were filled, would be insignificant in comparison with the very large quantity still running to waste, it comes to be considered whether we should not expand our ideas of the requirements, and, not content with supplying Sydney alone, make provision for irrigation on an extensive scale. The water supply here proposed will be quite capable of doing both. The water is in such ample abundance, that considerations of economy in its use do not arise. The position of the canal, traversing the back-bone of the county, admits of subsidiary canals being taken off it, so as to convey the water along the crests of the secondary ranges which branch from it on both sides. Irrigation on an extensive scale, assisting the splendid sun power of this climate, would convert the county of Cumberland into a garden. The hot summer sun, which is now so detrimental to vegetation, scorching and drying every green thing, would, if the soil were properly moistened by irrigation, produce crops of tropical luxuriance. The water which is now allowed to run to waste may, at no additional expense, be turned into the aqueduct, and be the means of bringing under profitable cultivation many thousands of acres of land now doomed to barrenness and waste. It is not necessary to refer to the many instances which might be enumerated of the extraordinary benefits which have resulted, in Spain, Italy, India, and other countries, from irrigation, and there is no reason to doubt that similar results would here follow its adoption. I propose in a future paper, referring more at length to this question of irrigation.

Having, in the foregoing pages, given a brief description of the general features of the country from which it is proposed to derive the water supply for Sydney,—having, I think, shown that it is all that could be desired as a gathering ground,—and that the streams which drain it may be fully relied upon to supply any demand ever likely to arise, either for the supply of the city and its suburbs, or for irrigation on an extensive scale,—I shall now proceed to describe in such detail as is necessary at this stage, the various works which would be required in carrying out the project. I would, however, at the outset, observe that I do not mean to say that considerable deviations and improvements may not be introduced into the designs which have been prepared and which are intended to represent generally what would be required and what would be amply sufficient; but it is not pretended that they are in all cases the very best and most fitting, or that when the works come to be carried into execution, many improvements may not be introduced; however, as I have said, they would, as now proposed, be amply sufficient, and any alterations and improvements which might be introduced would be only to simplify and economize. In preparing the designs, I have taken generally for my guidance those works which have been constructed for similar purposes elsewhere, introducing such alterations as the circumstances would seem to require, but preferring to be guided by precedent—by the approved experience of other countries—rather than attempt originality or too much novelty. The Glasgow, New York, Boston, and other water-works of recent construction, afford such splendid and successful examples of hydraulic engineering, that they may be safely taken as models for our guidance, and I have accordingly drawn largely from their experience, without, I hope, too servile an imitation.

In describing, in detail, the different works, I shall commence at the upper end, and following down the course of the canal, take them in the order in which they occur, giving such a description of each as will, I trust, explain the design, without going into such minutiae as would be required for a specification.

Nepean Dam.—The first work which occurs in the above order is the dam or weir in the Nepean, by which it is proposed to raise the water to such a height as will throw it into the tunnel and keep it running at the required height in the canal. The summer level of the water in the Nepean is, as before stated, 425 feet above high-water-mark, Sydney Harbour, which has been taken as the datum or standard level. I propose that the weir should be 11 feet 6 inches high, so as to raise the level of the water and maintain it permanently at a height of $436\frac{1}{2}$ feet above high-water, or 297 feet above the top level of the water in the Crown-street reservoir. After a very careful examination of the bed of the river, a most favourable site for the weir was selected about 15 chains below the junction of the Cordeaux, where a solid mass of rock extends from side to side, affording an almost level, uniform, and perfectly solid foundation. The weir would be of the heaviest class of masonry, set in cement (stones of any size being procurable on the spot). The height being so inconsiderable, and the bed of the river both above and below being so much encumbered with huge boulders and masses of rock, it would not so sensibly impede the discharge of the floods as to bring it into any danger of being swept away or injured; and there need therefore be no apprehension whatever of injury from floods.

If it should be considered desirable to make provision for allowing any portion of the water to flow down the river in dry summers, to supply the wants of those persons having property on the river, it could be done without difficulty by means of a notch in the weir, or by partly closing the sluice-gate at the inlet of the tunnel; and provision would likewise be made, by a culvert and a stop valve in the weir itself, to allow of the water being drawn off in summer, so as to clear away any sand or other matter which might accumulate in the pond above it. The height of the weir would be sufficient to maintain the water at a depth of 5 feet 6 inches in the tunnel.

At a distance of about 30 yards above the weir, a narrow cut would branch off, and passing round the right flank of the weir, would re-enter the river again lower down. From this cut the tunnel would open, the object of the arrangement being to allow the turbid water in times of flood, and the drift timber, sand, and other debris to flow past without being drawn into the tunnel.

Nepean Tunnel.—The tunnel by which the waters of the Nepean and Cordeaux would be conveyed across to the Cataract is shown in cross and longitudinal section in the accompanying book of plans; it would be 8 feet in height to the crown, $9\frac{1}{2}$ feet in width, having a cross sectional area of $60\frac{1}{2}$ feet, and capable, with the inclination of two feet in the mile, of discharging 85 million gallons per day when full. The cross section of the tunnel is such as gives the greatest discharging capacity with the least amount of excavation. Throughout its entire length the tunnel would be cut through the softer beds of the Sydney sandstone formation, the stratification of which at this part is nearly horizontal or with a slight north-westerly dip. I know of no material that would be more easily or economically tunnelled than this, the rock being strong enough to stand without the support of timbering or lining, or if any should be required it would only be in a few places, and for a few yards, while at the same time it is not so hard as to prevent its being cheaply, safely, and easily excavated. No apprehension need be felt of encountering water, quicksands, or any of those strata which make works of this class costly and difficult. The length of the tunnel would be 4 miles 35 chains, and it is in this respect, and in the depth of the working shafts, only, that it could be considered as a work of any considerable magnitude; in all others it would be one of great simplicity, unattended with any risk or difficulty in the execution. Provision would be made, by means of valves and strainers at the upper end, for regulating the admission of the water, or shutting it off altogether, in times of flood, so as to exclude the turbid water. This tunnel would discharge into the Cataract, at Broughton Pass, at a point about 7 chains below where the present road crosses the river. The level of the lower end of the tunnel is kept 6 inches above the level at which the water would stand above the weir in the Cataract, in order to allow of its being laid dry, if required to be cleaned out, or for any other purpose, without interrupting the supply from the Cataract, which, by this arrangement, might continue discharging into the second tunnel for the supply of Sydney.

Cataract Weir.—Here, too, as in the Nepean, a most favourable site has been found, about 10 chains below the road-crossing, where an almost level ledge of rock forms the bed of the channel. The weir would be very similar in all respects to that in the Nepean; its greatest height would be 10 feet 6 inches, the length on the top about 230 feet; it would be of the same kind of masonry, with similar culvert, stop-valves, &c.

Cataract Tunnel.—Leaving the Cataract, the next tunnel, of 1 mile 64 chains in length, also through rock of the Sydney sandstone formation, would bring the water out on the level of the open country near Appin. As this tunnel would be of similar construction to the former, its cross-sectional-area, rate of inclination, and discharging capacity being the same, and as it would be equally free of any serious difficulty in the execution, it is not necessary to enter into any more detailed description of it. It would not be so costly in proportion to its length as the Nepean tunnel, in consequence of the reduced depths of the working shafts. The stop-valves, gratings, and other appliances for excluding turbid flood-waters, drift, and *débris*, would be similar to those referred to in the description of the other tunnel. At the lower end a waste-weir and sluice would be provided to drain the tunnel, if required for the purpose of repairs to it, or to the channel of the canal below it.

Open Canal.—After leaving the Cataract tunnel at 6 miles 30 chains from the Nepean, the water would be conveyed generally in an open canal, excavated in the rock—which is still the ordinary Sydney sandstone—down to Woodhouse Creek, when the character of the geological structure of the country undergoes a change. Advantage has been taken of the slope of the land towards the Nepean, to keep the line of the canal as near the surface level of the ground as possible, consistently with the preservation of easy curves. The bottom of the channel would be in about 6 feet of cutting, to avoid embankments, which are always more or less difficult to make and keep watertight. Proper provision is made, by means of the bridges, and culverts under the canal, to carry off the surface drainage of the land. The cross-sections on Sheet No. 33, numbered 3, 3a, 4, and 5, represent the kind of work which it is proposed to construct, and which would vary according to the nature of the stratification through which the canal is intended to pass. Very little of the more expensive and difficult kind of work represented by sections 4—5, would be required, as the contour line has been carefully selected, with a view to keep in the soundest, and, at the same time, the least difficult ground.

The form of cross-section proposed is not that which gives the greatest theoretical discharge for a given sectional area of water, which would be the semicircle; but, after mature consideration, I am of opinion that the slight deviation from that form which I propose would be preferable, as, although the semicircular cross-section may give the greatest theoretical discharge for a given cross-section of water-way, it would not do so when the excavation above the surface level of the water is taken into account. The form of cross-sections I have proposed may be considered as not very dissimilar to the semicircle, only differing from it in having the top sides brought in a little, in order to reduce the amount of excavation in the block above the water-line. The canal would for the most part be excavated in the sandstone, which, as far as may be judged by the surface indications, would be sound, and sufficiently watertight to warrant the expectation that there would be little, if any, loss of water by leakage. Overlying the sandstone is a
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thin layer of light sandy soil, generally not more than one to two feet in depth. The line of the canal follows generally the contour of the country, but not too servilely, as I have preferred keeping the line in light cutting rather than introduce too sharp curves, or keep too near the outcrop of the ledges, where the stratification might be expected to be broken, fissured, and leaky.

Simpson's Creek Aqueduct.—At 7 miles 5 chains the canal would be carried across Simpson's Creek, on an aqueduct of one span of 60 feet, consisting of a wrought-iron trough supported on abutments of masonry. The approaches on either side would consist of cast-iron troughs bolted together in segments, and supported on walls of coursed rubble laid dry or without mortar. The troughs would be six feet in depth, by nine feet in width, and with those dimensions would be capable of passing 83 million gallons of water per day. The total length of the aqueduct, inclusive of the cast-iron approaches, would be 115 feet. See plan No. 3, sheet No. 27.

Elladale Creek Aqueduct.—At 7 miles 70 chains the canal would cross Elladale Creek, on an aqueduct of three spans, each 60 feet, the height at the centre being 81 feet above the bed of the creek. This aqueduct, like the former, would consist of a wrought-iron trough supported on masonry piers, and cast-iron for the approaches, resting on dry stone rubble walls. The entire length from end to end would be 530 feet.

Ousedale Creek Aqueduct.—At 9 miles 36 chains the canal would cross Ousedale Creek, on an aqueduct of two spans, each 60 feet—80 feet in height at the centre. The aqueduct would consist of a wrought-iron trough top, on stone piers and abutments; the approaches consisting, as before, of cast-iron troughs on dry stone rubble walls. The total length, from end to end of the iron troughing, would be 330 feet.

Malaly Creek Aqueduct.—At 9 miles 72 chains the canal crosses Malaly Creek, on an aqueduct of one 60 feet span, 60 feet in height. In this aqueduct, also, the centre span would consist of a wrought-iron trough top on stone abutments, and cast-iron trough approaches on dry stone rubble walls. The total length of the iron-work would be 110 feet.

On this portion of the line, it will have been observed that the aqueducts are frequent and some of them of good size, but this is not to be avoided, in consequence of its being necessary to cross so many systems of waters almost at right angles.

There is a general similarity in all the aqueducts on this portion of the canal, as, by thus simplifying the designs, and making them as far as possible repetitions one of another, the work could be constructed at considerably less cost than if they differed one from the other, involving a different style and class of work in each.

Tunnel.—At 10 miles 27 chains the canal passes through a short tunnel, 36 chains in length; the rock is sandstone, similar to the other tunnels, no troublesome or difficult strata would be encountered, and its execution would be unattended with any difficulty.

Leaf's Creek Aqueduct.—On leaving the tunnel, the canal would cross another deep creek, called Leaf's Creek, at 10 miles 78 chains, over which it would be carried by an aqueduct of two 60 feet spans, 90 feet in height, with wrought and cast iron troughs supported on ashlar masonry piers, and rubble stone walls, as in the others. The total length of iron superstructure would be 270 feet. The design for this work is shown on sheet No. 27, plan No. 1.

At 11 miles 59 chains the canal would cross another creek with an aqueduct of one span 60 feet, consisting of wrought-iron troughs on masonry abutments, and cast-iron approaches on rubble stone; the total length from end to end being 193 feet. The design is shown on sheet No. 29, plan No. 2.

Woodhouse Creek Aqueduct.—At 12 miles 65 chains the canal would cross Woodhouse Creek, by an aqueduct of one 60 feet span, 58 feet in height. See plan No. 3, sheet No. 29.

On crossing Woodhouse Creek the country undergoes a change, the sandstone formation disappearing and giving place to the shales and clays; and from this point till it reaches the tunnel under Sugar-loaf Hill, the canal would be an open cutting, following the contour almost on the natural surface. At 14 miles 22 chains, it crosses Menangle Creek by an aqueduct—the design for which is shown on sheet No. 30, plan No. 1—and passing on, enters the Sugarloaf Hill tunnel at 14 miles 73 chains. The tunnel would be 41 chains in length, for the most part in shale and sandstone; but judging from the conical shape of the hill from which it derives its name, I am disposed to think that trap would be encountered in the centre, and I have estimated accordingly for the additional cost of excavating that material, as well as for some lining in the shale and other soft strata.

On leaving the tunnel, the general level of the country falls, and the canal, after dropping 17 feet, would continue at its former grade of 2 feet per mile. These drops in the canal would form admirable sites for the erection of water-mills, as a considerable power would be developed by the fall of so large a body of water. I estimate it as being equal to (57) fifty-seven horse power, assuming that only 20 million gallons per day passes down.

Crossing of Railway.—At 17 miles 10 chains, the canal would cross the Great Southern Railway, on an aqueduct, at a height of 42 feet above the level of the rails; and at 17 miles 49 chains, it would cross the creek which, after flowing past Campbelltown, joins the George's River.

From this point onwards to Prospect, the works have been designed by Mr. Grundy, by whom they will doubtless be fully described.

Commencing

Commencing again at Prospect, two sites for reservoirs presented themselves for selection, one at Bull's Hill, the other at Prospect, the choice between which, it will be remembered, was at first doubtful. After careful examination of both, considered in conjunction with the nature of the country thence on to Sydney, (which determined the character of the works that would be required,) the choice was made in favour of the Prospect or the larger reservoir, and it may not be out of place here briefly to recapitulate the principal reasons which led to its selection.

The Bull's Hill Reservoir was estimated to be capable of storing 4,636 million gallons when full, and the surface level of the water in it would then stand at 260 feet above high-water, or 121 feet above the top level of the water in the Crown-street Reservoir. The depth of water at the outlet would be 60 feet, and the water must have been brought in the entire way, from the reservoir to Sydney, by pipes, in order to obtain full advantage of the head in the reservoir. Thus, were the reservoir full, or nearly so, the water would flow through the pipes with a velocity due to a head of 121 feet, or say, in other words, with a rate of inclination of 6 feet per mile; but as, from the nature of the case, it is not possible to suppose that the reservoir would be always full—the very name of reservoir implying the contrary—we must consider the question on the supposition of the water being considerably reduced, as may occur after long-continued and severe droughts, so that it would be necessary to fix the size of the pipes at such dimensions as would deliver the full quantity required, say 12 million gallons per day, under pressure of the lowest state the reservoir was ever likely to be drained to, which may be taken at (say) 20 feet above the level of the outlet, or 81 feet above Crown-street Reservoir. All above that, as regards head of water, must therefore be regarded as surplusage, the only effect of which would be to keep the pipes subject to undue and unnecessary pressure, requiring a corresponding increase of strength, thickness, and weight. Therefore, in so far as regards the greater height at which the water in the Bull's Hill Reservoir would stand over that in the Prospect Reservoir, there would be nothing gained, while in all other respects the advantages are in favour of the Prospect Reservoir. The storage capacity of the Bull's Hill Reservoir is, as I have stated, 4,636 million gallons. To store this quantity, an embankment of $96\frac{1}{2}$ feet in height at the centre, and containing $2\frac{1}{4}$ millions of cubic yards of earth, would be required, giving 2,060 gallons storage per yard cube of bank. The area covered by water, when full, would be about 535 acres.

Passing Bull's Hill Reservoir, and continuing the canal about $2\frac{1}{2}$ miles nearer to Sydney, it would arrive at the valley of Prospect, which has been proposed as the other site of the reservoir, and which is shown on sheet No. 16 of the accompanying book of plans. The valley of Prospect at this part spreads out into a broad flat basin, bounded on the north-west and south by a semicircular amphitheatre of low hills, forming the *divisio aquarum* of Botany Bay, the Hawkesbury, and Port Jackson. Lower down, where it is proposed to place the dam, the valley contracts to about $1\frac{1}{4}$ mile in width.

The reservoir at Prospect, when filled, would cover an area of 1,291 acres, and would contain in all 10,635 million gallons; but as it is proposed to draw off only the upper 25 feet of the water, the quantity available for supply would be reduced to 7,110 million gallons, equal to 19 months' supply for the present population of Sydney and the suburbs, allowing 100 gallons per head per day. The Prospect Reservoir would be of about the same superficial area as the Yan Yean, but considerably deeper, and containing a much larger quantity of water. It will perhaps convey a better idea of its size to say it would be of nearly the same extent as that part of Sydney Harbour lying between Bradley's Head and Fort Macquarie.

The whole of the valley consists of a strong retentive yellow and grey clay, the most suitable of all materials for the bottom of a reservoir; and there is abundant material of the same kind in the neighbourhood for the formation of the dam. When full, the water in the reservoir would stand at 195 feet above sea level, and might be drawn off to 170 feet above it, or 31 feet above the top level of the Crown-street Reservoir. The total quantity of water stored per yard of earth-work in dam would be 3,338 gallons; it would be 80 feet in height, and would contain two million of cubic yards of earth.

The height of 170 feet above high-water, as the lowest level to which the water should be drained off, has been fixed on account of the levels of the country on this side of Prospect not admitting of an open canal being formed at any higher level, unless at considerable expense; and as it is very desirable, both on account of the larger quantity of water a canal will convey, and also of its greater cheapness, to bring the water on in this manner to a point as near Sydney as possible, I have preferred adopting the plan herein proposed, rather than bring the water in the whole way from the reservoir by piping.

The dam at the Prospect Reservoir would be a work of considerable magnitude, and would take a long time to construct; but this need not prevent the water from the Nepean being brought into Sydney in the meantime, as it would be only necessary to convey it across the valley on a timber flume or channel from the inlet of the canal on the western side to the outlet at the north-eastern extremity of the reservoir. By this means Sydney might commence to draw its supply on completion of the Cataract Tunnel Canal and other intermediate works, without waiting for the completion of the Nepean Tunnel and the Prospect Dam, both of which would occupy some two or three years to construct. It would probably be desirable, in any event, to allow the Prospect Reservoir one or two years to settle after the water was admitted, as it is generally found in all large reservoirs of this kind, that the water becomes somewhat discoloured on being first admitted. It will be remembered that such was the case in the Yan Yean—

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and that the discolouration of the water was at first complained of, but that after a year or two it was found to become what it now is—perfectly clear and bright. I am of opinion, therefore, that in any case it would be better to bring the water required for town supply direct on from the rivers, which are perfectly clear, only allowing so much as may not be required for that purpose to escape into the reservoir, so as gradually to fill it. This, as I have shown in a preceding part of this report, would soon be the case, when it might be allowed to settle and redeposit any of the finer particles of the clay soil of the reservoir which were stirred up on the first admission of the water.

When it enters the reservoir on the western side, the canal drops 55 feet in a short distance, which would afford many suitable sites for water-mills. The power developed by the descent of (say) 20 million gallons of water per day would be equivalent to 184 horse-power.

The level of the canal at the top of the fall is 249·75 feet above high-water, or 36 feet above surface level of the water in the High Service Reservoir, Paddington. So much of the water as may be required for the supply of the high-service of Sydney (say 4 million gallons per day), might here, if thought desirable, be intercepted, and in place of allowing it to descend into the large reservoir, be conveyed across the dam, by means of a syphon-pipe, into a small-service reservoir to be constructed on the side of the Prospect Hill, near the outlet-tower. From this smaller reservoir all that part of the city commanded by the Paddington high-service could receive its supply; but, in order to keep up the high-service supply, in very dry seasons, as well as to be enabled to draw from the large reservoir if it should happen that the canal failed to deliver the 4 million gallons which we have estimated as being required for the high service of the city, as well as to command the very highest parts about Waverley, it would be only necessary to utilize the water escaping from the outlet-tunnel for the low-service supply, by causing it to pass through a turbine or water-wheel in the water-tower, which, by a simple arrangement, could be made to pump into either of the higher reservoirs. Thus, the water flowing out through the tunnel for the supply of the low service of the city would be made available for raising a sufficient quantity to supply the high service. An estimate of the cost of supplying the high services in this manner will be found in Appendix D.

The water would be drawn off from the reservoir through a water-tower into a tunnel excavated in the solid rock through the hill on which the dam abuts, at its eastern end; the tunnel would deliver into an open canal; and by the canal, the water would be conveyed a distance of $4\frac{1}{2}$ miles to a point within about a mile of where the railway crosses, where the general level of the country rapidly drops to 40 or 50 feet below our level. This depression continues for about a mile and a quarter, when the ridge rises again, near the crossing of the road from Parramatta to Liverpool. I propose that the water should be carried over this depression in an aqueduct, on the same rate of inclination as the canal, viz., 6 inches per mile, as by this means 2 or 3 feet of elevation at the lower end will be saved.

I am not, however, by any means prepared to say, seeing the very large surplus of water which would be stored in the reservoir, whether it would not be preferable to leave it at some higher level (say 2 or 3 feet); sacrificing so much water—about 400 to 600 million gallons—and dispensing with the aqueduct, substitute a syphon-pipe, whereby a saving of £20,000 would be effected. The aqueduct would be about 63 feet above the level of the rails where it crosses the railway, and 45 feet above the surface of the ground, the railway being in 18 feet of cutting.

At 48 miles 47 chains, where the line of aqueduct is shown as crossing the Parramatta and Liverpool Road, it is proposed to construct a small balance reservoir, by throwing an earthen embankment across the head of the valley—for the twofold purpose of supplying Parramatta with water, should it be determined to take it from this source, as well as to regulate any inequality in the delivery of the canal, and that of the syphon which commences at this point. I must here observe that a slight error has been made in the lithograph drawing, in showing the syphon as commencing at 49 miles 5 chains, instead of further back, at 48 miles 64 chains, as is intended.

It was my intention to have brought the line of canal along the crest of the ridge forming the watersheds of Parramatta River and Cook's River; but I found that at this part it made so considerable a bend round the head of Duck Creek as would have involved a detour of 4 miles; and as the country was not favourable for a canal on the natural surface, I found it would be cheaper and better to cross the deep depression of Duck Creek by means of a syphon pipe, getting on to the ridge again at 51 miles 40 chains, from which point about 1 mile of canal would be continued into another small balance reservoir, near the 53rd mile, and 11 from Sydney, from whence the water would be brought in by piping alone.

The water might be brought down from the reservoirs to this point in pipes, in lieu of by the plan I have described, but I have selected the latter for the following reasons:—In the first place, an open canal of the dimensions I have shown will convey a very much larger quantity of water, with a smaller rate of inclination per mile, than pipes would. This enables us to start at a lower level at the reservoir, and maintain a higher level at the end of the canal than would be the case were piping used, the friction and limited sectional areas of which considerably diminish their capacity of discharging, and make an open canal preferable wherever but a small fall can be obtained. The cost too, of piping, would be considerably greater than that of an open channel of corresponding capacity mile for mile. If piping had been used in this instance, it would have been necessary to have given it a fall of not less than 2 feet per mile, while with an open canal 6 or even 4 inches would be sufficient. Thus we must have started from the reservoir at

a higher level, and so left a considerable body of water unavailable, or the line must have been at a correspondingly lower level where the canal and aqueduct terminate at the 53rd mile. It will be seen that the plan I have sketched out, while admitting of the water being drawn down lower in the reservoir, also enables us to deliver a considerably larger body of water at a higher level, within about 11 miles of Sydney, than would have been possible had piping throughout been used; and if at a future time the requirements of the city should demand any larger supply than we now propose to furnish, it would only be necessary to lay another main, of any required dimensions, between Sydney and the termination of the canal, in order to supply it, instead of continuing the whole distance to the reservoir, as would otherwise be required, the canal being capable of delivering 29 million gallons per day at this point.

From 52 miles 33 chains to where the piping commences, the canal would be widened so as to form another balance reservoir, to admit the water in an easy and continuous stream into the pipes. By means of this arrangement, the water being always supplied to the pipes in greater quantity than they can carry off, a uniform head is preserved, and a more continuous and regular flow through them would be the result. Being kept more fully charged at their upper ends, there would be always a tendency to equalize the level of the reservoirs; and thus the water in the Petersham Reservoir would stand nearly, if not quite, at the same level as the others. In this way, by a succession of syphons, all tending to produce equality of level in the water at either extremity, we should keep the pipes of the low service (whenever it may be required, as in case of fire) under the full pressure due to the level at which the water would stand in the 49th-mile Reservoir, that is to say, 42 feet above the Crown-street Reservoir, without calling on the high service.

From the 53-mile Reservoir the water would be carried to the Petersham Reservoir by a system of piping. The dividing ridge between those points being too low to admit of the canal being continued, the most direct line has been selected for the pipes, as there are no buildings, formidable depression, or other obstacle, which would necessitate a departure from the straight line.

There would be many advantages in using two pipes to convey the water from where the canal would terminate to the Petersham Reservoir, and thence on to Sydney; chief amongst which would be that of preventing interruption to the supply in the event of accidents happening to the pipes, or when they required flushing, cleaning, or recoating, repairs to valves, or any of those other contingencies likely to arise. Two pipes, of 34 in. in diameter, would be sufficient to deliver the 12 million gallons we have been proposing for the town supply, or one of 48 in. diameter; but, as I have stated, although somewhat more costly in the first instance, I should prefer having two.

The size of pipes here stated is rather larger than would be required, but I have preferred erring on the safe side. In Boston, it is found that two pipes of 30 in. diameter deliver 10 million gallons per day with the same rate of inclination as ours would have, and probably two 32-inch pipes would be found sufficient; but I have thought it safer to estimate for the larger size.

The reservoir at Petersham would be at the highest point in that neighbourhood, and although the mean grade line of the pipes would give but 149 feet above datum, or 10 feet above the Crown-street level, I have no doubt that in general the water would stand at a much greater height; in fact, but little below the level of the upper reservoir at the other end of the pipes. I think we are safe to assume about 164 feet above datum, or 25 feet above Crown-street, as the ordinary level at which the water would stand. Provision would be made for allowing both the low-service pipes to discharge into this reservoir when required to keep it charged, or, by shutting them off from it, convey the water direct to Sydney either for the high or low service of the city. From the reservoir at Petersham I would propose to supply direct all those suburbs, lying to the west of the city, as Petersham, Ashfield, Marrickville, Newtown, Camperdown, Glebe, and Balmain; St. Leonards might also be supplied by an arrangement similar to that adopted at the Boston Waterworks for crossing the Chelsea Creek.

In selecting the line for the piping from Petersham to Sydney, I have taken advantage, as much as possible, of the roads, in order to avoid interference with the valuable properties which a straighter line would necessitate. On leaving the reservoir at Petersham, the line of pipes would be laid along the Stanmore Road, thence sweeping with a gentle curve into the Enmore Road, and along it to the railway bridge, crossing on the western side of which, over the line, the pipes would cross obliquely the Newtown Road, and thence on through Wilson-street, thence again crossing over the railway into Redfern-street, along Redfern-street to the crossing of Castlereagh-street, thence obliquely across the Surry Hills to the end of Riley-street, and along Riley-street into the Crown-street Reservoir.

The total distance from the Nepean being 63 miles.

I stated that at Prospect two small reservoirs might be constructed, one for the Paddington high-service, which would take its supply direct from the canal on the other side of the reservoir, being supplemented, when necessary, by water thrown up by the turbine—the other reservoir for the highest service at Waverley being wholly supplied by the turbine. A branch pipe, with stop-valves and other necessary appliances, would connect each of those reservoirs with a single main, which would be laid alongside of the low-service aqueduct as far as the 53rd mile, where, we have seen, the piping for the low service commences, with which the high-service pipe might be connected in the manner I shall now proceed to describe.

At

At its lower end, the high-service pipe would branch into two, each branch being connected with one of the pipes of the low service, with a stop-valve at the junction, so that the high-service supply might be conducted through either or both of the low-service pipes if required, or be shut off from both, should they be wanted for the low-service. A similar arrangement of branches and junctions would be required at the Sydney end. The operation would be somewhat as follows:—Let us call the two low-service pipes from the 53-mile reservoir to Sydney, A and B. Although both those pipes would discharge into the Petersham Reservoir, there would be an arrangement to continue them through to Sydney, so as to shut off either or both from the Petersham Reservoir. We will suppose that both low-service pipes are delivering into the Petersham Reservoir, and it is required to supply the high service either at Paddington or Waverley. Pipe A, we may suppose, is allowed to continue discharging into the low-service reservoir at Petersham, and pipe B is connected with the high-service pipe, by the valves being opened at each end; the water, would then flow from either of the Prospect high-service reservoirs, through pipe B, into either of the high-service reservoirs at Paddington or Waverley; or the same process might be performed with pipe A; or again, by shutting off both from the high-service pipes, the low-service supply would go on as before.

But the high services of Paddington and Waverley might also be supplied in an equally efficient and much cheaper manner by pumping up the water from Crown-street. One of the engines now employed at Botany would be sufficient for the service, and the annual cost for working expenses, for many years to come, would be quite insignificant. The estimate given in Appendix C shows the probable cost of the entire project, on the assumption that the high service would be supplied in this way. The other estimate, Appendix D, is for the gravitation principle throughout.

The remaining engines might be employed, as described in another report, in pumping back the sewage from the Tank Stream and main sewer, to be used in irrigating the Botany Swamps. We should thus dispose for ever of that, which if it be not so already, is certain to become at no distant date, a most gigantic evil,—as injurious to the health as to every other interest of the citizens.

E. O. MORIARTY.

APPENDIX A.

TABLE of ordinary Summer Discharge of the following Rivers:—

	Height above Sea.		Drainage Area.	Total Discharge.	Discharge per Square Mile.	Representing Rainfall per annum.	Total average Rainfall per annum.
	Valley.	Hill.					
	ft.	ft.	Square miles.	Cubic ft. per min.	Cubic ft. per min.	Inches.	Inches.
Thames, at Staines—chalk, green sand, Oxford clay, oolites, &c.	40 to 100		3,086	40,000	12.98	2.93	24.5
Severn, at Stonebench—silurian	400 to 2,600		3,900	33,111	8.49	1.98	....
Loddon (Feb., 1850)—green sand	110 to 700		221.8	3,000	13.53	3.01	25.4
Nene, at Peterborough—oolites, Oxford clay, and lias	10 to 600		620.0	5,000	8.45	1.88	23.1
Lee, at Lee Bridge—chalk (Rennie, April, 1796)	30 to 600		570.0	8,880	15.58	3.53	....
Medway, driest seasons (Rennie, 1787)—clay .....	.....		481.5	2,209	4.59	1.04	
Medway, ordinary summer run (Rennie, 1787) .....	.....		481.5	2,520	5.23	2.19	
Verulam, at Bushey Hall—chalk	150 to 500		120.8	1,800	14.9	3.37	
SYDNEY WATER SUPPLY.							
Heads of the Rivers Nepean, Cordeaux, and Cataract	1,400 to 1,800		354	s. d. 4,363	12.32	4.19 1.27	49.14* 14.90†

NOTE.—S. D. representing summer discharge for 5½ months, from 15th September, 1868, to 28th February, 1869.

* Mean of twenty-seven years.

† 14.90 represents the number of inches of rainfall in the summer months, and 1.27 inches the amount discharged through the rivers in the same period.

APPENDIX P.

Discharging capacities of Tunnels, Aqueducts, and open Conduits, from Pheasant's Nest to Sydney.

Number of Section on Sheet No. 33.	Depth of Water in centre of Canal.	Inclination of Surface of Water.	Area. Square feet.	Wet. Perimeter, feet.	Hyd. Mean Depth.	Velocity, in feet, per second.	Discharge, in cub. ft., per second.	Discharge, in gallons, per day.	Remarks.
1 and 2	ft. in. 5 6	1 : 2640	47.42	18.6	2.55	2.87	134.52	73,434,000	Tunnels above reservoirs.
	6 0	1 : 2640	51.27	19.3	2.66	2.92	150.15	80,845,000	
	Full diameter	1 : 2640	60.33	28.3	2.13	2.62	158.56	85,375,000	
	Full, and 10 ft. head extra.....	1 : 1251	60.33	28.3	2.13	4.19	252.49	135,950,000	
3.....	ft. in. 5 6	1 : 2640	47.34	18.2	2.6	2.89	137.06	73,801,000	Cutting in rock, with perpendicular sides.
	6 0	1 : 2640	51.94	19.2	2.7	2.95	153.25	82,515,000	
	7 0	1 : 2640	61.14	21.2	2.88	3.05	186.30	100,310,000	
4, 5, and 6	5 6	1 : 2640	47.79	18.2	2.62	2.90	138.89	74,789,000	Canal with battering sides.
	6 0	1 : 2640	52.76	19.2	2.75	2.97	157.10	84,591,000	
	7 0	1 : 2640	63.96	21.2	3.01	3.11	199.25	107,280,000	
	5 6	1 : 2640	49.5	20.0	2.4	2.78	137.69	74,141,000	Iron aqueduct above reservoir.
	6 0	1 : 2640	54.0	21.0	2.57	2.88	155.44	83,697,000	
	4 6	1 : 10560	36.0	17.0	2.1	1.30	46.84	25,219,000	Iron aqueduct below reservoir.
	5 0	1 : 10560	40.0	18.0	2.22	1.34	53.5	28,811,000	
7 and 8	4 6	1 : 10560	38.3	15.2	2.52	1.42	54.59	29,390,000	Canal below reservoir.
	5 0	1 : 10560	43.17	16.2	2.66	1.46	63.21	34,036,000	
	5 6	1 : 10560	48.07	17.2	2.79	1.49	72.09	38,815,000	

APPENDIX C.

ESTIMATED Cost of proposed project for the Supply of Sydney with Water from the heads of the Cataract and Nepean River—the high services at Paddington and Waverley being supplied by *pumping* from Crown-street :—

<i>Nepean to Menangle—</i>		
Nepean Dam and other works	£2,278	
Tunnel from Nepean to the Cataract	42,325	
Cataract Dam and other works	2,278	
Tunnel from Cataract	16,441	
Open canal	2,428	
Aqueduct, Simpson's Creek	768	
Open canal	2,811	
Aqueduct, Elledale Creek	4,606	
Open canal	5,027	
Aqueduct, Ousedale	2,987	
Open canal	1,512	
Aqueduct, Malaly	961	
Open canal	1,320	
Tunnel	3,345	
Open canal	776	
Aqueduct, Leaf's	2,707	
Open canal	2,343	
Aqueduct	1,141	
Open canal	3,536	
Aqueduct, Woodhouse's	1,124	
Open canal	5,133	
Aqueduct, Menangle	2,237	
Open canal	1,832	
Tunnel, Sugarloaf	7,477	
Open canal to 16 miles 35 chains	3,536	
Aqueduct over Railway	1,195	
Do. Campbelltown Creek	1,602	
Land	880	
<i>Bull's Hill to Prospect and Reservoir—</i>		124,606
Open canal	5,750	
Reservoir, dam, and other works	176,136	
Land	10,400	
<i>Prospect Reservoir to Sydney—</i>		192,286
Open canal and aqueduct	£47,000	
Compensating reservoir, Duck Creek	4,800	
Syphon-pipes, Duck Creek	52,552	
Open canal	1,500	
Reservoir, Haslem's Creek	5,940	
Piping to Petersham	106,773	
Reservoir, Petersham	4,800	
Piping to Sydney	56,480	
Land	1,008	
<i>Supply to high-water level—</i>		280,853
A small high-service reservoir at Waverley	5,000	
Shifting Botany engine and pipes, and building new engine and boiler sheds	5,000	
		10,000
Total	£607,745	
Superintendence and other contingent expenses, say	20,000	
		£627,745

NOTE.—The above estimate does not include the cost of the canal between Menangle and Bull's Hill, which will be furnished by Mr. Grundy.

APPENDIX D.

ESTIMATED Cost of proposed project for the Supply of Sydney with Water from the heads of the Cataract and Nepean Rivers—the high services at Paddington and Waverley being supplied by *gravitation* from Prospect Hill :—

<i>Nepean to Menangle, as before</i>	£124,606	
<i>Bull's Hill to Prospect and reservoir, as before</i>	192,286	
<i>Prospect Reservoir to Sydney—</i>		
Open canal	£47,000	
Reservoir, Duck Creek	4,800	
Piping, Duck Creek	52,552	
Open canal	1,500	
Reservoir, Haslem's Creek	5,940	
Piping to Petersham	121,633	
Reservoir, Petersham	4,800	
Piping to Sydney	64,480	
Land	1,008	
<i>Supply to high-water level—</i>		303,713
Reservoir on Prospect Hill and turbine	6,000	
28-inch piping	86,241	
		92,241
Total	£712,846	
Superintendence and other contingent expenses, say	20,000	
		£732,846

NOTE.—The above estimate does not include the cost of the canal between Menangle and Prospect, which will be furnished by Mr. Grundy.

APPENDIX E.
TABLE of Rainfall and Discharges in Nepean and Cataract Rivers.

Day of the Month.	Rainfall at Wilton.	Rainfall at Sydney Observatory.	Cataract River.		Nepean River.		Cataract and Nepean Rivers.		Quantity of water running into reservoir.	Quantity of water running to waste in rivers.	General Remarks.
			Quantity of water due to Sydney rainfall on drainage area of 70 square miles.	Quantity of water measured as having passed down river.	Quantity of water due to Sydney rainfall on drainage area of 284 square miles.	Quantity of water measured as having passed down river.	Quantity of water due to Sydney rainfall on drainage area of 354 square miles.	Quantity of water measured as having passed down rivers.			
	Inches.	Inches.	Millions of gallons.	Millions of gallons.	Millions of gallons.	Millions of gallons.	Millions of gallons.	Millions of gallons.	Millions of gallons.	Millions of gallons.	
OCTOBER, 1868.											
1	5	.....	25	.....	29	29	.....
2	5	.....	24	.....	29	29	.....
3	5	.....	23	.....	28	28	.....
4	5	.....	23	.....	27	27	.....
5	4	.....	22	.....	27	27	.....
6	4	.....	22	.....	26	26	.....
7	4	.....	21	.....	25	25	.....
8	4	.....	21	.....	25	25	.....
9	4	.....	20	.....	24	24	.....
10	4	.....	19	.....	23	23	.....
11	4	.....	19	.....	23	23	.....
12	...	0.09	91	4	370	18	462	22	22	.....
13	...	0.16	162	4	658	18	821	21	21	.....
14	3	.....	17	.....	21	21	.....
15	3	.....	17	.....	20	20	.....
16	3	.....	16	.....	19	19	.....
17	...	1.06	1,075	3	4,361	16	5,436	19	19	.....
18	3	.....	15	.....	18	18	.....
19	3	.....	14	.....	17	17	.....
20	3	.....	14	.....	17	17	.....
21	3	.....	13	.....	16	16	.....
22	3	.....	13	.....	15	15	.....
23	2	.....	12	.....	15	15	.....
24	2	.....	12	.....	14	14	.....
25	2	.....	11	.....	13	13	.....
26	...	0.04	41	2	165	10	205	12	12	.....
27	...	0.05	51	2	206	10	256	12	12	.....
28	2	.....	9	.....	11	11	.....
29	2	.....	9	.....	10	10	.....
30	2	.....	8	.....	10	10	.....
31	...	0.06	61	2	247	8	308	9	9	.....
Sums...	...	1.46	1,481	100	6,007	498	7,487	598	598	.....	Totals of the Month.
Bt. fwd.	...	1.86	1,886	79	7,652	293	9,538	372	372	.....	Carried fwd. fr. Sept.
Totals...	...	3.32	3,367	178	13,659	792	17,025	970	970	.....	Since 15th Sept., 1868.
NOVEMBER, 1868.											
1	2	.....	8	.....	9	9	.....
2	17	.....	86	.....	103	80	23	
3	...	0.14	142	11	576	56	718	67	67	.....
4	8	.....	42	.....	51	51	.....
5	...	0.20	203	10	823	50	1,026	60	60	.....
6	...	0.05	51	12	206	58	256	69	69	.....
7	11	.....	54	.....	65	65	.....
8	10	.....	51	.....	61	61	.....
9	...	0.30	304	9	1,234	47	1,538	57	57	.....
10	...	0.04	41	9	165	45	205	54	54	.....
11	8	.....	42	.....	50	50	.....
12	...	0.35	355	8	1,440	39	1,795	47	47	.....
13	...	0.06	61	7	247	37	308	44	44	.....
14	...	0.33	335	7	1,358	34	1,692	41	41	.....
15	...	0.38	385	6	1,563	31	1,949	38	38	.....
16	...	0.04	41	6	165	30	205	36	36	.....
17	6	.....	29	.....	35	35	.....
18	...	0.07	71	6	288	28	359	34	34	.....
19	5	.....	27	.....	32	32	.....
20	5	.....	26	.....	31	31	.....
21	...	0.43	436	5	1,769	25	2,205	30	30	.....
22	...	0.01	10	5	41	24	51	29	29	.....
23	...	0.02	20	5	82	23	103	27	27	.....
24	4	.....	22	.....	26	26	.....
25	4	.....	20	.....	25	25	.....
26	4	.....	19	.....	23	23	.....
27	4	.....	7	.....	11	11	.....
28	3	.....	7	.....	11	11	.....
29	3	.....	7	.....	10	10	.....
30	3	.....	7	.....	10	10	.....
Sums...	...	2.42	2,454	204	9,956	983	12,410	1,187	1,164	23	Totals of the Month.
Bt. fwd.	...	3.32	3,367	178	13,659	792	17,025	970	970	.....	Carried fwd. fr. Oct.
Totals...	...	5.74	5,821	382	23,615	1,774	29,436	2,157	2,134	23	Since 15th Sept., 1868.

NOTE.—The quantities are given to the nearest million of gallons calculated, hence some slight differences in the balances.

APPENDIX E—continued.

TABLE of Rainfall and Discharges in Nepean and Cataract Rivers—continued.

Day of the Month.	Rainfall at Wilton.	Rainfall at Sydney Observatory.	Cataract River.		Nepean River.		Cataract and Nepean Rivers.		Quantity of water running into reservoir.	Quantity of water running to waste in rivers.	General Remarks.
			Quantity of water due to Sydney rainfall on drainage area of 70 square miles.	Quantity of water measured as having passed down river.	Quantity of water due to Sydney rainfall on drainage area of 284 square miles.	Quantity of water measured as having passed down river.	Quantity of water due to Sydney rainfall on drainage area of 354 square miles.	Quantity of water measured as having passed down rivers.			
Inches.	Inches.	Millions of gallons.	Millions of gallons.	Millions of gallons.	Millions of gallons.	Millions of gallons.	Millions of gallons.	Millions of gallons.	Millions of gallons.	Millions of gallons.	
DECEMBER, 1868.											
1	3	...	7	...	9	9	...	
2	...	0.05	51	...	206	6	256	9	9	...	
3	6	...	8	8	...	
4	6	...	8	8	...	
5	...	0.17	173	...	699	6	873	7	7	...	
6	5	...	7	7	...	
7	5	...	6	6	...	
8	5	...	6	6	...	
9	4	...	6	6	...	
10	4	...	5	5	...	
11	4	...	5	5	...	
12	4	...	5	5	...	
13	4	...	5	5	...	
14	3	...	4	4	...	
15	3	...	4	4	...	
16	...	0.09	91	...	370	3	462	4	4	...	
17	...	0.14	142	...	576	3	718	4	4	...	
18	2	...	3	3	...	
19	2	...	3	3	...	
20	2	...	3	3	...	
21	2	...	3	3	...	
22	2	...	2	2	...	
23	2	...	2	2	...	
24	2	...	2	2	...	
25	...	0.02	20	Approximately 4 million per day.	82	2	103	2	2	...	
26	...	0.21	213	...	864	2	1,077	2	2	...	
27	1	...	2	2	...	
28	1	...	2	2	...	
29	1	...	2	2	...	
30	1	...	2	2	...	
31	...	0.24	243	...	987	1	1,231	2	2	...	
Sums	0.92	933	30	3,785	101	4,718	131	131	.....	Totals of the Month.
Bt. fwd.	...	5.74	5,821	382	23,615	1,774	29,436	2,157	2,134	23	Carried fwd. from Nov.
Totals...	...	6.66	6,754	412	27,400	1,875	34,154	2,287	2,264	23	Since 15th Sept., 1868.
JANUARY, 1869.											
1	1	...	1	1	...	
2	...	0.18	183	...	741	1	923	1	1	...	
3	1	...	1	1	...	
4	1	...	1	1	...	
5	1	...	1	1	...	
6	1	...	1	1	...	
7	1	...	1	1	...	
8	1	...	2	2	...	
9	2	...	2	2	...	
10	2	...	2	2	...	
11	...	0.06	61	...	247	2	308	2	2	...	
12	2	...	2	2	...	
13	2	...	2	2	...	
14	2	...	2	2	...	
15	2	...	2	2	...	
16	...	0.04	41	...	165	1	205	2	2	...	
17	...	0.02	20	...	82	2	103	2	2	...	
18	...	0.23	233	...	946	2	1,179	2	2	...	
19	...	0.15	152	...	617	2	769	2	2	...	
20	2	...	2	2	...	
21	...	0.01	10	...	41	2	51	2	2	...	
22	...	0.22	223	...	905	2	1,128	3	3	...	
23	2	...	3	3	...	
24	2	...	3	3	...	
25	2	...	3	3	...	
26	2	...	3	3	...	
27	2	...	3	3	...	
28	2	...	3	3	...	
29	2	...	3	3	...	
30	...	0.01	10	...	41	2	51	3	3	...	
31	...	0.11	112	...	453	2	564	3	3	...	
Sums	1.03	1,044	9	4,238	55	5,282	63	63	.....	Totals of the Month.
Bt. fwd.	...	6.66	6,754	412	27,400	1,875	34,154	2,287	2,264	23	Carried fwd. fr. Dec.
Totals...	...	7.69	7,798	421	31,638	1,930	39,436	2,351	2,328	23	Since 15th Sept., 1868.

NOTE.—The quantities are given to the nearest million of gallons calculated, hence some slight differences in the balances

APPENDIX E—continued.

TABLE of Rainfall and Discharges in Nepean and Cataract Rivers—continued.

Day of the Month.	Rainfall at Wilton.	Rainfall at Sydney Observatory.	Cataract River.		Nepean River.		Cataract and Nepean Rivers.		Quantity of water running into reservoir.	Quantity of water running to waste in rivers.	General Remarks.
			Quantity of water due to Sydney rainfall on drainage area of 70 square miles.	Quantity of water measured as having passed down river.	Quantity of water due to Sydney rainfall on drainage area of 254 square miles.	Quantity of water measured as having passed down river.	Quantity of water due to Sydney rainfall on drainage area of 584 square miles.	Quantity of water measured as having passed down rivers.			
	Inches.	Inches.	Millions of gallons.	Millions of gallons.	Millions of gallons.	Millions of gallons.	Millions of gallons.	Millions of gallons.	Millions of gallons.	Millions of gallons.	
FEBRUARY, 1869.											
1	Approximately 4 million per day.	.....	2	.....	3	3	.....
2	2	.....	3	3	.....
3	2	.....	3	3	.....
4	2	.....	2	2	.....
5	...	0.53	537		2,180	2	2,718	2	2	.....
6	2	.....	2	2	.....
7	...	0.08	81		329	65	410	66	66	.....
8	...	0.15	152	1	617	129	769	130	80	50	
9	...	0.60	608	1	2,468	193	3,077	193	80	113	
10	...	0.01	10	1	41	256	51	257	80	177	
11	...	2.72	2,758	1	11,190	320	13,949	321	80	241	
12	...	2.24	2,271	20	9,216	328	11,487	348	80	268	
13	...	0.19	193	40	782	336	974	376	80	296	
14	...	0.40	406	59	1,646	345	2,051	403	80	323	
15	...	0.12	122	78	494	353	615	431	80	351	
16	...	0.04	41	98	165	361	205	458	80	378	
17	...	0.09	91	77	370	289	462	366	80	286	
18	...	0.01	10	57	41	217	51	274	80	194	
19	...	0.03	30	36	123	145	154	181	80	101	
20	16	.....	73	.....	89	80	9	
21	13	.....	56	.....	70	70	.....
22	11	.....	40	.....	51	51	.....
23	9	.....	23	.....	32	32	.....	Nepean slightly muddy
24	7	.....	21	.....	28	28	.....
25	6	.....	18	.....	24	24	.....
26	5	.....	16	.....	21	21	.....	do.
27	5	.....	15	.....	19	19	.....
28	4	.....	13	.....	18	18	.....
Sums...	...	7.21	7,311	546	29,663	3,624	36,974	4,170	1,382	2,788	Totals of the Month.
Bt. fwd.	...	7.69	7,798	421	31,638	1,930	39,436	2,351	2,328	23	Carried fwd. fr. Jan.
Totals...	...	14.90	15,109	967	61,300	5,554	76,410	6,521	3,710	2,811	Since 15th Sept., 1868
MARCH, 1869.											
1	4	.....	12	.....	16	16	.....
2	...	0.13	132	3	535	11	667	14	14	.....
3	3	.....	10	.....	13	13	.....
4	3	.....	9	.....	12	12	.....
5	3	.....	9	.....	11	11	.....
6	...	0.01	10	2	41	9	51	12	12	.....
7	4	.....	9	.....	13	13	.....
8	5	.....	9	.....	14	14	.....
9	6	.....	9	.....	15	15	.....
10	5	.....	9	.....	14	14	.....	Nepean and Cordeaux slightly muddy.
11	5	.....	9	.....	14	14	.....
12	4	.....	8	.....	13	13	.....
13	4	.....	8	.....	12	12	.....
14	3	.....	8	.....	11	11	.....
15	3	.....	8	.....	11	11	.....
16	2	.....	7	.....	10	10	.....
17	...	0.35	355	2	1,440	7	1,795	9	9	.....
18	...	0.05	51	2	206	6	256	8	8	.....
19	...	4.45	4,512	2	18,308	6	22,820	8	8	.....
20	2	.....	6	.....	8	8	.....
21	...	0.01	10	2	41	6	51	8	8	.....
22	...	0.05	51	2	206	6	256	8	8	.....
23	3	.....	6	.....	9	9	.....
24	3	.....	7	.....	10	10	.....
25	3	.....	8	.....	11	11	.....
26	...	0.09	91	3	370	8	462	10	10	.....
27	3	.....	7	.....	10	10	.....
28	3	.....	7	.....	10	10	.....
29	...	0.04	41	3	165	7	205	10	10	.....
30	3	.....	7	.....	9	9	.....
31	3	.....	7	.....	9	9	.....
Sums...	...	5.18	5,253	96	21,311	245	26,564	341	341	.....	Totals of the Month.
Bt. fwd.	...	14.90	15,109	967	61,300	5,554	76,410	6,521	3,710	2,811	Carried fwd. fr. Feb.
Totals...	...	20.08	20,362	1,063	82,611	5,799	102,973	6,862	4,051	2,811	Since 15th Sept., 1868.

NOTE.—The quantities are given to the nearest million of gallons calculated, hence some slight differences in the balances.

APPENDIX E—continued.

TABLE of Rainfall and Discharges in Nepean and Cataract Rivers—continued.

Day of the Month.	Rainfall at Wilton.	Rainfall at Sydney Observatory.	Cataract River.		Nepean River.		Cataract and Nepean Rivers.		Quantity of water running into reservoir.	Quantity of water running to waste in rivers.	General Remarks.
			Quantity of water due to Sydney rainfall on drainage area of 70 square miles.	Quantity of water measured as having passed down river.	Quantity of water due to Sydney rainfall on drainage area of 284 square miles.	Quantity of water measured as having passed down river.	Quantity of water due to Sydney rainfall on drainage area of 354 square miles.	Quantity of water measured as having passed down rivers.			
	Inches.	Inches.	Millions of gallons.	Millions of gallons.	Millions of gallons.	Millions of gallons.	Millions of gallons.	Millions of gallons.	Millions of gallons.	Millions of gallons.	
APRIL, 1869.											
1	...	0.27	274	2	1,111	6	1,385	9	9	.....
2	...	0.58	588	2	2,386	6	2,974	8	8	.....
3	18	...	39	...	57	57	.....
4	...	0.64	649	500	2,633	1,475	3,282	1,975	80	1,895	
5	...	0.33	335	1,670	1,358	5,901	1,692	7,571	80	7,491	
6	3,338	...	11,802	...	15,140	80	15,060	
7	...	1.55	1,572	836	6,376	2,951	7,949	3,787	80	3,707	
8	...	0.31	314	540	1,275	1,000	1,590	1,540	80	1,460	
9	...	0.02	20	243	82	430	103	674	80	594	
10	...	0.61	619	218	2,510	377	3,128	595	80	515	
11	...	0.17	172	192	699	324	872	516	80	436	
12	167	...	270	...	437	80	357	
13	141	...	217	...	358	80	278	
14	...	0.61	619	141	2,510	217	3,128	358	80	278	
15	...	0.18	183	330	741	558	923	888	80	808	
16	...	0.34	345	404	1,399	900	1,744	1,304	80	1,224	
17	161	...	450	...	611	80	531	
18	107	...	225	...	332	80	252	
19	63	...	113	...	176	80	96	
20	31	...	77	...	107	80	27	
21	27	...	64	...	91	80	11	
22	...	0.06	61	23	247	52	308	75	75	.....
23	18	...	40	...	58	58	.....
24	17	...	38	...	55	55	.....
25	15	...	37	...	52	52	.....
26	13	...	36	...	49	49	.....
27	...	0.31	314	11	1,275	34	1,590	46	46	.....
28	10	...	34	...	44	44	.....
29	9	...	33	...	42	42	.....
30	8	...	32	...	40	40	.....
Sums	5.98	6,064	9,257	24,602	27,739	30,666	36,995	1,975	35,020	Totals of the Month.
Bt. fwd.	...	20.08	20,362	1,063	82,611	5,799	102,973	6,862	4,051	2,811	Carried fwd. fr. March.
Totals...	...	26.06	26,426	10,320	107,214	33,537	133,640	43,857	6,026	37,831	Since 15th Sept., 1868.
MAY, 1869.											
1	...	0.11	112	10	453	22	564	32	32	.....
2	10	...	22	...	32	32	.....
3	8	...	22	...	30	30	.....
4	...	0.06	61	10	247	22	308	32	32	.....
5	...	0.16	162	16	658	29	821	45	45	.....
6	...	0.82	832	43	3,374	72	4,205	115	80	35	
7	...	2.42	2,454	114	9,956	191	12,410	305	80	225	
8	...	4.37	4,431	3,112	17,979	4,477	22,410	7,589	80	7,509	
9	...	1.89	1,917	3,112	7,776	4,477	9,692	7,589	80	7,509	
10	...	0.83	842	1,556	3,415	2,239	4,256	3,795	80	3,715	
11	366	...	446	...	812	80	732	
12	327	...	426	...	753	80	673	
13	288	...	406	...	694	80	614	
14	249	...	387	...	635	80	555	
15	211	...	331	...	542	80	462	
16	173	...	275	...	448	80	368	
17	135	...	219	...	354	80	274	
18	98	...	163	...	261	80	181	
19	...	1.55	1,572	90	6,377	150	7,949	240	80	160	
20	...	0.21	213	83	864	138	1,077	220	80	140	
21	75	...	125	...	200	80	120	
22	72	...	121	...	193	80	113	
23	69	...	116	...	186	80	106	
24	67	...	112	...	179	80	99	
25	64	...	108	...	172	80	92	
26	58	...	99	...	158	80	78	
27	53	...	91	...	144	80	64	
28	47	...	82	...	130	80	50	
29	42	...	74	...	116	80	36	
30	37	...	65	...	102	80	22	
31	31	...	56	...	88	80	8	
Sums.	...	12.42	12,594	10,626	51,097	15,561	63,692	26,187	2,249	23,937	Totals of the Month.
Bt. fwd.	...	26.06	26,426	10,320	107,214	33,537	133,640	43,857	6,026	37,831	Carried fwd. fr. April.
Totals...	...	38.48	39,020	20,945	158,311	49,098	197,331	70,044	8,275	61,768	Since 15th Sept., 1868.

NOTE.—The quantities are given to the nearest million of gallons calculated, hence some slight differences in the balances.

APPENDIX E—continued.

TABLE of Rainfall and Discharges in Nepean and Cataract Rivers—continued.

Day of the Month.	Rainfall at Wilton.	Rainfall at Sydney Observatory.	Cataract River.		Nepean River.		Cataract and Nepean Rivers.		Quantity of water running into reservoir.	Quantity of water running to waste in rivers.	General Remarks.
			Quantity of water due to Sydney rainfall on drainage area of 70 square miles.	Quantity of water measured as having passed down river.	Quantity of water due to Sydney rainfall on drainage area of 284 square miles.	Quantity of water measured as having passed down river.	Quantity of water due to Sydney rainfall on drainage area of 354 square miles.	Quantity of water measured as having passed down rivers.			
	Inches.	Inches.	Millions of gallons.	Millions of gallons.	Millions of gallons.	Millions of gallons.	Millions of gallons.	Millions of gallons.	Millions of gallons.	Millions of gallons.	
JUNE, 1869.											
1	...	0·03	30	26	123	48	154	74	74	.....
2	...	0·04	41	25	165	46	205	71	71	.....
3	24	.....	43	.....	68	68	.....
4	24	.....	41	.....	65	65	.....
5	23	.....	39	.....	62	62	.....
6	22	.....	37	.....	59	59	.....
7	21	.....	35	.....	56	56	.....
8	21	.....	33	.....	53	53	.....
9	19	.....	31	.....	51	51	.....
10	...	0·18	183	18	741	30	923	48	48	.....
11	16	.....	28	.....	45	45	.....
12	106	.....	100	.....	206	80	126	
13	...	0·36	365	195	1,481	172	1,846	367	80	287	Water perfectly clear during this fresh.
14	...	0·28	284	285	1,152	243	1,436	529	80	449	No fresh in the Nepean.
15	500	.....	315	.....	815	80	735	
16	...	0·07	71	3,231	288	387	359	3,617	80	3,537	
17	...	0·07	71	500	288	359	359	859	80	779	
18	...	0·10	101	216	411	332	513	547	80	467	
19	...	0·07	71	161	288	304	359	465	80	385	
20	...	0·22	223	154	905	262	1,128	416	80	336	
21	0·08	...	.....	147	.....	220	.....	366	80	286	21st to 26th Nepean slightly discoloured.
22	139	.....	205	.....	344	80	264	
23	147	.....	234	.....	381	80	301	
24	135	.....	186	.....	321	80	241	
25	79	.....	139	.....	219	80	139	
26	61	.....	118	.....	179	80	99	
27	52	.....	98	.....	149	80	69	
28	43	.....	78	.....	120	80	40	
29	34	.....	58	.....	93	80	13	
30	29	.....	46	.....	75	75	.....
Sums ...	·08	1·42	1,440	6,452	5,842	4,267	7,282	10,719	2,166	8,553	Totals of the Month.
Bt. fwd.	·00	38·48	39,020	20,945	158,311	49,098	197,331	70,044	8,275	61,768	Carried fwd. fr. May.
Totals...	·08	39·90	40,460	27,397	164,153	53,365	204,613	80,763	10,441	70,322	Since 15th Sept., 1868.
JULY, 1869.											
1	25	.....	37	.....	62	62	.....
2	20	.....	41	.....	61	61	.....
3	20	.....	37	.....	57	57	.....
4	20	.....	36	.....	56	56	.....
5	0·08	...	.....	19	.....	35	.....	54	54	.....
6	19	.....	35	.....	54	54	.....
7	19	.....	34	.....	52	52	.....
8	18	.....	33	.....	50	50	.....
9	0·31	0·40	406	21	1,646	37	2,051	58	58	.....
10	21	.....	35	.....	56	56	.....
11	21	.....	33	.....	54	54	.....
12	21	.....	32	.....	52	52	.....
13	21	.....	29	.....	50	50	.....
14	18	.....	28	.....	46	46	.....
15	0·01	...	.....	16	.....	28	.....	43	43	.....
16	14	.....	27	.....	41	41	.....
17	13	.....	25	.....	39	39	.....
18	...	0·10	101	257	411	175	513	432	80	352	
19	1·43	1·29	1,308	500	5,307	325	6,615	825	80	745	Rise of water mainly in Cordeaux, little or none in Nepean: Cordeaux, on 21st, more discoloured than ever seen before.
20	...	0·89	902	333	3,662	446	4,564	779	80	699	
21	...	0·28	284	140	1,152	209	1,436	348	80	268	
22	...	0·03	30	126	123	111	154	237	80	157	
23	125	.....	83	.....	208	80	128	
24	123	.....	85	.....	208	80	128	
25	...	0·10	101	100	411	72	513	171	80	91	
26	0·10	...	.....	76	.....	58	.....	135	80	55	
27	60	.....	48	.....	107	80	27	
28	47	.....	41	.....	88	80	8	
29	0·21	0·16	162	50	658	36	821	86	80	6	
30	46	.....	34	.....	80	80	.....
31	43	.....	32	.....	74	74	.....
Sums...	2·14	3·25	3,296	2,349	13,371	2,315	16,667	4,664	2,000	2,664	Totals of the Month.
Bt. fwd.	0·08	39·90	40,460	27,397	164,153	53,365	204,613	80,763	10,441	70,322	Carried fwd. fr. June.
Totals...	2·22	43·15	43,756	29,746	177,524	55,681	221,280	85,427	12,441	72,986	Since 15th Sept., 1868.

NOTE.—The quantities are given to the nearest million of gallons calculated, hence some slight differences in the balances.

APPENDIX E—continued.

TABLE of Rainfall and Discharges in Nepean and Cataract Rivers—continued.

Day of the Month.	Rainfall at Wilton.	Rainfall at Sydney Observatory.	Cataract River.		Nepean River.		Cataract and Nepean Rivers.		Quantity of water running into reservoir.	Quantity of water running to waste in rivers.	General Remarks.
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AUGUST, 1869.											
1	40	30	70	70	
2	58	28	65	65	
3	...	0·13	132	54	535	48	667	102	80	22	
4	0·01	36	48	84	80	4	
5	0·01	...	.....	22	.....	39	.....	62	62	.....
6	0·01	...	.....	16	.....	34	.....	49	49	.....
7	0·01	...	.....	13	.....	29	.....	43	43	.....
8	...	...	.....	16	.....	29	.....	45	45	.....
9	...	...	.....	19	.....	28	.....	47	47	.....
10	...	...	.....	17	.....	27	.....	44	44	.....
11	...	0·02	20	16	82	25	103	41	41	.....
12	...	0·01	10	14	41	25	51	39	39	.....
13	...	...	.....	14	.....	25	.....	39	39	.....
14	...	...	.....	13	.....	24	.....	37	37	.....
15	...	...	.....	13	.....	24	.....	37	37	.....
16	...	...	.....	13	.....	23	.....	36	36	.....
17	...	...	.....	13	.....	22	.....	34	34	.....
18	...	...	.....	12	.....	22	.....	34	34	.....
19	...	...	.....	12	.....	21	.....	33	33	.....
20	...	...	.....	11	.....	21	.....	32	32	.....
21	...	...	.....	9	.....	21	.....	31	31	.....
22	...	...	.....	21	.....	21	.....	42	42	.....
23	0·33	0·35	355	26	1,440	52	1,795	78	78	.....
24	...	...	.....	16	.....	25	.....	42	42	.....
25	...	...	.....	13	.....	22	.....	34	34	.....
26	...	...	.....	11	.....	22	.....	33	33	.....
27	...	...	.....	9	.....	22	.....	31	31	.....
28	...	...	.....	8	.....	21	.....	30	30	.....
29	0·01	...	.....	8	.....	21	.....	29	29	.....
30	...	...	.....	8	.....	21	.....	29	29	.....
31	...	...	.....	8	.....	20	.....	28	28	.....
Sums ...	0·38	0·51	517	539	2,098	839	2,615	1,378	1,351	26	Totals of the Month.
Bt. fwd.	2·22	43·15	43,756	29,746	117,524	55,681	221,280	85,427	12,441	72,986	Carried fwd. fr. July.
Totals...	2·60	43·66	44,278	30,285	179,622	56,520	223,895	86,805	13,793	73,012	Since 15th Sept., 1868.
SEPTEMBER, 1869.											
1	0·01	...	.....	7	.....	20	.....	27	27	.....
2	...	...	.....	7	.....	17	.....	24	24	.....
3	...	...	.....	5	.....	16	.....	21	21	.....
4	...	...	.....	4	.....	15	.....	20	20	.....
5	...	...	.....	4	.....	15	.....	19	19	.....
6	...	0·05	51	4	206	15	256	19	19	.....
7	...	...	.....	4	.....	14	.....	19	19	.....
8	0·55	...	.....	90	.....	102	.....	192	80	112	
9	0·38	0·18	183	78	741	93	923	171	80	91	
10	0·09	0·19	193	61	782	55	974	116	80	36	
11	0·05	0·12	122	36	494	35	615	71	71	.....
12	0·04	0·12	122	16	494	29	615	46	46	.....
13	...	...	.....	14	.....	26	.....	40	40	.....
14	...	...	.....	11	.....	25	.....	36	36	.....
15	...	...	.....	9	.....	24	.....	32	32	.....
16	...	...	.....	8	.....	23	.....	31	31	.....
...	...	...	.....	.....	.....	.....	.....	.....	.....	.....	The twelve months observations terminate.
...	
...	
...	
...	
...	
...	
...	
...	
...	
Sums ...	1·12	·66	669	360	2,715	524	3,385	884	645	239	Totals of the month.
Bt. fwd.	2·60	43·66	44,273	30,285	179,622	56,520	223,895	86,805	13,793	73,012	Carried fwd. fr. Aug.
Totals...	3·72	44·32	44,942	30,645	182,337	57,044	227,280	87,688	14,438	73,251	Since 15 Sept., 1868.

NOTE.—The quantities are given to the nearest million of gallons calculated, hence some slight differences in the balances.

REPORT BY MR. GRUNDY ON THE UPPER NEPEAN SCHEME.

To the President and Members of the Sydney Water Commission.

Gentlemen,

In pursuance of your minute of the 11th July, 1868, which confided to Mr. Moriarty and myself the important task of ascertaining whether it were possible to obtain a plentiful and reliable supply of water, by the means and from the sources already most favourably considered by you, namely, the Nepean and Cataract Rivers, I submit to you my report upon that portion of the necessary work which has been supervised by me.

It was arranged, to avoid expense, and because Mr. Moriarty's position at the head of a public department afforded him facilities for acquiring much information common to each report, that questions of fact such as the prices of materials should be left to that gentleman, and adapted by me to the details of my portion of the work subsequently; necessarily, my report follows Mr. Moriarty's, and leaves me little time for elaboration. Moreover, although I had collected statistics upon this subject, such as the catchment area, and circumstances of supply of water to other towns in other countries, I have decided, after having this day heard Mr. Moriarty's report, in which he includes almost all that can be written within the limits of such a paper, to withdraw from mine all outside matter.

When the surveying party under my supervision first went out, at the beginning of April, 1868, it was intended that their work should, as instructed by the Commissioners in March, commence at the Sugarloaf Hill, and extend to the highest land at the head of Duck Creek; this portion of the distance, between the proposed interception of the rivers and Sydney, was specially indicated, because from the broken country, and the uneven and puzzling nature of the Prospect Range, it was by no means clear that the water could be brought to Sydney retaining a height that would keep it available for a gravitation scheme, without so enormous a cost as would be prohibitory.

Trial surveys and approximate estimates only were contemplated; but, as the work went on, as it became more likely that the scheme was practicable, as the gauges certified to the supply of water, and sites for reservoirs were found, the Commission thought that close detail would be advisable, and the entire proposal has been worked out with much minuteness. It has been costly; but in dealing with water, an engineer has to consider circumstances which much increase the difficulty of preliminary work; he can have no rising gradients, nor long level stretches as occur on roads and railways; it is more than usually desirable that he should take it through good ground in slight cutting, avoiding embankment wherever he can do so, and lead it with a constant descending gradient besides. The difficulty thus caused must be evident enough in an involved country like the Prospect Range, much of which is truly called the "Puzzling Hills."

Whilst the earlier part of these surveys was being made, my attention was anxiously directed to the discovery of available storage reservoirs; upon this depended the fate of the undertaking; without a reservoir holding several months' supply it would be useless to bring water from the proposed sources, because there are long periods of drought when the total yield of the rivers is altogether inadequate, even if all the water flowing down them could be impounded, which if it could be done, would not, I think, be permitted. It was not until the survey was nearing the end of the range of hills at Greystanes, that the ground offered any favourable sites for large reservoirs, but I there found three—the contours of which I submitted to a meeting of the Commission, specially convened at my request for the consideration of them; of these three, two are situate at Bull's Hill, closely adjoining each other, with a spur only intervening, and either could readily be adopted, or they could be converted into one. Into these the water could be conveyed at a height of 260 feet above Sydney high-water-mark, and their joint capacity is about 4,600 million gallons; the third, distant some 2 or 3 miles, and being at Prospect, was of still larger area, but could only be constructed to hold the water at a level of some 200 feet above Sydney high-water-mark; at that level, however, it would impound about 7,000 million gallons. The Commission preferred the higher level reservoirs, and I was requested to cause details of these to be proceeded with, giving up the lower level or Prospect one. It was not until these two reservoirs had been fully elaborated—a work occupying nearly two months' time, that Mr. Moriarty, who had been absent at Melbourne when the decision just mentioned was arrived at by the Commissioners, recommended the reconsideration of my low-level reservoir at Prospect. I hope that when the Commissioners arrive at a decision, a pure gravitation scheme by pipes and pressure from the Bull's Hill Reservoirs may be chosen. However, if from a comparison of expense, or for other reasons, the Commission adopts the Prospect scheme, I may be permitted to say that I shall none the less consider the Commissioners successful in their endeavour to introduce an abundant supply of water into Sydney at a cost not prohibitory.

I will now proceed to describe my portion of the aqueduct.

There are few works of much magnitude beyond the tunnels and reservoirs requiring detailed drawings; and of these the most prominent is the crossing of the Railway at Menangle. This work, and the crossing of the Campbelltown Creek, are included in Mr. Moriarty's estimate, he having other similar works requiring special drawings and estimates, which equally suit these. As the distance supervised by me appears on the finished drawings to be twenty-one miles, it may be well to mention that the work involved would represent much more than double that distance. The object

of the Commission, when the field-work was undertaken, being to ascertain the possibility of finding *any* line over this part of the country, a trial survey was first made. Accordingly this is still shown upon the plans by the dotted line marked "Alternative line." When it was laid before the Commission, and the practicability of finding a line proved, it was resolved that another and shorter one, based upon the data obtained, should be surveyed, &c. This is the line adopted, and involves some miles of tunnel, but it is shorter by several miles than the first one. However, both have been carefully and completely got up, and either could be adopted. The first line, moreover, was continued all the way to Greystanes, where it was then thought possible to construct a high level reservoir, but on the levels being completed this was found impracticable. This line was $37\frac{1}{2}$ miles in length from the Sugarloaf.

Mr. Moriarty's first portion of line joins mine near the Sugarloaf at a point $16\frac{1}{2}$ miles from the commencement, and immediately afterwards we cross the road from Campbelltown to Camden, passing underneath it, leaving it undisturbed. At the $17\frac{1}{8}$ mile the line crosses the Railway by an iron aqueduct described by Mr. Moriarty. From hence the line skirts the east side of the dividing range of the Nepean and George's River watersheds, crosses several long spurs, contouring the mountain side until at the $17\frac{7}{8}$ miles, it crosses Campbelltown Creek—one of the upper tributaries to George's River—by an aqueduct, also included in Mr. Moriarty's estimates. Immediately beyond this it enters a short tunnel 90 yards in length; and at $18\frac{1}{2}$ miles is an aqueduct 150 feet in length. From this point the character of the country on the east side of the range becomes increasingly difficult, and being followed for some miles, it was almost impossible to find ground at the required level upon which the works could be constructed, the side of the hills being broken into long spurs and deep gulleys, almost precipices; on the west side of the range, however, the country was found to be quite different, falling away in long easy slopes, offering good constructing ground, with fewer watercourses and no precipices. The only resource, therefore, was to pierce the range, which is done by a tunnel 484 yards in length. There are two complete surveys hence to the $22\frac{1}{4}$ -mile and the Nepean watershed is adopted. Ten chains beyond the exit from the tunnel, or at the 19th mile, the aqueduct crosses the road from Campbelltown to Camden, at a level involving no material alteration of the road surface. At the 20th mile occurs an aqueduct 450 feet in length and 23 feet high. In construction, an embankment might be substituted, if thought advisable, with a small bridge at its deepest point. At the $20\frac{1}{2}$ mile is a tunnel 1,254 yards in length, which might be avoided in construction by a detour of about $2\frac{1}{2}$ miles over a good country. At the 22nd mile, the nature of the country necessitates a drop of nearly 7 feet in the height of the aqueduct; this is done by means of weirs. At the 23rd mile, a high spur runs out from the main range, necessitating a tunnel 220 yards in length, after which the country continues very good to the 25th mile, where must be another tunnel, through another spur, but only 84 yards in length; beyond which the entire range falls with great rapidity, and the line of aqueduct which is carried along the highest part of it has to be lowered many feet, 72 in all, by a series of weirs. Part of the fall of 72 feet is caused by a sudden drop in the range at Cairn's Hill, at about the 29th mile, but the weirs are mostly placed several miles short of Cairn's Hill, as the fall takes the aqueduct into better country, being the pasture lands on the west side of Mount Cordeaux. Here is an excellent site for utilizing the water power, if it should be found practicable to do so. It is near the old Cowpasture and the Denham Court Roads, affording easy access to the Great Southern Road, distant four or five miles. But I cannot say that I entertain any expectation of largely using the water as a mill power—at any rate above the reservoir—as the supply would be so irregular that the machinery would in all probability be idle half the time, and proper control of supply by the millers is almost an essential of water-power. At $27\frac{1}{2}$ miles the aqueduct is taken under the Denham Court Road, level of the road unaltered; at 29 miles under the Cowpasture Road, level of the Road unaltered; immediately afterwards, under the Bringelly Road, level also unaltered. Hence to the $31\frac{1}{2}$ miles, the aqueduct is carried along the very highest part of the range. From the 27th mile an alternative line has been chosen. The original contour kept to the west side of the range, and wound tortuously round it, avoiding heavy works, but materially increasing the length, until crossing once more the back bone of the range, it traversed the eastern side of it, skirting the sites of the Bull's Hill and Prospect Reservoirs, and continuing on to Greystanes, now the property of Walter Lamb, Esq. Here the Prospect Range terminates in a horse-shoe bend enclosing a valley which it was thought might be made available as a high-service reservoir, having its surface water at a level of some 300 feet above Sydney high-water-mark. This was afterwards abandoned, it being shown when the section was completed that the area submerged must be either very limited, or the aqueducts leading into it of great length and enormous height; and even then the impounding capacity was still small. The extreme distance from Sugarloaf to Greystanes was about $37\frac{1}{2}$ miles. It is necessary to make some mention of these various changes, as they include much more than twice the distance shown upon the completed drawings, which do not, without this explanation, fairly represent the money and time expended upon them, nor the work so ably performed by Mr. Licensed Surveyor Handcock, C.E., whose ability and perseverance I may perhaps be permitted to record. Returning to the description of the aqueduct:—At the $31\frac{1}{4}$ miles, an unavoidable tunnel of 180 yards is entered upon, succeeded by a good country to Judge's Hill, at the 33rd mile, where there is another tunnel, 80 yards in length, and also unavoidable. Hence the aqueduct traverses a broken country, with numerous culverts and short aqueducts, to the $34\frac{1}{2}$ miles, where it is on the back-bone of the range, at its lowest point, between Menangle and Prospect; hence to the 37th mile, where Mr. Moriarty again takes up the work. A variety of different lines were tried in the endeavour to avoid the bad country intervening, but
this

this could not be done save by the substitution of a line $7\frac{1}{4}$ miles long, and itself heavy, with nearly half the length of tunnelling of the direct one, which arrives at the 37th mile, in 3 miles and a half of broken country, necessitating three tunnels of 3,300, 240, and 340 yards in length respectively. I believe that this line may still be improved in construction, especially the long tunnel, which, although it cannot be much shortened, may be taken into ground where the depth of the shafts may be greatly diminished. At this point the water would, if the high-level reservoirs were adopted, be turned into them. The plans before you show the aqueduct to be continued into the Prospect Reservoir, as is described by Mr. Moriarty. I must mention that the further work of carrying on the line of aqueduct to Duck Creek, at the 50th mile, was performed by me to the extent of examining the country and clearing the line, which appeared to me the best. This was subsequently pointed out by Mr. Hancock to Mr. Moriarty's party.

This brings me to the Bull's Hill Reservoirs, as shown on the plan (15A) accompanying my report.

The two reservoirs at Bull's Hill might be connected by a tunnel piercing the short spur between them, at the level of the outflow pipe, and would then form one reservoir. The area covered by both when full would be 535 acres, would hold an available depth of 60 feet between the surface level of 260 feet and the outflow pipe of 200 feet, and would contain 4,636 million gallons of water, or 386 days' supply of 12 million gallons per day. In May last, some doubt still rested upon the minds of the Commissioners as to the sufficiency of the supply from the rivers; I therefore obtained a statement of the result of the rainfall and its consequences, taken from the gauges put up by Mr. Moriarty for the Commissioners. The means adopted by me to obtain a reliable result are explained in the accompanying table, and need not be recapitulated now; suffice it to say, that I was very hard indeed upon the reservoir, never withdrawing any water from the river unless under the most favourable circumstances; but I succeeded in producing results so suprisingly favourable as to satisfy myself and other Members of the Commission. Mr. Moriarty submits a more finished set of tables, and arrives at much more favourable results; but I have in my report preferred making reference to my own, chiefly because I know it to be almost unfairly hard against the reservoir, but partly because its simplicity, as a reference, may induce the public to examine it.

By referring to it, and substituting simply 4,636 millions for 7,000 millions, it will be seen that, as the other circumstances entering into the calculation remain the same, this quantity would never once during 28 years have been half emptied, and would have been full, practically, 26 years out of the 28. I am therefore decidedly of opinion that this reservoir is quite large enough.

The material of which the dam should be made is abundant and good.

It is those reservoirs, or one of them, which should be constructed if the high level scheme be adopted. I have already shown that the water they can hold would never be half withdrawn; in actual numbers they would have contained *once for one month*, 2,416 million gallons, as shown by the very severe test of my tables, which record no flow into reservoir, when less than 10 million gallons are flowing down the rivers, and, practically, the average would stand much higher. However, with the reservoir thus far exhausted, the level of the water in it would be 238 feet above Sydney high-water-mark. With this 238 feet, and with a distance of about 20 miles to convey the water, let us see what height in Sydney we could achieve by pipes all the way. I calculate a delivery of more than 4 million gallons to the highest level attainable, and under the worst circumstances, and more than 7 million gallons into the Crown-street Reservoir. The water would be drawn off at a level in the Bull's Hill Reservoir of 200 feet, with a head of 238 feet at lowest area, in two pipes of 36 inches in diameter each. But it must be borne in mind that for $\frac{2}{3}$ ths of the whole period of 28 years the reservoir is practically *full*.

However, at this *lowest* period the supply would have been—To Paddington Reservoir, four millions and a quarter, or thereabouts; to the Crown-street Reservoir, eight millions and a half; together, nearly 13 million gallons per day.

For details of supply see Appendix D.

The cost of the pipes, which would be each about 21 miles in length, and calculating upon a price of £11 per ton, would be about £460,000. (See Table, Appendix.)

It has been suggested that the pressure would be inconvenient or excessive, but it is a fact that a large proportion of the mains for the London and other Water-works are under a pressure of much more than 200 feet.

Now there are but few places where the difference of level, even according to Mr. Moriarty's section—which in all probability would not be the line chosen for these pipes—is anything like 200 feet under the full reservoir. This pressure, if it existed anywhere could easily be avoided, by elevating the pipes at the lowest places if necessary, which, however, it is not, because it is a mere question of thickness of metal, and is quite usual in England and elsewhere.

Both as regards the length of piping and the pressure, there is indeed nothing but what may be observed daily in other places.

I believe that the high level scheme would be preferable from its simplicity, if it be in other respects practicable. The compound system of pipes, aqueducts, syphons, and small reservoirs, would be a constant source of anxiety, trouble, danger, and expense, *necessarily* larger expense, on account of manual labour alone, for regulating sluices, turbine or engine, &c., whilst, by comparison, the pipes would be secure.

A *resumé* of the reasons which suggest themselves to me in favour of the Bull's Hill Reservoir is:—

1. That to adopt the Prospect Reservoir is to depart from what I conceive to have been the original decision of the Commission, namely, the supply of water to Sydney by gravitation.
2. The Prospect Reservoir, and canal therefrom, necessitate a clear minimum unnecessary loss of 68 feet, and a maximum loss of 90 feet head of water.
3. This loss of an average of *at least* 75 feet is lost for ever, in all future modifications of the scheme of supply, unless by adopting the extreme step of making *all* the reservoirs.
4. The mode of supplying the higher levels of Sydney from Prospect, from a small reservoir, is inefficient and uncertain. To fill such a reservoir for a six months' drought, such as occurred from July to December, 1847, would require a reservoir capable of containing something like 700 million gallons—but Mr. Moriarty having (October 1st) abandoned this suggestion in favour of pumping from Crown-street, it is now needless to criticise it further.
5. The Bull's Hill Reservoirs hold more than $4\frac{1}{2}$ thousand million gallons, over an area of only 535 acres, whilst the Prospect one has but 7 thousand million gallons available, over 1,291 acres area, *i.e.*, $\frac{1}{3}$ ths the quantity of water in Bull's Hill, over only $\frac{1}{4}$ ths the area; the evaporation therefore would be much greater in the Prospect Reservoir.

But there is yet another view to which I call the attention of the Commissioners,—exhibiting the Bull's Hill proposal in perhaps its best light for present adoption.

It is true that a quantity of 12 million gallons has been fixed upon by the Commissioners as the supply required—but it is equally true that that supply is to suffice for a doubled population and future generations. Sydney and its Suburbs do not require—probably could not use 12 million gallons *now*, indeed they would have been well satisfied with the 30 million per week (not *five* million per day), if it could have been assured to them. It was but the uncertainty of that supply and the reduction of it when most wanted, together with the prospect of a possible failure of it, that brought this Commission into existence. Then why not modify for the present, the scheme? It will be remembered that the Bull's Hill Reservoirs are divided by a high spur. Here nature has given exactly what is required. Make *one* reservoir, and bring for the present *one* line of piping into Sydney. Let us see how this suggestion will work out. The southern reservoir of the two extends over an area of 395 acres, and contains 3,475,000,000 (three thousand four hundred and seventy-five millions) of gallons of water, and is much the larger basin of the two,—holding, indeed, almost exactly three-fourths of the *whole*. I am not prepared to state that *any enlargement of this one reservoir need ever be made*, even to supply 12 million gallons, as my table indicates that it would never have failed for 28 years, but would have still contained 1,655,000,000, or 130 days' supply, when the worst drought of 28 years broke up. The cost of this would be about £630,000.

A further and very important modification of the above described Bull's Hill scheme is the following:—The natural basin admits, especially at the western or mountain side, of a further raising of the level of the water to a height of 280 feet above high-water-mark at Sydney. It would be possible then to cut off, as it were, a portion of the western part of the reservoir, and to isolate it from the remainder by a moderate embankment, *20 feet higher in level* than the main dam; but inasmuch as the level of the ground where this second embankment would be made would be some 240 feet above high-water-mark, the embankment performing this work would be but of moderate height—some 40 feet or so—the effect would be to obtain a high-level of 280 feet available for the supply by gravitation of all but the very smallest island of the heights of Waverley, whilst impounding to the extent of its area an additional supply of water available either for a Waverley supply, or for supplementing the water in the body of the reservoir. A branch pipe should be connected with this small reservoir, and would deliver to a height of 270 feet at Waverley when the Reservoir was full. A table of results is appended. Now the level of the line of aqueduct encourages this proposal, for on reference to the plan and section it will be seen that a line 20 feet higher would shorten the tunnels and reduce the depth of shafts over the last and roughest 3 miles of the whole distance; nay, I have already quoted this part of my work as capable of improvement probably in some such manner, irrespective of the reservoir level. I regret that no actual estimate of the cost of such work can be made without further and now impossible field work, but my impression is that the improved line would pay for the embankment.

Now, the adoption of the high-level reservoir need by no means bind the Commission to the immediate employment of pipes; they could just as easily descend to the canal level *after leaving* the reservoir as *before entering it*. The question of pipes or canal might therefore be for the present left open, if the Commissioners wished it; but it would, I think, be important to retain an impounding reservoir, at such a level as will admit of eventually adopting *either* mode of supply, now that we have found one.

No doubt the strongest argument in the minds of many will be the apparent capability of the compound scheme to convey 30 millions of gallons of water half-way from Prospect to Sydney; but this capacity is excessive, as can be readily shown. By Mr. Moriarty's tables of the water passing down the joint rivers, impounding a full aqueduct whenever it was to be obtained, and *all* the water passing down at other times,

I find that, between the months of October, 1868, and March, 1869, the reservoir delivering 30 millions per day would have been called upon to part with about 3 thousand million gallons more water than it received. Here was no remarkable drought, but the reservoir was half empty. But *during* a remarkable drought, namely, that of 1849 and 1850, I find that 11,700 million gallons would have been withdrawn, and, by the test I have applied throughout, only 2,550 millions supplied between January, 1849, and February, 1850; which means that the Prospect Reservoir would have been dry for three months. After February, 1850, to June, 1850, 2,500 millions more would have been supplied, and 4,500 millions required; so the reservoir would have been practically dry for eight months. Therefore, a canal conveying 30 millions per day from the reservoir would be least useful when most wanted.

Withdrawing 20 millions per day would have reduced the Prospect Reservoir to 1,750 million gallons in February, 1850; or 87 days' further supply, if the drought had continued; a reduction sufficiently close for safety. But this 30 million can only be brought within ten or eleven miles of Sydney—whereas by the pipe system, 14 million gallons could be brought *into* Sydney, namely:—

From the 280 feet reservoir at its lowest,	or 252 feet,	$5\frac{1}{2}$ millions to Paddington.
From the 260	„	or 238 „ $8\frac{1}{2}$ „ Crown-street.

14 millions

Mr. Moriarty's estimates for the various works contemplated by him being completed, I have only to append an estimate of mine. This I have accordingly done in Appendix A. I have next tabulated the cost of the Bull's Hill Reservoir, or a high-level scheme for delivering the same supply into Sydney (Appendix B).

As I have throughout this report placed before you only the very most trying condition of the supply, it is but fair that I should state the more favourable, and the average conditions, which is accordingly done in Appendix E.

In conclusion, I may repeat, that either scheme as now presented contains at least the great element of success—a sufficient supply of water. No more fear need be felt by the citizens, of droughts and their forerunner—diminished supply; but I regret that a scheme should be abandoned, in favour of *any* compromise whatever, which would supply all Sydney, and all its Suburbs (excepting indeed a very small area of the highest part of Waverley, which *cannot* be supplied) without artificial additions, which being supplied by pressure would give an available force for various city purposes, notably for extinguishing fires (high above the level of 149 feet), from which cause alone losses might be avoided, and at some time or other would be, which for aught I know might represent the whole amount expended in construction.

I cannot enter into any details of the arrangement of supply in Sydney, but it is self-evident that it is a very simple matter to connect with any or all the Suburbs (with the exception of Waverley heights), to deliver at all times into the Crown-street and Paddington Reservoirs, and to have a stand-pipe at Paddington, for the supply of all accessible parts of Waverley. This stand-pipe would never in 28 years have failed to supply to a height of 228 feet, would have supplied for $26\frac{1}{2}$ years out of the 28 years to a height of 238 feet; and for 13 years out of 28, would have supplied to 248 feet.

I find that I have omitted to mention the fact that the extreme lowering of the Bull's Hill Reservoir due to supply, and withdrawal only, would have been to a level of 245 feet above datum; the remaining 8 feet between this 245 and the 238 I have taken as the practical lowest, is allowed for absorption of reservoir and evaporation, which would tell most during the long droughts when the reservoir was most lowered.

FRANCIS H. GRUNDY.

APPENDIX A.

ESTIMATED Cost of proposed project for the supply with water from the heads of the Cataract and Nepean Rivers, the high services at Paddington and Waverley being supplied by *gravitation* from Prospect Hill.

	£
Excavation in earthwork, exclusive of tunnels	20,940
" rock	25,567
" tunnels	25,028
Fencing	4,053
Brick-lining in tunnels	7,256
Rubble masonry	14,056
Dry rubble	1,397
Concrete	6,006
Puddle	2,396
Stone pitching.....	6,420
Aqueducts	1,550
Culverts	1,500
Weirs	615
Road bridges	500
Accommodation bridges	10,000
Superintendence and contingencies	127,284

NOTE.—This is exclusive of Mr. Moriarty's estimate.

APPENDIX B.

ESTIMATED Cost of proposed project for the daily supply of upwards of 12 million gallons of water from the heads of the Cataract and Nepean Rivers, by *gravitation*.

	£
Moriarty, Appendix B, to Sugarloaf.....	124,929
Grundy, to Bull's Hill	127,284
Bull's Hill Reservoir, dams, &c.	224,708
Pipes to Sydney, laid	476,202
Two distributing reservoirs	10,000
Contingencies and supervision	10,000
	£973,123

ESTIMATED Cost of proposed project for the supply of upwards of 6½ million gallons, by *gravitation*.

	£
Joint Line to Bull's Hill	252,213
Reservoir, dam, &c.....	125,000
Pipe to Sydney	238,101
Two distributing reservoirs, say at Petersham and Waverley	10,000
Contingencies and supervision	7,000
	£632,314

APPENDIX C.

TABLE showing the number of gallons which could be discharged in 24 hours by two pipes each of 36 inches in diameter, from the Bull's Hill Reservoir, into Crown-street and Paddington Reservoirs respectively.

	Height at Bull's Hill above High-water- mark, Sydney.	Height of Discharge, above High-water- mark, Sydney.	Head of Water.	Gallons discharged in 24 hours, by one pipe of 36 inches diameter, 20 miles long.
Discharge at Paddington.	238	214	24	4,246,392
	240	214	26	4,429,980
	245	214	31	4,826,056
	250	214	36	5,200,680
	255	214	41	5,550,024
	260	214	46	5,878,680
	265	214	51	6,190,080
	270	214	56	6,486,336
	275	214	61	6,769,752
	280	214	66	7,041,768
Discharge at Crown-street.	238	139	99	8,625,600
	240	139	101	8,711,040
	245	139	106	8,923,992
	250	139	111	9,132,000
	255	139	116	9,334,080
	260	139	121	9,534,600
	265	139	126	9,729,600
	270	139	131	9,919,920
	275	139	136	10,108,080
	280	139	141	10,320,240

Calculated by Hawksley's formula $G = \sqrt{\frac{(15 D)^5 H}{L}}$

Where G = Gallons delivered per hour.
L = Length of pipe in yards.
H = Head of water in feet.
D = Diameter of pipe in inches.

APPENDIX D.

TABLE showing what could be done by two pipes of 36 inches in twenty-four hours.

Both drawing pressure from a height of	Deliver to Crown-street.	Deliver to Paddington.	Height to which 8 million could be delivered.	Proportion of time for which this delivery could be maintained.
280 feet	21 mill. galls.	15 mill. galls.	256 feet.....	7 out of every 9 months.
275 "	20 " "	13½ " "	251 "	About 2 years 10 months out of every 3 years.
270 "	19 ⁵ / ₁₆ " "	13 " "	.....	Whenever the supply from the sources would allow the quantity to be taken out of Reservoir.
One pipe from 275 ft., the other from 245 feet.	10 " "	6½ " "	4 mill. to 256 ft.	2 years and 10 months out of every 3 years.
5 feet lower	9½ " "	6½ " "	Ditto to 250 feet.	Practically always. By the tables, 26 years and 10 months out of a period of 27 years and 3 months.

The probable eventual arrangement would be to construct a reservoir at Waverley, at a level of 250 feet; and Mr. Bennett's Reservoir at Strawberry Hills.

The supply to Sydney might always be 13 million gallons, and always fill the Waverley Reservoir, excepting for an *average* time of about one fortnight per year, but which would resolve itself into some 2 or 3 months once every 10 years or so.

APPENDIX E.

TABLE showing the heights in the Reservoir at Bull's Hill, during the various periods comprised within the tabulated twenty-seven years and three months, together with the quantity to, and height at which one 36-inch pipe would have delivered in Sydney; with a full Reservoir the water to be 260 feet above Sydney high-water-mark.

Time in Months.	Height in Reservoir.	Quantity delivered to Crown-street.	Quantity delivered to Paddington.	Height to which 8 millions could have been delivered.	Height to which 4 millions could have been delivered.	Supply divided between the two Reservoirs.
250	Full	9,500,000 galls.	5,878,000 galls.	161 feet	236 feet	7,700,000 galls.
60	255 feet	9,334,000 "	5,550,000 "	155 "	231 "	7,400,000 "
10	250 "	9,132,000 "	5,200,000 "	150 "	226 "	7,150,000 "
5	245 "	8,923,000 "	4,826,000 "	145 "	221 "	6,800,000 "
2	238 "	8,600,000 "	4,450,000 "	139 "	214 "	6,500,000 "
327						
Small additional Reservoir at level of 280 feet.						
250	Full	10,320,000 galls.	7,042,000 galls.	181 feet	256 feet	8,660,000
60	275 feet	10,108,000 "	6,770,000 "	175 "	251 "	8,400,000
10	270 "	9,920,000 "	6,486,000 "	170 "	246 "	8,200,000
5	265 "	9,730,000 "	6,190,000 "	165 "	241 "	8,000,000

STATEMENT of the probable Quantity of Water available from the Upper Nepean and Cataract, read by Mr. Grundy, at a Meeting of the Commission, on 6th May, 1869.

THE satisfactory solution of the question of a sufficiency of water from the heads of the Cataract and Nepean is of vital importance to the success of the scheme for the future supply to Sydney, as proposed by the Water Commission. I have formed a table from the data in our possession, which completely satisfies me that the supply is ample—that an aqueduct carrying seventy-five million gallons in twenty-four hours is quite large enough,

enough, and that a reservoir containing seven thousand million gallons will never be even severely tried, *never being reduced below about five thousand million gallons during a trial of twenty-eight years.*

Gauges have been placed across the rivers—on the Cataract, for about five and a half months,—on the Nepean, four and a half months. It might be wished that the time had been longer, but the gaugings exhibit all the changes necessary for our purpose. All we want to know from the rivers is,—what is the effect of atmospherical changes upon them? Alternations of dry and wet weather occurred during the time of gauging; for each of the rainy periods we have the *depth* of rainfall, the *number* of *days'* rain, and the *effect* upon the rivers' discharge—the varied circumstances producing altered results, of course.

A fall of $2\frac{1}{2}$ (2.42) inches, extending over *fourteen* days, would have kept the aqueduct supplying seventy-five million gallons per day *full* for ten days,—a fall of $7\frac{1}{2}$ inches for fourteen days, full for fourteen days,—proving that these rivers respond immediately to a moderate rainfall, bring it down rapidly, rise almost the very first day of rain, and fall again quickly after it ceases, making the task of tabulating *results* easy—as we must depend chiefly upon the *number of days* of rain, not the quantity fallen.

Of course, during the 7 inches' fall, thousands of millions of gallons poured on down the river's course. This latter fall, then, was too rapid for us; clearly, if it had descended more moderately, we should have benefited more by it; for if $2\frac{1}{2}$ inches are enough to fill our conduit for ten days, these 7 inches, if they had obliged us by taking *twenty-eight* days to fall in, would have kept our conduit full for the twenty-eight days, and so on. Therefore, so far as the *effect* of the raining goes, we have, in even this short period of gauging, really sufficient data; for the *effect* is a *constant* quantity, and what $2\frac{1}{2}$ inches or 7 inches of rain did in 1868–9, it is logical to presume it did in 1859 or any other time, the circumstances of the watershed remaining unaltered, as we know they do; so that fortunately the short record we possess suffices for this item of our calculation. But the result of rainfall being thus ascertained, we require to know the probabilities as to how and when it will fall. *How often shall we have these $2\frac{1}{2}$ or 7 inches of rain in an available number of days?* Here is the *uncertainty*; and if we had the *rainfall* for a few months only, instead of *its effect* when fallen, calculation would be *impossible*. Fortunately we have the rainfall in inches, and time of falling in days, for every month, for twenty-eight years, and can come to a very perfect conclusion. It is true that the rain-gaugings have been taken in Sydney; it would have been more satisfactory had they been taken on the spot, rather than fifty miles away; but it is a known fact that the periods of rain at the two places are co-existent, whilst the river watersheds are similarly situated with our South Heads, as regards coast-line, and are at much higher elevation, and do practically receive much more rainfall than a *Sydney* register shews to be quite sufficient for our purposes.

The gauge tables show that a fall of 1 inch of rain in seven days (also 1 inch in ten days) produced scarcely any effect upon the supply of water, which must arise either from an inch of fall being required to saturate the ground of the watershed, or that the small fall was due to local causes (thunder-storms, &c.) nearer Sydney. I have in the succeeding tables omitted *all* rain-fall below $1\frac{1}{2}$ inch, however rapidly it may have fallen. I have also omitted *all* supply below 10,000,000 gallons per day; thus sacrificing 1,472,000 gallons on the very driest day of the five months, and an average of 5,000,000 gallons for 300 days every year, calculating indeed only flood water. This is very desirable, if not essential, as we thus avoid all interference with the *ordinary* supply of water in the Nepean, Sydney being supplied *entirely* from what would have been in the ocean or flooding the country in twenty-four hours.

The gaugings from the 1st to the 27th of November are for the Cataract only—those of the Nepean not beginning until the 27th; but for the $4\frac{1}{2}$ months succeeding, the volume of water discharged by the Nepean is always, at the least, three times that from the Cataract—generally more; and these comparative quantities fluctuate remarkably little. I have therefore calculated upon that proportion for November. I have, for convenience of calculation, put together the quantity discharged whilst in excess of 10 million gallons, taking, of course, on high floods, only 75 millions per day, and reduced it into days; thus, approximately, there were in November, 1868, 27 days of over 10 million gallons, together giving 750 million gallons, equal full conduit for 10 days. In February, from the 10th to the 22nd, 12 days *full*, and to the 27th, the remainder, making 14 days in *all*.

In March, there were no less than 12 days over 5 but under 10 million gallons delivery, and doubtless, in many months in every year, as many. These are all omitted, being unnecessary, as the reservoir never shows any alarming symptoms of exhaustion without them, and I think the question of sufficiency of supply may be considered satisfactorily settled—absolutely and satisfactorily, notwithstanding any weak points to be found in this argument.

Note.—When there is a deficiency of supply for one or even two months, but a full reservoir to draw from, *refilled* by a sufficient rainfall immediately afterwards, I have generally recorded a full reservoir in these tables, as the question is in no way affected by the withdrawal and replacing of six or seven hundred millions from six or seven thousand millions.

For convenience, I have considered that 360 millions are withdrawn per month from the reservoir, and that it takes *five* days' full conduit to give a month's supply— $75 \times 5 = 375$ —a little too much.

Year.	Months.	Inches' Rain.	Days' Rain.	Days' Supply.	Quantity in Reservoir taken as
In the year—					gallons.
1841.....	January	5·63	17	17	7,000,000,000
	to				
1842.....	August				full.
„	September to November	1·31	33	none	5,920 millions.
„	December	3·04	15	13	6,490 „
1843.....	January	1·58	14	none	6,340 „
„	February to				
1844.....	January				full.
„	February	1·88	16	none	6,640 „
„	March	2·28	5	5	6,640 „
„	April and May	3·26	24	none	5,920 „
„	June	10·04	12	12	6,430 „
„	July to				
1845.....	July				full.
„	August	0·60	7	none	6,640 „
„	September	3·62	8	8	6,865 „
„	October and November	2·69	18	none	6,505 „
„	December to				
1847.....	June				full.
„	July to December	7·15	61	none	4,840 „
1848.....	January	8·00	18	18	5,785 „
„	February	2·55	14	10	6,160 „
„	to				
„	December				full.
1849.....	January to April	3·69	40	none	5,560 „
„	May	5·61	13	13	6,160 „
„	June	1·80	11	none	5,800 „
„	July	3·48	14	14	6,475 „
„	August and September	2·99	26	none	6,115 „
„	October	1·95	10	7	6,265 „
„	November to				
1850.....	February	5·07	55	none	4,785 „
„	March and April	9·07	24	24	5,830 „
„	May	1·22	11	none	5,470 „
„	June	3·52	15	15	6,190 „
„	July to October	10·16	22	22	full.
„	November	1·69	9	none	6,640 „
„	December	1·52	6	none	6,280 „
1851.....	January	1·74	8	none	5,920 „
„	February to				
1854.....	September				full.
„	October to December	2·01	29	none	6,640 „
1855.....	January to				
1857.....	October				full.
„	November to				
1858.....	February	5·24	30	none	5,560 „
„	March to June				full.
„	July to September	2·82	29	none	5,920 „
„	October to				
1859.....	February				full.
„	March to May	2·43	22	none	5,920 „
„	June to				
1862.....	March				full.
„	April and May	2·86	20	none	6,280 „
„	June	3·32	10	10	6,640 „
„	July	0·12	4	none	6,280 „
„	August	1·95	9	5	6,280 „
„	September to November	2·38	26	none	5,920 „
„	December to				
1863.....	October				full.
„	November to				
1864.....	January	2·69	28	none	5,920 „
„	February to				
1866.....	July				full.
„	August to October	2·60	25	none	5,920 „
„	November to				
1867.....	September				full.
„	October to December	1·26		none	5,920 „
1868.....	January to				
1869.....	May				full.

The very large margin, tending to a still more favourable result, is easily seen. For instance, in the year 1847 a period of six months occurs in my tables without adding one drop of water to the reservoir—yet 7·15 inches of rain fell during that time in sixty-one days. Now we know that 2·41 inches gave a full conduit for 10 days; by deduction, the 7·15 inches would have given a *full conduit for the thirty days*; yet we add *nothing*; are not the chances greatly in favour of having received several—many—days' full supply? Again, during the prolonged drought of 1849 and 50 I allow nothing for a fall of 1·8 inch in eleven days in June, but a fall of 2 inches for eight days gives by the gauging a full conduit for that time; then, in August and September of the same year we have 3 inches (2·99) in 26 days, and allow nothing for it, yet 3 inches give a full conduit for *twelve* days. Should we have none of it? Again, 1½ inch in December, 1850, in six days—nothing allowed for it, yet 2 inches fills the conduit for *eight* days. In January, 1·74 inches in eight days—nothing allowed, and so on.

However, the reservoir reduced to its lowest at the end of 1849 still contains about 5,000,000,000 gallons.

SUMMARY.

In 28 years.....13 years full.
 „ 2 years.....Under 6,000,000,000 gallons.
 „ 2 months.....Under 5,000,000,000 gallons.
 „ 13 years.....Over 6,000,000,000 and under 7,000,000,000 gallons, or practically full.
 26 years practically full.

FRANCIS H. GRUNDY.

6th May, 1869.

Paper read by Mr. Woore at a meeting of the Sydney Water Commission, held on 27 November, 1867.

STATEMENT of the advantages to be derived from obtaining a supply of water from the Warragamba River, by means of an aqueduct, as proposed by Mr. Woore, of Pomeroy.

THE greatest collecting area of ground that exists within reach of Sydney would be tapped at its lowest point, but at an elevation sufficiently high to cause the water to run into Sydney by its gravitating force; consequently, the largest supply of water that can be obtained from one source would there be secured, and by means of an aqueduct would be conveyed into the metropolis at the least annual cost.

The country intervening between that river and Sydney being admirably adapted to form an aqueduct on, such a work may be constructed at a very moderate outlay.

The direction in which it is proposed to construct this work, and the elevation of the ground, is shewn on the accompanying map. The aqueduct would mostly pass along the top of a ridge; therefore, water may be distributed nearly throughout its whole course by its gravitating power alone.

Where the aqueduct would cross the Nepean River, the locality affords every facility to supplement that supply by pumping that stream into it, by a direct lift, to which the machinery now used at Botany may be applied when required. This river could not be dammed to the required height at that point, as it would inundate large portions of valuable land. The water in both is of the purest character, and the quantity that may be obtained from either (more particularly the Warragamba) far exceeds that of any other source. By diverting the Warragamba alone, or such portion of it as may be required, a liberal supply of water for present purposes, or for a greatly increased population, may be thrown into Sydney, Parramatta, and indeed Windsor, besides irrigating a large portion of the northern part of Cumberland. And when it is necessary to supplement that quantity, these rivers with their tributaries, the Cox, Nattai, and Bargo, are capable of being made to store an almost unlimited supply, by further damming towards their sources, sufficient for the requirements of ages to come.

Therefore, this work may be considered so substantial and permanent that, when formed, an ample supply of that necessary fluid will be established for ever.

To carry out this scheme, I propose to form a dam across the Warragamba, about a quarter of a mile above its junction with the Nepean, to such a height as will raise its waters rather above the level of the high ridge that crosses the valley of Mulgoa, from whence there is a gradual descent into Sydney.

An effective dam may there be formed that would resist the force of the heaviest flood that ever came down that river, at a comparatively moderate cost. The principles on which I would construct it are explained in the annexed drawing. The banks are almost perpendicular, composed of compact sandstone, lying in thick horizontal layers, well suited for the construction of such a work. All the heavy materials necessary are on the spot, and there is the facility of water conveyance for any other that may be required. Such a dam would convert from twelve to fifteen miles of the river into an immense reservoir, extending nearly into Burragorang.

This reservoir may be also used as a highway on which the traffic of that fertile district, which is at present blocked up by high mountains, could be worked with facility.

When the Warragamba is in ordinary flood, the surplus water would be allowed to run through an adjoining natural gully, as the supply required for use would be drawn off by a side cutting, furnished with a lock gate. The volume of water in excessive flood thus diminished, spread in a thin sheet over the top of the dam, and approaching it in an almost quiescent state, from having lost its momentum by passing over the extensive level surface of the reservoir, would then retain but little of its destructive power; and the diversion of so large a quantity of water from the parent stream as would be drawn off by such an aqueduct, would greatly reduce the evil of the inundations that take place on the fertile flats of the Hawkesbury River, relieving Windsor of the dreaded apprehension of being some day submerged.

In this light alone such a work would be highly beneficial, and would greatly increase in utility; as, the larger the quantity of water that would be drawn off to augment and fertilize one part of the county, the greater would be the benefit other parts would derive by lessening the evil effect of inundations.

It

It is proposed to convey the water from Mulgoa to Sydney in an open cut, sufficiently large to allow a considerable volume to pass, the sides of which, reduced to a proper inclination, should be grassed and securely fenced from molestation. Where the duct would cross minor valleys, small reservoirs may be conveniently formed for irrigating purposes.

Between the Warragamba and the ridge alluded to in Mulgoa lies the Nepean River, and a narrow spur that extends from the high land of Fairlight, both of which it is necessary the duct should cross. The formation there is all solid sandstone. To cross the Nepean I propose to sink two shafts—one on each bank, opposite to the other, and to connect them by a tunnel worked in the rock underneath the bed of the river. The whole would form a large inverted syphon. As the top of these shafts would be on the level of the water in the Warragamba reservoir, and connected with it by an open cut in the sandstone, the water in the shaft on the right bank (or that on the Mulgoa side of the river) would by the natural law of all fluids, stand at the level of that in the reservoir. From that shaft the fluid would be drawn off and conveyed through the mountain spur to the ridge in Mulgoa by open cut and a short tunnel, and from thence into the open aqueduct that has been described, to a great reservoir to be formed at the head of Ironstone Creek, near to the Newtown Railway Station, from which place the different municipalities would be supplied separately.

It will be seen that these works may be constructed by ordinary labour, few skilled artificers being required; and, as there would be no importation of material, the cost would be comparatively small, if judiciously carried out. The money would be spent entirely within the Colony.

Such a large expenditure, therefore, could not fail to give immediate life and energy to every trade within it. The country would not be drained of its capital. On the contrary, the money borrowed for the construction would be retained for future enterprise; while we were adding to the wealth of the Colony a highly remunerative work, the enormous advantages of which, in producing health, wealth, and comfort to its inhabitants, is beyond the human mind to grasp, and which any attempt to trace here would be out of place.

Until a more detailed survey than that I have made is effected, a correct estimate of the cost cannot be arrived at; therefore, it is desirable that should be immediately proceeded with.

THOMAS WOORE.

Sydney, 14 March, 1868.

Dear Dr. Smith,

I enclose the copy of a proposition I have to make to the Water Commission at our next meeting, that you may have time to consider the matter.

I am induced to offer this suggestion, from the very decided adverse opinions that were expressed at our last meeting, relative to my Warragamba scheme for bringing water into Sydney. These, coupled with certain prejudice I have observed to exist, from the commencement of our proceedings, are likely to lead to more unpleasant differences.

I need scarcely say that, both on public grounds, and as it affects the credit of the Commission, it is very desirable we should be friendly in our consultations, and unanimous in our results, and I see but little chance of that, unless I take the responsibility I offer, so as to remove the conducting of the details of that scheme from further discussion; for it is evident, very different views are entertained by the members of the Commission in the matter. But little confidence is placed on me, and I am not disposed to give way when I know that I am right.

I have the whole scheme of the Warragamba in detail before my mind, and only wait for the necessary sections to be made, to enable me to reduce it to figures. Not a doubt exists with me as to its practicability, great utility, and low cost of construction. I could convince any unbiassed reasoning mind of this in half an hour; but I object to making my thoughts gratuitously public, more particularly when they may be turned to my disadvantage. However, should such an arrangement as I propose be entered into, all objection to explaining my views to the Commission would then be removed.

Besides the desire of avoiding irritable discussion, I have another motive in making this offer, which is—to place myself in a true position before the public. I pledged myself to prove the practicability of this scheme, and to show it to be the best in the Colony, long before this Commission was thought of. The Government (as far as was in their power) have given me the opportunity, and I will do so if allowed by the Commission if not, all responsibility of failure will now rest with my opponents, if such exist. I contend that such a survey as I propose is *absolutely necessary*; that no one that understands the subject would object to it; that it is impossible to make an estimate that any dependence can be placed in without it; and for the Commission to put forth any other but what confidence can be placed in, would be highly discreditable; also, that in no other manner could that survey be so cheaply effected.

I remain, &c.,

THOMAS WOORE.

Memorandum

Memorandum of a proposition made by Mr. Woore to the Water Commission, in reference to a Supply of Water being drawn from the Warragamba River.—Read, 17th March, 1868.

If the Commission will remunerate me for that part of the trial section for a proposed line of aqueduct from the Warragamba River to Sydney that I have laid before it, *i.e.*, from Sydney to Rope's Creek (22 miles) at the rate it has cost to have the other part (14 miles), surveyed by Mr. Wyndham's party and myself, and will provide a similar party to complete that survey by making another section (an amended one), so as to enable an estimate being framed, I will engage to produce not only a practical scheme from the Warragamba to Sydney, but one that, from its ample supply of water, great utility, and small cost in construction, cannot be surpassed in this Colony. It would be accompanied by an estimate fit to lay before Parliament, and be a work that would, in every respect, be a credit to the Colony.

The aqueduct would be an *open cut*; the water supplied by *gravitation* in any quantity that is required, at a height that would command *all Sydney*.

During the time I am engaged in this survey and estimate, I would expect to be paid at the rate the Government have at present established, *i.e.*, three guineas per day with travelling expenses found.

Such an arrangement would not interfere with the Commission prosecuting their inquiries, and, should any other scheme be propounded, it may be treated in a similar manner. Under any circumstances, it is desirable the survey of one line should be advanced towards completion ready to be brought up with our report.

THOMAS WOORE.

Sydney, 17th March, 1868.

Paper read by Mr. Woore, at a meeting of the Sydney Water Commission held on 31st March, 1868.

A STATEMENT in reference to supplying Sydney with Water from the Warragamba River, made by Thomas Woore to the Royal Water Commission.

ACCORDING to the resolution passed by the Water Commission on the 25th instant, requiring that any proposal for supplying Sydney with water should be exhibited in detail, I have to explain my Warragamba scheme, and now do so, as far as practicable; but as the trial survey that has been made does not afford sufficient information even to lay the work out, much less any defined data to compute from, it is impossible to go into minutiae with any degree of accuracy. I can at present only state the principles on which I propose this great work should be constructed, and the mode of operation in effecting it. Before anything definite can be produced, an amended section must be made.

Having described the general character of the scheme in the paper read to the Commission on the 27th November, 1867, and plan then exhibited, I will now explain its principal features, and shew that it is practicable to convey the fluid into Sydney by the force of gravitation alone.

The main work required would be, a great dam to be built across the Warragamba River, to intercept the water there and raise it to the level of the ridge that traverses the Mulgoa Valley. This structure would of necessity be about 600 feet long (on the top), and about 170 feet high, filling up the contour of the gorge. In effecting it, there are three great difficulties to contend with:—

1. The enormous pressure of the fluid at that depth, which amounts to 78 lbs. on the square inch.
2. The great force of the flood currents.
3. The inconvenience attending a constant stream of water running over the work during its construction (as the river cannot be diverted until the dam is complete), and its being subject to violent and sudden inundations by floods.

No masonry wall, no matter how strongly constructed, would resist such a pressure, nor could the ordinary method of forming earthen structures be carried out there, for obvious reasons. Some new plan must be adopted, and I propose the following:—

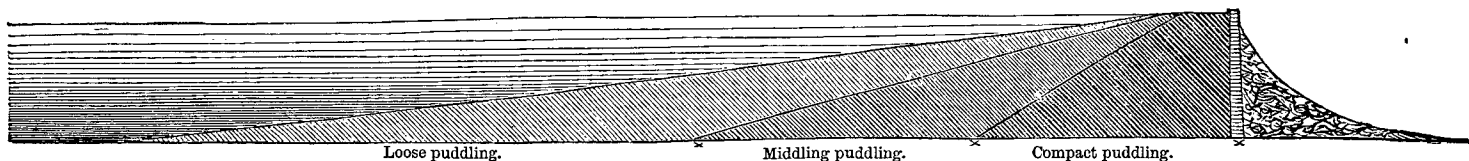
That the form of the dam should be similar to that represented in the accompanying drawing. The inner slope, or that on which the river current would act, to have an inclination of at least one in ten. The outer, starting from the top of the dam at an angle of 45°, would terminate at the base at about 80° from the perpendicular, thus forming a curved face, so that any water running over the top of the dam would, before having descended to the bottom (or to the bed of the river), have obtained a horizontal motion in the direction of the stream in order to prevent injury being done to the foundation by continued friction, the effect of a perpendicular fall.

The

The advantages that would attend such an inclined face on the inner side of the dam are these:—

That it would remove the principal weight of the fluid from the immediate vicinity of the weakest part of the structure (which is the highest part) to a distance from it, where it would be more easily contended against; and, from the slight inclination it bears to the course of the current, that form would offer the most effectual resistance to the descending water, floating trees, and other debris brought with it.

There would be three forces acting on that incline—the effect of gravity, liquidity, and lateral motion of the current fluid. Their combined direction would depend on varying circumstances, principally on the different velocities at which the water would impinge upon it as the river current varied, but it would always fall within certain limits of which 32° from the perpendicular may be taken as the mean; if so, the force *to be resisted* would be downwards at an angle of 52° from the perpendicular in the direction of the stream, where it would be met by the solid rocky bottom of the river—a sure foundation.



Longitudinal Section.

The angular lines shew the proper direction a resisting force should be applied, to resist the river current and sustain the water in the reservoir.

This is a simple problem in statics capable of being clearly demonstrated; but an illustration may be taken from an extreme case, more easily understood—a dam with a perpendicular inner surface. In that case, the fluid impinging on the inner face at right angles to the surface, would strike the dam with its greatest force on the weakest point, where resistance is least attainable, and the whole weight of the fluid would operate with irresistible force on the broadside of the structure.

Mr. J. P. Nichol, LL.D., in his "Cyclopædia of Physical Sciences" under the head of "Hydrostatics," clearly explains the effect that would be produced on the surface of a basin such as would be necessary to retain the body of water we require. Considering the reservoir as a vase (by which name he designates all vessels containing perfect fluids such as water), he states that "all pressure, being alike *perpendicular to the sides*, are in a parallel direction. Their united action, therefore, is equal to the weight of the mass of fluid, of bulk equal to the column of water." In exemplifying which, he instances "a hole made in the side of a vessel through which the water gushes. To oppose this, if a board is placed over the hole, and a stick or bar of iron be held against that board to prevent the egress of the water, it will be necessary to hold that stick or bar *at right angles to the side of the vessel* to obtain the greatest power of resistance." Shewing that the water in the reservoir, when in a quiescent state, would press on the inclined bottom of the dam *at right angles to its surface*, and must be opposed by a force *directly opposite*, to obtain stability. That resisting force would be secured by the solid structure of the dam having its base resting on the bed of the river, and would suit itself to the different velocities of the current.

I desire to be particular in explaining these principles, as it is considered to be impracticable to construct an efficient dam, of the required height, in such a position; and I do so in plain language, to encourage the investigation of every mechanic, believing that the subject of damming up water for the purposes of irrigation is one of the greatest consequence in this dry and variable climate.

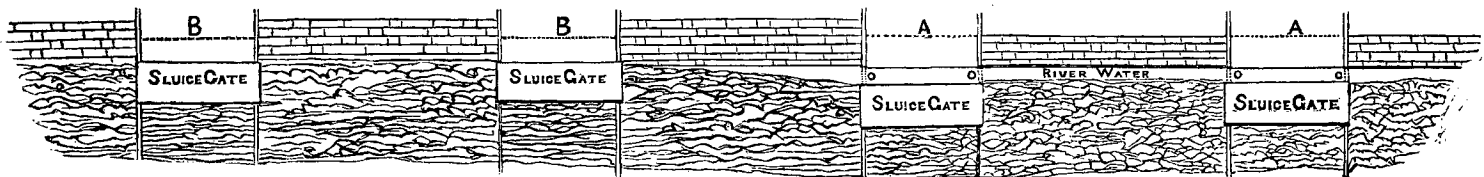
With reference to the composition of this work, I propose that the dam should consist of a masonry wall built across the river; on the upper side of which the river bed would be filled to the required slope by a mixture of puddling stones and clay, to vary in their proportions according to the situation in which it is deposited; the most compact mixture being next to the wall, that at a distance from it being composed of stones filled up with the surface soil or sand. The lower side adjoining the wall would be built up of well-packed rubble stones to the required curve, facing this curved apron with ashlar or timber, as may be found most expedient, so as to form a smooth surface for the water to pass over in excessive floods, if necessary.

It is not supposed that this wall will offer any great resistance to the pressure of the water. The objects in placing it there are, to form a retaining back to the puddling mixture, to facilitate the construction of the work by affording means for applying sluice gates, and to prevent the escape of water in the first instance, that is, before the work becomes consolidated. Therefore, it is intended to lay this stonework carefully in cement, and to carry the extremes of the wall into the solid rock at each bank. The strength of the dam, as has been already stated would be derived from the rocky bottom of the river. Such a structure would be yearly increasing in strength, from the sand and debris brought down by the river being deposited on it.

The mode of constructing so great a work under the inconveniences of a river constantly flowing over it I propose as follows:—That after lowering the water at present standing on the proposed site as much as possible, to put in the foundations by means of the usual cofferdam; and when the work has been brought up to the surface of that water, to continue it by means of shifting sluice-gates fitted on the inner face of the wall. These gates,

gates, of which there would be four or more, placed at intervals along the top of the wall (see the accompanying drawing), to be formed of iron, 8 or 10 feet long by 4 or 5 feet deep. Their number and size would depend on the quantity of water they would be required to discharge. They would be made to slide upwards on vertical iron bars secured to the masonry, and capable of being made watertight round their edges when in position, by caulking. Each gate would be fitted with an apparatus, such as racks and pinions, to raise it when required. They would be worked alternately; that is, in two sets. Those at one end of the wall or side of the river would always be advanced upwards one-half the width of those at the other end or side; so that when in operation, the course of the stream would be continually changed from one side of the river to the other, as the water would always find its way to the lower sluices, and thus leave the opposite side free from interruption to continue the building. The work would thus be gradually raised by alternate shifts.

Cross Section shewing the working of the shifting sluices. The dotted lines AA mark the position of the gates at the next shift; BB, the height the water will attain after that shift has been effected; ○○○ the iron bars on which the gates slide.



It is proposed to carry up the whole embankment simultaneously, say two courses of the masonry of the wall at a time, with a corresponding thickness of the puddling mixture and rubble work. The former would be carefully laid level, well rammed or trodden down by bullocks or horses, and when complete, the water turned on from the other side of the river over which it had been flowing, doing good service by consolidating the last layer of earth and stones. The puddling material and stone work would be delivered on the work wherever required, from tram stages and trucks overhead.

Thus would the work gradually proceed in horizontal layers until complete; and the running water, which at first appeared an insurmountable obstacle, turned to good account in consolidating the whole. And there would be small risk of damage to the structure, were the heaviest flood known to come down during its progress; for every part would attain its full strength as the work rises, the structure would offer but little obstruction to the stream, and as each layer was added, the water would have more room to escape.

It is not intended that the surplus water, after the requisite supply is drawn off for Sydney, &c., should be allowed to run over the dam, except in very extraordinary cases of high flood, and even that can be avoided if necessary. There is a natural watercourse on the left bank of the river, that may be made to draw off all ordinary waste and deliver it into the river again, about two miles below the dam; but as this has never yet been measured in any way, it would be absurd to guess at its details.

The next feature of importance in this scheme is, the conveyance of the water intercepted by the dam into Sydney. A short tunnel would be required through the right bank of the Warragamba into the Nepean gorge, which at this point has the appearance of a formidable obstacle, being from cliff to cliff 466 feet wide and 200 feet deep. But it is not necessary to cross at this elevation; a considerably lower level will do. This it is proposed to effect by an inverted syphon cut through the rock (which is here solid sandstone) under the bed of the river, or by a bridge over the stream, as may be found on consideration to be the most economical. The dam water would find its level through this syphon, then pass along a short open cut and another shorter tunnel all through the sandstone into the open valley of Mulgoa.

To give any detail of these works in the present state of the survey is utterly impracticable, as their dimensions entirely depend on the level on which it is determined to construct the aqueduct, and that cannot be arrived at until an amended section is made and the whole subject carefully considered.

The object in making a trial survey of the proposed route was twofold. In the first place, to ascertain positively whether there was sufficient fall in the ground to conduct the water to Sydney by gravitation. Secondly, to mark a line along the land, the different levels of which would be noted, so that another line might be traced by means of it, at such level as would be required to lay out the proposed work on. These objects have been entirely accomplished. It has been proved, provided the work is correct, that an available fall exists from the Warragamba to Rope's Creek of 84 feet, in a distance of 11 miles; and from thence to the bridge on the Liverpool Road, near Ashfield, of 69 feet, in a distance of 20 miles.

This is sufficient for all purposes required, and it now only remains that the matter should be well considered, and another section laid out on the land, adapted to the most judicious manner of managing the water supply. When this is done, the dimension of the various works would be got at, and an estimate computed from them, the correctness of which would, of course, depend on the degree of minutiae that would be gone into in that survey.

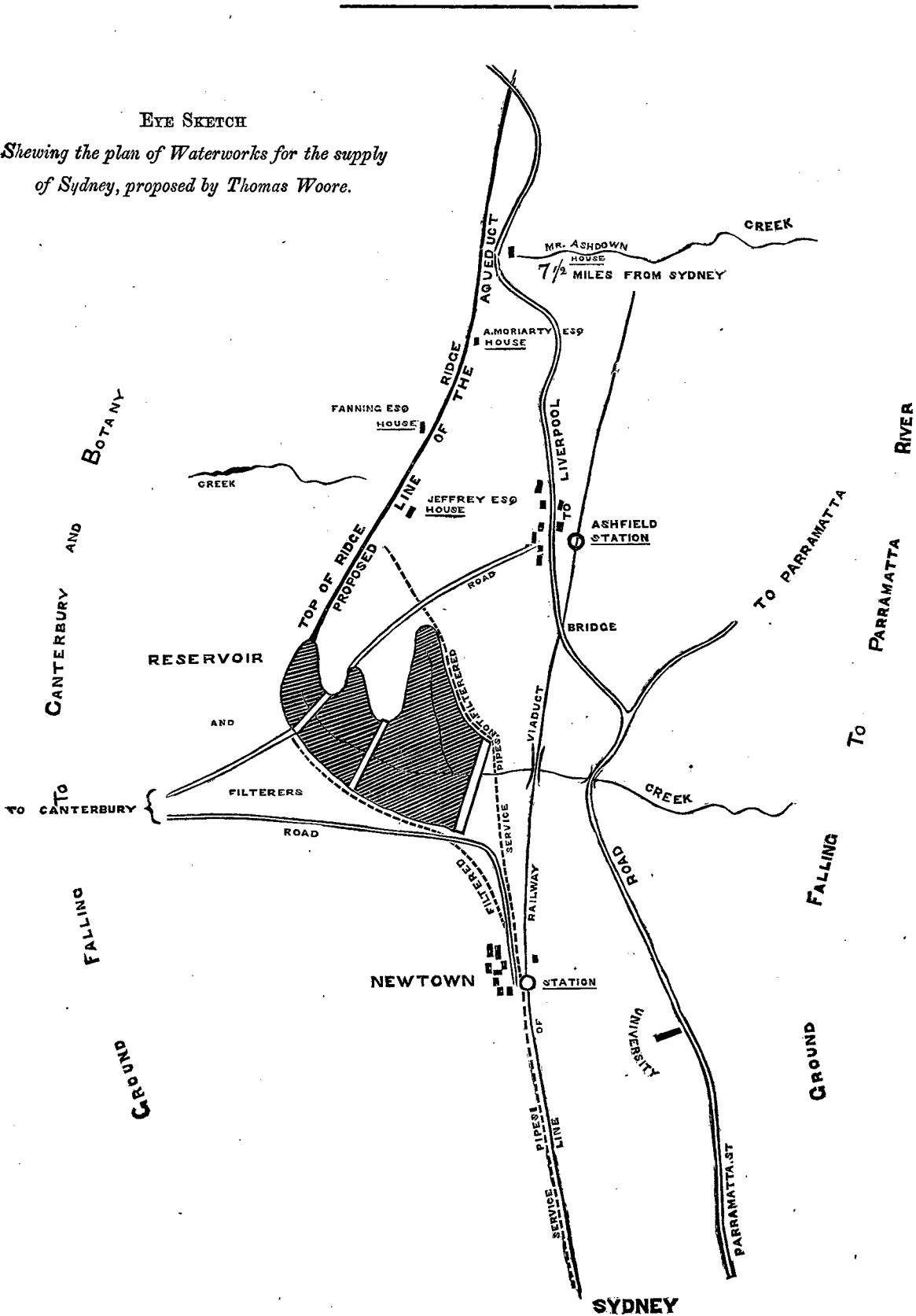
I annex an eye sketch of the works proposed to be constructed in the neighbourhood of Sydney, for the supply of the town and its neighbourhood. It will be seen that it is intended to form large reservoirs capable of storing a considerable supply of water on the ridge at the head of Ironstone Creek, at Petersham. This is the highest land in the vicinity of Sydney, and I think would command every part of it; but here again we wait for a survey to determine the elevation. The city and most of the suburban municipalities would be supplied from these reservoirs by separate pipes.

These are all the details I can at present furnish.

THOMAS WOORE.

31 March, 1868.

EYE SKETCH
 Shewing the plan of Waterworks for the supply
 of Sydney, proposed by Thomas Woore.



(Explanatory Note by the President.)

At the meeting held on April 16th, Mr. Woore submitted the following resolution:—“That, in order to obtain data from which an estimate of the cost of bringing water from the Warragamba River into Sydney may be calculated, an amended section of the line be gone into without delay.” The consideration of this resolution having been deferred till next meeting (April 18th), it was then moved by Mr. Moriarty, and carried—“That before further expense be incurred in regard to Mr. Woore’s scheme, printed copies of the various statements read by him to the Commission be supplied to the Members, with the view of eliciting written opinions thereupon.” At a meeting held on May 29th, Mr. Woore’s resolution of April 16th was put and negatived.

F. H. Grundy, Esq., to The President, Sydney Water Commission.

183, Pitt-street, Sydney,
17 April, 1868.

My dear Sir,

The accompanying document contains my views upon Mr. Woore’s proposal to dam the Warragamba. I have little to say beyond what is already expressed therein. I have thought my best upon the subject, and have decided that I could not conscientiously avoid making this statement.

I shall be purposely absent to-morrow, and desire that my opinion may be considered as finally embodied in my written statement.

Question may be raised as to absolute dimensions given; therefore I wish to state definitely, that possible minor inaccuracies will in no way alter the belief I have expressed
I am, &c.,

FRANCIS H. GRUNDY.

MR. WOORE’S SCHEME FOR DAMMING THE WARRAGAMBA.

F. H. Grundy Esq., to The President, Sydney Water Commission.

Sydney Water Commission,
17 April, 1868.

Dear Sir,

My opinion of the extreme importance of arriving at a correct conclusion as to the practicability of Mr. Woore’s great scheme, and the propriety of adopting it, if practicable, has led me to give it my most earnest consideration. Nothing but the magnitude of the error which, I believe, we should commit, in permitting Mr. Woore’s scheme to go forth to the public with the silent consent of this Commission, would have induced me to advance an opinion so completely opposed to the views of that gentleman. Even as it is, I adopt this course with regret, having high respect and esteem for Mr. Woore. However, I can only trust that he will believe me to be actuated by a desire to solve satisfactorily the vexed question which has been entrusted to this Commission for solution. I much regret that Mr. Woore has decided not to meet the Commission for the purpose of discussion upon this subject. Such protest against his scheme as any of the Commissioners might have thought it his duty to make, might well have been expressed during the conversation which would have arisen. It is also, I think, much to be regretted, that Mr. Woore declines to prepare any approximate estimate of his works. Now, an approximate estimate is *essential*; for, granting the practicability of all he proposes to do, the entire question hinges upon the *cost*. The *cost* will settle whether it is *worth* doing,—whether a similar result cannot be arrived at with less expense elsewhere,—and therefore, in considering the whole subject, I have found it necessary to make an approximate estimate for myself; and in doing this, I have made a closer investigation of the whole subject. “Facts upon figures” are the foundation of every engineering work, and Mr. Woore’s noble superstructure is, I fear, but a “baseless fabric” without them.

Of course I labour under much disadvantage in advancing an estimate of another man’s scheme, as it is quite competent for him to question every detail; and having given no absolute statistics himself, he cannot easily be disproved.

However, we have, I am confident, ample data for an approximate estimate. I desire it to be distinctly borne in mind that this calculation is merely an attempt to arrive at something like *the cost of constructing Mr. Woore’s works in his own way*, as described to us by himself.

The object of this work being to keep back the waters of the River Warragamba, until they are raised to such a height above the bed of the river, that they will not only flow down into Sydney, but when there, still maintain sufficient height to supply the city by gravitation,—

We have to consider—

1. The height of distributing reservoir in Sydney;
2. The gradient necessary for the descent of the water;
3. The height at which the water in the dam must stand above the outlet whence it commences its descent;
4. The additional height required to oppose the sudden rush of floods.

One only point, indeed, can be questioned, and that one is, the gradient necessary to carry the water into Sydney by gravitation in an open cutting.

But even on this point we have reliable information. We have the scientific result of analytical examination, from renowned English chemists, which declares that to keep such an aqueduct as is proposed free from the growth of vegetable matter, and also of animalculæ, a gradient of no less than three feet per mile is desirable. Considering, however, the nature of the country to be crossed, the difficulty of obtaining the necessary height, and the other circumstances involved, I believe I am right in saying that two feet per mile has been fixed by all the members of the Commission (with the exception of Mr. Woore, whose opinion I do not remember to have heard), as the minimum gradient upon which our calculations should be based. At any rate, it is *my* opinion that we *must not* have *less* fall, and *should* have *more* if possible.

Our facts then are :—

1. Height of distributing reservoir, near Sydney, above high water—136 feet. This is the height of the present reservoir in Campbell-street, which is nearly the same as the high land above Newtown. It is not high enough, by some 60 feet or more, to fulfil Mr. Woore's conditions, namely, to provide a plentiful supply to *all Sydney* by gravitation; but let that pass.
2. Loss of level by gradient:—Distance of proposed dam from Sydney in a straight line, thirty-three miles, to which must be added at least one-third for irregularities of contour; for it must not be forgotten that for a canal a regular gradient must be found, accommodating itself wherever practicable to the natural surface of the ground, so that numerous windings of large extent are unavoidable. This would give forty-four miles, but I have adopted forty miles, because that distance certainly will not exaggerate Mr. Woore's estimate, and gives us the convenient number of 80 feet due to gradient.
3. Height of ordinary surface water of dam must be 20 feet at least above supply outlet. Not only is this necessary in order to avoid the collection in the aqueduct of floating impurities, and the obstruction of the orifice by foreign bodies, trees, &c., but in times of drought, a head of 20 feet is a very small depth from whence to draw an enormous supply for Sydney, and a plentiful quantity for irrigation.
4. An additional height of 40 feet to allow for the rise in the river at times of floods. The rise of the floods from the present ordinary level is from 70 to 80 feet, but the permanently raised level, due to the dam, would widen the sides of the gorge, and reduce it to about 40. I add this 40 feet to the height, although Mr. Woore has not done so, because I am confident that it cannot be that gentleman's intention to pour a Niagara over the dam, 600 feet broad, 40 feet high, with a fall of 200 feet, and a weir would (though perhaps essential) be much more expensive than this.
5. Height of bed of river, where the proposed dam is to be, above high water mark—41 feet.

The height of dam, then, must be as follows :—

1. Height of distributing reservoir	...	...	136 feet
2. Loss of level by gradient	...	...	80
3. Outlet below surface	...	...	20
4. Increase for floods	...	...	40
			276 feet
5. <i>Less</i> the height of the bed of the river above high water level	...	...	41
			235 feet
Total height of dam			235 feet

Mr. Woore informs us that the width of the gorge at the high level is 600 feet, at the bed about 130 feet; the *mean* width is consequently 365 feet.

Given for breadth of front embankment of dam at top the very small width of 30 feet, the height of 235 feet, the face slope of 10 to 1, and the back perpendicular (as resting against the wall), the width at the bottom would be 2,380 feet, and the mean width 1,205 feet. The cubic content of this mass of material would be 3,840,000 cubic yards. By a similar calculation, which need not be repeated here, the embankment at the back of the wall which has to sustain the falling water would represent about 600,000 cubic yards. I confess that I am at a loss to estimate the cost of the wall in the middle of this mountain of earthwork. It seems to me to be *unnatural* that it should be there at all, interfering with the united solidity of the mass it so mischievously subdivides, unless, indeed, it be of the proper proportions for a retaining wall, or in other words, a masonry dam. However, as it is 235 feet high, I suppose it cannot be less than 10 feet thick at the top, with a batter of 2 inches to the foot on either side. By a calculation equally simple with the foregoing, it will be found to contain more than 100,000 cubic yards of very superior masonry. It is to be perforated and fitted with iron sluices, which would of course add to the cost.

There would next be required some 40,000 square yards of pitching, the stones used being of extraordinary size and weight.

Estimate.

Earthwork :—

For this work the material and attention to construction varies, but a large proportion is to have great attention, to be very closely rammed, puddled, &c., and it is all to be puddled more or less; most of it would practically be done under water! and I have estimated it at 5s. per cubic yard :—

4,444,000 cubic yards, at 5s	£1,111,000	0	0
Masonry, 100,000 cubic yards, at 30s.	150,000	0	0
Pitching, 40,000 square yards, at 20s.....	40,000	0	0
	£3,101,000	0	0

Contingencies :—

A work of this magnitude would certainly take three years to complete—three years during which time there must never be a flood. Here I must express my opinion that no contractor would ever undertake it. If he did, he would most certainly add 50 per cent. for contingencies. This would raise the estimate to £1,950,000. Upon paper, then, we have the dam constructed for the sum of *Two Millions* of money.

But it is my conviction that this dam *would never be built at all*. Every flood which came down during its construction would annihilate it—not a vestige would remain; and it is terrible to contemplate the disaster which would follow. Suppose the dam progressing, and up 100 feet, then comes a flood—the water has been rising with the construction, and immediately begins to sweep over the unfinished works. It is not within the bounds of reason to suppose that in such a condition there is no weak spot anywhere; the water finds it, and away goes the whole structure. What follows? A wall of water dammed back for *very many miles* bursts suddenly down the valley of the Hawkesbury 100 feet high. Irrigation there would be, indeed! Death, destruction, desolation, incalculable! and I believe that this would really happen. At all events, I can scarcely conceive that any one could be found to accept the responsibility of such a contingency.

Having endeavoured to arrive at some conclusion as to the proposed dam, I may, perhaps, be permitted to add some of my own opinions thereupon. And first, I do not think that this dam would hold water. There would be an enormous pressure on each of the sandstone sides, seamed with fissures and broken passages. I believe the water would force numerous outlets for itself in all parts, and that instead of a head of 20 feet we should not have any. Nor do I think that, even if completed, this dam would withstand the passing over it of one single flood. I believe such a disposal of the flood-water is *impracticable*, and that a weir is essential. To construct a weir means to cut through the solid rock 100 feet down, by a width of more than the river channel, but say 600 feet, and by a length beginning in front of the works, and re-entering behind them, or considerably more than half a mile, necessitating more than 6,000,000 yards of *rock-cutting*, which at 5s. only would represent £1,500,000. My estimate for Mr. Woore's proposed dam, *if I had to construct it, and dared to make the attempt*, would be at the least £3,500,000.

I feel compelled, therefore, to state my belief that, however the future supply of water for the city is obtained, it will *not* be by damming the Warragamba to the height necessary to supply Sydney by gravitation.

I regret the great length of this communication, but cannot see how my opinions could have been clearly explained in a shorter one.

I remain, &c.,

FRANCIS H. GRUNDY.

(Memorandum by Mr. Adams on Mr. Woore's scheme of damming the Warragamba.)

I HAVE carefully considered Mr. Woore's scheme for supplying Sydney with water, and believe that the erection of a dam on the plan proposed would be impossible—the force of a flood sweeping over the works while in progress of erection would carry away the puddling, the wall would not be strong enough to check the torrent, and the whole would be swept away.

I have not attempted an estimate of the cost; in fact, I do not know where a sufficient supply of puddling material could be obtained. Even at Mulgoa, clay suitable for the purpose is only found in thin strata derived from the shale formation.

P. F. ADAMS.

Surveyor General's Office,
30 April, 1868.

(Memorandum on Mr. Woore's project for obtaining a supply of water from the Warragamba.)

HAVING proposed the resolution to the effect that, before incurring any further expense for surveys in respect to Mr. Woore's scheme for obtaining a supply of water for Sydney from the Warragamba, it would be advisable to obtain the views of each member of the Commission thereon, I now beg to state, as briefly as the subject will allow, the objections which seem to me to stand in the way of its successful accomplishment. In doing so, it will be necessary to refer to the letters and memoranda laid by Mr. Woore

Woore before the Commission; and I would take this opportunity of expressing the hope that, if I have had the misfortune to differ from Mr. Woore as to the practicability of his great project, as he terms it, he will not attribute it to prejudice on my part, but to an anxious desire to endeavour to arrive at facts—at a true solution of the question proposed for our inquiry. The subject is too important a one to permit prejudice on the one hand, or a too great complacency on the other, to interfere with the candid and honest expression of one's opinion. I am drawn into these observations by an expression which occurs in Mr. Woore's letter of the 14th March, where he refers to the very decided adverse opinions which were expressed at a meeting relative to his Warragamba scheme, and which he states were coupled with certain prejudices which he had observed to exist from the commencement of the proceedings. As regards myself, I am free to confess that, after having visited the Warragamba, carefully examined the site pointed out by Mr. Woore for his dam, and attentively considered all he had to say in support of the project, I arrived at the opinion of its utter impracticability—an opinion which has only been confirmed by everything which its designer has since said and written in support of it. I have not hesitated, when necessary, to express this opinion at the Commission, because I believed it to be my duty to do so—the subject, as I have said, being too large to permit of minor considerations interfering with the candid and full expression of each member's opinion.

Referring to Mr. Woore's paper read to the Commission on the 27th November, and which was accompanied by a plan and section of the line of aqueduct by which it was proposed to bring the water from the Warragamba to Sydney,—we find it stated, in the opening paragraph, that “the greatest collecting area of ground within reach of Sydney would be tapped at an elevation sufficiently high to cause the water to run into Sydney by its gravitating force.” This assertion was made at a time when, according to Mr. Woore's own admission, he had no knowledge (although he produced a section, which, however, he afterwards admitted was altogether valueless) of the difference of level between the Warragamba and Sydney; he did not know the height of the former, or of either the high or low service reservoirs, or of any part of the city which he proposed thus to supply by gravitation. At the time, I felt, and perhaps expressed my surprise at so crude a project being announced in such positive terms; and the more so, as a simple inquiry at the City Engineer's Office would have elicited for Mr. Woore the fullest information as to the levels of the city, as it had done for the other members of the Commission; and an application to the Railway Office would have settled the question of the height of the water at the Warragamba; but neither had been done, and the project came before us, announced, no doubt, with sufficient confidence, but unaccompanied by a single proved fact which could enable it to pass the critical examination to which it should have been foreseen it would be subjected.

Referring again to the paper of 27 November, we find it stated, in the third paragraph, “The country intervening between that river and Sydney being admirably adapted to form an aqueduct on, such a work may be constructed at a very moderate outlay.” This would appear to be a sufficiently positive assertion to warrant the inference that it was based on some specific knowledge, particularly when accompanied and illustrated by a plan and section; but subsequently, the Commission were told (after having been asked to guarantee a payment for this very survey) that it would be necessary to employ another surveyor, to make a survey and take the levels of a portion of this same line—namely, from South Creek to Warragamba, which was done at considerable expense, under Mr. Woore's own supervision, and which demonstrated that, so far from the country being admirably adapted to form an aqueduct on, it would involve the construction of an embankment or bridge of some 18 miles in length, and, on an average, about 100 feet in height. We were then told that Mr. Woore's own first section was valueless, as was also that made by Mr. Wyndham under Mr. Woore's direction, and were asked (see memorandum of 17 March) not only to remunerate Mr. Woore for this very section which he admits to have been thoroughly worthless, at the same rate as the other had cost, but also to provide a similar party to complete that survey by making another section—“an amended one—so as to enable an estimate being framed.” He would “then engage to produce not only a practical scheme from the Warragamba to Sydney, but one that, from its ample supply of water, great utility and small cost of construction, cannot be surpassed in the Colony.” The aqueduct would be “*an open cut*”; the water would be supplied by *gravitation* in any quantity that could be required, at a height that would command *all Sydney*. This would seem to be very like what is called putting the cart before the horse. Mr. Woore will guarantee all these things, if he be allowed to make a survey to ascertain positively whether there be sufficient fall in the ground to conduct the water into Sydney by gravitation—the very result of which survey might be (as it has turned out it would be) to show the utter impossibility of doing so. That the guarantee must have failed was subsequently rendered sufficiently patent by Mr. Woore himself. He will guarantee to supply *all Sydney* with water by *gravitation* from the Warragamba, by constructing a dam at the latter of 170 feet in height; the level of the water at the Warragamba being 56 feet above sea level. Supposing it possible, for the sake of argument, to construct this dam, we shall then have, bed of channel at Warragamba, 41 feet above sea level, to which if we add height of dam, 170 feet, we get 211 for the top of the dam above sea level; but the high service reservoir at Paddington is 224 feet above sea level, or 13 feet higher than the proposed reservoir; therefore, unless the water of the Warragamba runs up hill, it cannot supply that part of Sydney at present drawing its supply from the Paddington reservoir; and, as many parts of Waverley are still higher, it is evident that Mr. Woore's guarantee to supply “all Sydney by gravitation” could not have been sustained. Having been told, on the 27th November, that “such works could be constructed at a very moderate outlay”—

outlay"—"that they could be constructed by ordinary labour—few skilled artificers being required—and as there would be no importation of material, the cost would be comparatively small,"—and on the 14th March, being further told that Mr. Woore has "the whole scheme in detail before his mind, and only waits for the necessary sections to reduce it to figures,—not a doubt exists as to its practicability, great utility, and small cost, but that he objects to making his thoughts gratuitously public, the more particularly when they may be turned to his disadvantage." On the 31st March, we hear that he can at present only state the *general principles* on which he proposes his great work should be constructed, and that, before anything definite can be produced, an amended section must be made. The whole scheme existed in detail, we are told in Mr. Woore's memo., on the 14th March; but on the 31st, we are told he can only state the principles on which this great work should be constructed—details having in the interval expanded into principles—contrary to the usual mode of induction.

Mr. Woore's project must be divided into two parts. The first would be the dam and works necessary for the storage of the water; the second, those required for its conveyance into Sydney. As to the dam of course no engineer would ever venture to construct it on the principles laid down by Mr. Woore. It consists of five classes of work,—"loose puddling, middling puddling, compact puddling, a masonry wall" and rubble stone backing. The effect of a flood on the three degrees of puddling would be, to wash out all the clay composing it, leaving a disjointed mass of rubble, having no cohesion, and permeated throughout by the water. This would bring the whole statical pressure of the water on the masonry wall which forms the core of the dam; and, accepting Mr. Woore's dictum that "no masonry wall, no matter how strongly constructed, could resist such a pressure," the result must be, that the wall would give way, and the whole mass be swept down the valley. It is easy to imagine what the consequences would be. But supposing, for the sake of argument, that this dam could be made to stand, and as Mr. Woore says that it is not intended that the water should overtop the dam, then we have the following condition of things:—The top of the dam, which is 170 feet in height altogether, must be about 70 feet above the ordinary level of the water in the reservoir. As the floods would rise about that height in the gorge, this would leave 100 feet of head; from which subtract (say) 20 feet for level of outlet sluice below permanent level, and subtracting from the remainder 80 feet, which would allow about 2 feet per mile in the conduit, this would deliver the water in Sydney at about 41 feet above sea level. It is obvious, then, that a dam of 170 feet would not be sufficient to fulfil Mr. Woore's own condition of supplying all Sydney by gravitation.

Let us next consider what height would be sufficient; and, in doing so, let us take the expression "all Sydney" to mean only such portion of it as is supplied from the low service reservoir in Crown-street, which is 136 feet above sea level. Starting from this point, and allowing, as before, say 2 feet per mile for 40 miles, we have 216 feet as the level of water at the outlet sluices. Allow 20 feet for permanent head of water in the reservoir, and 70 feet above that for top of dam, if it is to be high enough to prevent floods passing over, this gives 306 feet for top of dam above sea level. Deduct 56, present level of water, and allow 15 feet for foundation of dam below that level, we get 265 feet for height of dam. This would give a pressure of about 900 tons on every foot run of the dam. No possible arrangement of the materials proposed could prevent this pressure coming on the wall; and no wall, even supposing its dimensions to be properly proportioned, which they are not in Mr. Woore's plan, could be made water-tight under such a pressure. The project, in as far as the dam is concerned, must therefore be regarded as impracticable.

With regard to the second part of the project, namely, the proposed means for bringing the water into Sydney in an open canal, the surveys which have been made show that such a canal must cross the valleys of South Creek, Roper's Creek and Eastern Creek, with their intervening ridges, at right angles, and at about the middle of their course. This would necessitate an aqueduct of over 130 feet in height in many places, for more than 18 miles in length. These considerations show so clearly the utter impracticability of the scheme, that I for one should feel bound to object to any more expense being incurred to demonstrate further an impracticability which is already so patent. It needs no further argument to shew that the level of the Warragamba is too low to allow of the water from it being brought into Sydney by gravitation. To raise it to the required elevation would necessitate the construction of a dam of a height never before attempted. And, were this even practicable, there is little doubt but that the leakage through the seamed and fissured sides of the gorge, under the enormous pressure to which they would be subject, would in dry seasons far exceed the quantity coming down the river; and in times of flood, nothing could resist the furious torrent which passes out of these gorges, as every one will admit who witnessed the last flood in the Nepean. The objections to the second part of the scheme,—that of constructing a canal which would have to cross several systems of waters, at an elevation of about 130 feet above the natural surface of the ground, for over 18 miles,—is perhaps more a financial than an engineering difficulty, and one which it is fortunately unnecessary to encounter; as, by tapping the Nepean and its tributaries at a higher point of their course, and following the natural fall of the country, we shall be able to obtain a gravitation system amply sufficient for our requirements.

E. O. MORIARTY.

28 May, 1868.

(Memorandum

(*Memorandum by Professor Smith, on Mr. Woore's scheme of damming the Warragamba.*)

As it is thought desirable that every member of the Commission should express in writing his opinion of Mr. Woore's Warragamba scheme, I submit the following as indicating briefly the main reason why I feel compelled to join the majority of the Commission in setting this project aside. It is not without reluctance that I have come to this conclusion; for, in several of its features, this scheme commends itself strongly to our acceptance. It is the most abundant source of water that has come under our notice. The running stream would in most seasons be more than sufficient for the growing wants of Sydney, and, as a stand-by in long droughts, the proposed dam would probably contain a supply for three years, if the outlet were only 20 feet below the highest surface of the water. Besides this, the river has done its work and is of no more use after joining the Nepean, so that there could be no claims for compensation if its waters were impounded. With these advantages we should not be warranted in laying Mr. Woore's scheme aside, unless for objections of the most serious character.

Now, without going into any engineering details, which fall more properly within the consideration of the other members, it is sufficient for me to know that a dam at the mouth of the Warragamba, high enough to supply Sydney with water by gravitation, would be higher than any similar work of which I have ever heard, or can find any record, in other countries. We know that dams in England of much less height, constructed, it may be presumed, with the best engineering skill, have given way and spread devastation in their course. The building of the required dam on the Warragamba would undoubtedly be of the nature of an *experiment*—a costly and dangerous experiment—for it would be a new thing in engineering, and success could not possibly be made certain beforehand; for, let it be granted that, working on known principles, the materials might be so arranged as to resist successfully the enormous pressure to which the dam would be subjected, yet it is impossible to predict how the native rock would stand that pressure, and whether, through some weak joint or porous stratum, a leak might not be established that would either empty the dam, or bring about its destruction.

If the experiment is capable of being made a success I believe it can only be so at an enormous outlay; but I admit that, if successful, the results would be magnificent, and the work would be a monument of engineering skill and boldness that could not fail to command a world-wide fame. On the other hand, if unsuccessful, the direct pecuniary loss would be immense; and should the dam be carried away after completion, or when near it, the consequences to life and property might be very lamentable.

J. SMITH.

6 June, 1868.

P.S.—June 20th.—Since writing the above, I have learned that a masonry dam has recently been constructed on the Furens, an affluent of the Upper Loire in France, of a height nearly as great as would be required on the Warragamba. This weakens the force of one of the objections stated above, but does not altogether remove it; for in several important particulars the conditions of the Furens dam were much more favourable than could be obtained at the Warragamba. For example, it was possible there to turn off the water entirely while the building was going on; and the catchment area that drains into the reservoir is under ten square miles, with an average annual rainfall under 40 inches, so that there could be no such terrific floods as would have to be contended against here.

J. SMITH.

(*Resolution moved by Mr. Thomas Woore, at the meeting of the Commission held on May 19th,—put and negatived on May 29th.*)

IN carrying out any scheme for the supply of water to Sydney, it is desirable the forces acting on dams should be thoroughly understood—that the proper form for their construction may be arrived at. It is therefore resolved, as a difference of opinion exists among the members of this Commission, that two or more disinterested gentlemen, familiar with the laws on which hydrostatics are founded, should be respectfully solicited to consider the subject, and separately give their opinions as to the science of the matter, in reply to the accompanying papers, viz. :—

That read by Mr. Woore to the Commission on the 27th November, 1867.

That read on the 30th March, 1868; and the following :—

It is proposed to construct a dam across a river gorge, the sides of which are composed of sandstone inclined about 40 degrees from the perpendicular; the dam to be about 600 feet in length, and 170 feet high at its centre. The water intercepted by it would form a lake from 10 to 15 miles long, 1,000 to 1,500 feet wide, and say 170 feet deep near to the structure, diminishing to naught at the other extremity, the fall in the bed of the river being 8 or 10 feet in a mile.

The question to be solved is—"What is the proper form such a structure should take, to offer the greatest resistance to the forces exerted upon it by the retained fluid?" This to be considered entirely irrespective of dimensions, the substance that dam would be composed of, or of the mechanical application of that substance.

Mr.

Mr. J. P. Nichol, LL.D., in his Cyclopædia of Physical Sciences, under the head of Hydrostatics, designates all vessels containing perfect fluids, vases. It is in this light that it is desired the bottom and sides of the reservoir should be considered, *i.e.*, supposing them to be composed of thin glass or metal plate, "*in what direction would the fluid exert its force upon that plate?*"—the final object of that consideration being to determine how and where to apply proper resistance externally to that force.

The fluid may first be considered as a quiescent body, then allowance made for its lateral motion, caused by the river current acting on it.

It is not intended the water should be allowed to run over the dam in this instance, but that the river should be blocked by it at that point, and divided into two streams. What water would be required for Sydney and Cumberland, to be forwarded by an aqueduct through the right bank, the surplus allowed to run off through a natural gully that exists in the left bank, to join the Nepean River two miles below the dam.

Under these circumstances, the effect of the river current on the dam when in time of flood would be inconsiderable, as the streams would pass off without approaching it further than as an eddy working round a bay. Therefore, in this secondary view of the case, it is only necessary to examine—"What would be the velocity and strength of a current on the surface of a reservoir from 10 to 15 miles in length, with a fall in the river immediately above where it enters of 8 or 10 feet in a mile, discharging say 500 tons per minute as a maximum?" and, "What force would such a current exert at different depths?" with the object of determining the effect the eddy caused by that current would have on the dam.

As there have not been any measurements or plans made of the locality, this latter consideration can only be conjectural, from the want of positive data to compute from, but it does not affect the first and material point—"What is the proper form a dam should take to offer the greatest resistance to the forces exerted upon it by the retained fluid?"

To the President of the Royal Water Commission.

Sir,

I very much regret that the opinions expressed by the members of this Commission on the Warragamba scheme for bringing water into Sydney, should be so adverse as to prevent further investigation of the subject; because when proposing it, I pledged myself to shew that it could be carried out advantageously, which their act prevents. And having been appointed to this Commission for the purpose of advocating that scheme (should no better be presented), I am now in a position I cannot honorably recede from without doing so; and this will draw forth expressions that must be disagreeable to my companions. The question with me is,—shall I be doing my duty by giving way to their adverse opinions, when I conceive all the evidence that has come before us has tended to strengthen my original views? Were I to do so, it would be an acknowledgment I had lost faith in the scheme, or nerve to carry it out when opposed, and had committed a great error in proposing it so confidently as I did. The subject would be condemned, perhaps cast into oblivion, without that proper investigation the public are entitled to expect at our hands. As I cannot do this, I have no other course but to defend my position, however disagreeable that may be; but I may remind you, I am not the opposing party.

Before entering into the merit of the case, I must reply to an unwarrantable accusation made by Mr. Grundy, in his paper, which is not justified by the facts of the case, *viz.*:—"That I had decided not to meet the Commission for the purpose of discussion on this subject." Our minute book and printed papers prove the contrary. The subject has been under frequent discussion, in which I have always joined, giving all the information in my power, having been anxious to prosecute this scheme. I have laid a section of the intervening country, several plans, explanatory drawings, and three written documents on the subject, before the Commission, while my colleagues to this date, have not committed themselves to any other view than a rigid opposition to this scheme. After having done this, and expressly stated in writing that I had no further information to give, or could have any until the survey was advanced, I was called upon to appear before the Commission, to be cross-examined as an ordinary witness, having a shorthand writer at my elbow, taking down every word I said, and threatened by Mr. Moriarty, who was the proposer) with a summons if I did not attend. This I refused to do, because the Commission had no right to put one of the members to such an ordeal; it was very disrespectful to me; and on a subject of so much difficulty, in its present crude state, the answers to questions coming from known adversaries, required consideration; but in doing so, I expressed willingness to reply to any queries that would be put to me in writing. Such an interrogation would not have been a discussion; I regarded it as a trap laid to entangle me, that I was not disposed to put my head into. I have never refused discussion; on the contrary, I am very desirous it should be continued until some proof of the scheme, whether good or bad, be arrived at. It has been open to members to bring the subject forward for discussion at any time. Whenever that has been done, it has invariably been at my instance; therefore, Mr. Grundy is not warranted in making such an assertion, but it serves to illustrate the prejudice that exists. If these gentlemen think so lightly of the scheme, what do they wish to cross-examine me for, if it is not to catch me tripping?

In

In replying to the papers read by the different members to the Commission,—as they all bear on one subject, and are unanimous in their adverse sentiments, I may take them collectively. You, sir, not having expressed an opinion on the engineering question, and as our President having always taken an unbiassed part, are entirely exempt from any unfavorable expressions I may find it necessary to make. It may be deemed presumptuous that I should make such confident assertions on this subject. I know it is considered so within this Commission. It seems to be peculiarly repugnant to Mr. Moriarty; but is it not time for a man over 64 years of age, and having 42 years experience in engineering science (if he has any brains at all), to be able to arrive at definite conclusions in a matter founded on the clearest physical laws? As this is a subject of great public interest, and it is of consequence that those interested should be enabled to judge of the value of the opinions that are set before them, I may be excused the egotism of showing on what mine rest, more particularly as I stand alone in advocating this cause against such high officials.

In the years 1826 and 7, when I suppose my companions were either in the nursery or at a baby school, I was employed on board H. M. Ship "Alligator," Captain Simeon, afterwards Captain Canning, the son of the Prime Minister, in collecting data, and making experiments in oceanic hydrometry, for the purpose of ascertaining the influence the Mississippi, Rio Grande, and other rivers flowing into the Gulf of Mexico, had in causing the Gulf Stream, at a time when that science was little understood. This led to my being appointed, in 1828, to the command of the "Woodlark" Cutter, and entrusted with filling up the maritime details at Shetland, of the great trigonometrical survey that was then progressing over the British Isles, the successful accomplishment of which procured me a lieutenancy in the "Southampton," Admiral Sir Edward Owen's flag ship in India, where for five years I was engaged in surveying and various scientific pursuits. This, coupled with my long experience in this Colony, and the works I have produced in it, ought surely to entitle my opinion to some respect, at all events to protect me from such arrogant attacks.

It is remarkable that the most material point to be investigated, that on which all schemes depend, more particularly the Warragamba, should be entirely ignored by these gentlemen, that is, *the scientific principles on which such dams as we require should be constructed*, which I have repeatedly urged on them. I freely admit that no dam built on the plan that has hitherto been adopted in this Colony would resist the force of the Warragamba waters, and also that none of the height that is required there to bring water into Sydney by gravitation has ever been constructed. But I contend they have been formed on entirely erroneous grounds, and that if such works were properly constructed on true scientific principles, there would be no risk of their being disturbed by the heaviest floods. Are these gentlemen afraid to grapple with this question, or so strongly wedded to existing rules that they cannot see beyond? One at least is deeply interested in the present system; for if Mr. Moriarty admits what I assert to be the case, he condemns his own acts, and acknowledges he has committed fatal errors. I have repeatedly pressed this question on the Commission, and when I found it would not be entertained, moved a resolution, "*That the subject, as far as it related to scientific principles, should be referred to others qualified to give an opinion,*" but this was negatived, so that this question, which is of paramount importance in any scheme, has been systematically avoided; nevertheless, I presume no work of this nature will ever be undertaken until that is decided.

The great fault in the present system, lies in the whole force of the water being brought to bear laterally on the broadside of the dam, its weakest part. It is evident that a wall capable of bearing ten tons on the top, would not resist the same, if applied to it horizontally; and this is exactly the effect the water in a reservoir has upon the present system of building dams. It is the property of this fluid to exert its influence at *right angles* to whatever surface it is opposed; therefore, if the water rests on a perpendicular wall, its whole force acting at right angles to that wall, is directed to drive the structure off in a *horizontal direction*. Whereas if it rests on a horizontal plane, the tendency or thrust is *directly downwards* for the same reason. Consequently, by merely selecting an angle with the surface of the water on which to form a plane (or inner slope of a dam) between these two extremes, any downward direction may be given to the force exerted by the water in a reservoir. This is a very material point, for on it rests solely the capability of forming structures of this nature *to resist any amount of pressure*.

This force thus directed, would meet the bottom of the river through the intervening substance (or inner portion of the dam). The dam being in the form of a wedge answers two purposes. The upper surface receives and directs the forces downward, while the wedge supplies an unresisting medium fitted between the water and the rocky bed of the river, which is incapable of being disturbed; so that a dam thus constructed, obtains its strength solely from its inner portion, irrespective of the outer form. This is an axiom that cannot be disputed, as it is founded on the natural laws that govern all fluids. All the dams that I have examined are more or less opposed in their construction to this principle, not one of them have answered the conditions on which they were built (I do not allude to mere dikes); most have given way under pressure. And it is remarkable that the only one that is directly opposed to it, consequently, most in error, is that built at the North Rocks, near Parramatta, for to supply water to that town, by the Chief Engineer of Harbours and Works, E. O. Moriarty, Esq., C.E., as is there ostentatiously displayed on a marble slab. This, from being solid arched masonry of great strength between two rocks, one on each bank, resists the floods in that small creek; but the water drives through the stones to such

an extent, that it is quite useless for the purpose it was built. There is more water running through the joints of the masonry than enters the reservoir, excepting floods. I have said this dam is directly opposed to true principles, and therefore, it may serve as an example for comparison. The base of resistance is here obtained from the *banks*, between which an arch is curved against the stream, the inner surface of which is *perpendicular*, the outside slightly inclined inwards; no other resistance to the water being offered, therefore, it represents a dam with a perpendicular inner surface. Now, what is the effect of the fluid on that structure? The greatest depth of water in the reservoir is close to the masonry, consequently, the greatest weight or pressure is there, acting in the very worst form, that is, *horizontally*, tending to drive the work broadside out into the creek. A more defective structure for the purpose cannot exist. There it stands with the water running through it—an example of man's folly, in attempting to oppose Nature's unerring laws.

In contra-distinction, take the opposite case. By means of the long inner slope proposed, the greatest depth of water is thrown back from the highest and weakest part of the structure, and there the force, instead of acting horizontally, is directed *down into the earth*, the very shallow water resting near the top of the dam having little effect. To any unprejudiced mind I should think this must be very evident, but light may be thrown on the subject by obtaining a section and particulars of the great inundation that lately occurred at Sheffield by the bursting of a dam there. Was that dam built on correct principles?

In the papers before me, each of the members express their having given the Warragamba scheme earnest attention. As this is material to the public, I may be allowed to examine what that attention has been, for on it depends the value of their opinions. It is natural to suppose that, before making such an assertion, and placing their veto on a scheme that offers such great advantages if it can be carried out, and that has been so strongly urged by one of their number, that they would, at all events, have made themselves acquainted with the locality; but although all other places have had their attractions, but one day has been devoted to the Warragamba, and that was entirely mis-spent. It is a fact that, with the exception of taking a general view of Mulgoa from a height, visiting the site of the dam, and that of a tunnel, no other part of the proposed aqueduct has been seen by them. Before leaving Regentville on that day, I pointed out the easiest and only way we could inspect it in the time, through going by land, and returning by water; but notwithstanding, I was the only person that knew the locality, I was immediately over-ruled. From missing the boat we did not arrive at the junction until nearly 11 o'clock, when we walked a mile and a half to Mulgoa, where the Chief Engineer amused himself in trying to make a kind of level out of a crooked twig and a reel of cotton, for what purpose did not appear. This occupied more than an hour; we then returned to the boat, had lunch, and the remainder of the afternoon was spent by the three engineers and boat's crew in endeavouring to make a section of the gorge, which they entirely failed in doing, as they went the wrong way about it, which I pointed out at the time, and shewed the proper way. Throughout the day Mr. Moriarty took the lead, setting me entirely aside, so that I never was consulted, or had any opportunity of explaining, which I brought to your notice, Sir, at the time. This comprises the whole of the inspection the Warragamba scheme has had. Neither the gully through which it is proposed to divert the river, nor the sites of crossing the Nepean River and South Creek, where the main works will be, has ever been seen by them, and a survey has been refused on the grounds shewn in these papers. Does this warrant the assertion that the subject has been earnestly considered by them?

Hitherto I have endeavoured to keep to facts; but now lies before me, in Messrs. Moriarty and Grundy's papers, a mass of wild incoherent calculations, founded on false surmises that cannot possibly lead to any practical result. To discuss these would be an utter waste of time, as they are based on imaginary data, and seem to me to have no other object than mystification. No calculations of this kind are of any service until a survey produces measurements to found them on; when that is accomplished, an estimate of the cost that can be depended on may be arrived at, but not before.

I must again express my sincere regret that my colleagues would not join me in shewing the advantages of this scheme; but I cannot think their opposition will prevail. For years after laying out the Southern Railway, I was as strongly opposed, notwithstanding the line I proposed was adopted, and there is no doubt a similar result will take place in this instance.

I remain, Sir, yours faithfully,

THOMAS WOORE.

8 June, 1868.

(Memorandum referring to Mr. Woore's letter of 8th June.)

In a paper read to the Commission at its last sitting by Mr. Woore, some severe strictures were passed on the rejection of his proposal to refer the subject of the best form for dams to some scientific gentlemen, or, in his own words, "that the subject, as far as it related to scientific principles, should be referred to others qualified to give an opinion." It was broadly insinuated that the subject was not understood by engineers, and, as an instance in point, reference was made to the faulty construction of the Parramatta dam. I may, perhaps, be permitted, as the designer of that work, to offer a few observations on the subject generally and particularly. Generally, then, I would observe that, so far from the subject not being understood, the best form for masonry dams has been most carefully

carefully and elaborately investigated, both by English, and continental engineers, particularly the latter, as may be gathered from a perusal of the descriptions of the Ban and Furens dams; the latter commenced in 1861 and only just completed, the former now in course of construction. With such information before us, there could be no possible object in deputing to other scientific gentlemen an investigation which the Commission was quite competent to undertake itself. With reference to the particular branch of the subject, namely, as to the so-called faulty design of the Parramatta dam, I may observe that, inasmuch as whatever those faults may be in Mr. Woore's opinion, they are faults which it has in common with those great works to which I have referred, I can rest easily under that gentleman's condemnation. It is quite sufficient satisfaction for me to find that the most elaborate investigation of the subject has shewn the correctness of the principles on which I designed that work sixteen years ago, the only difference, which is not one of principle, being that due to the difference in the character of the material used, the Parramatta dam being constructed with the heaviest squared masonry, for which the stone on the spot was suitable, while the Ban and Furens dams are built of rubble masonry, set in mortar, and which, therefore, required a greater thickness at the base than was required with the superior kind of masonry in the Parramatta Dam.

E. O. MORIARTY.

June 18, 1868.

Mr. Bennett to the President, on Mr. Woore's proposed Dam for the Warragamba.

Department of Public Works,
Sydney, 26 April, 1869.

Sir,

In compliance with your request that I should give my opinion as to the dam proposed by Mr. Woore, and prepare a design and estimate for a masonry dam of the proportions constructed and proved in France,—drawing and estimate for masonry dam of the height proposed by Mr. Woore (170 feet) are submitted herewith; and it will suffice merely to state that I could not recommend the construction of such a work.

The section submitted is calculated from the formulæ developed by the Engineers of the Ponts et Chaussées, in their recent elaborate investigations as to the best form of masonry dams for impounding the flood waters of the affluents of the Loire and Rhone; and, in accordance with which, the dams on the Furens and Ban, used both for flood regulators and water supply, have been constructed.

The cost of the dam alone would be	£416,000	0	0
The cost of two tunnels, wells, and valves for emptying reservoir, inlet-valves, and arches, and retaining walls on down stream side of dam.....	12,000	0	0
Approximate cost of overflow to discharge about 96,000 cubic feet per second, or 29½ feet per second per square mile (21 feet per second per square mile being the measured proportion of the Hunter floods), with granite revetments and sills at the salient points.....	150,000	0	0
	£578,000	0	0
Cost of suspension aqueduct over the Nepean, on Ordish's patent (say)	50,000	0	0
	£628,000	0	0

With contingencies.....£650,000.

It is to be distinctly understood that this dam is not calculated to allow any flood waters to pass *over it*, so that the whole floods of the Warragamba would have to pass through the cutting in the side of the gorge to be made for an overflow, the depth of which would exceed 60 feet, and the width be at least 100.

Without any reference whatever to the comparative cost of the masonry dam, I could not recommend its erection, while there was the slightest possibility of obtaining an adequate supply of water from any other source, even at double the cost.

Though a similar structure to this withstood the floods of the affluents of the rivers named; I would not be prepared to risk, however remotely, the ruin to life and property which the failure of this dam would entail.

I doubt the power of the rock *in situ* to resist the force to which it would be exposed in floods. However tight the joints of the masonry may be made with cement, under such a pressure the filtration through the sandstone of which it would be constructed, with the percolation through the joints and fissures of the sides and bottom of the gorge, would more than equal the dry weather supply from the river, so that the conserving power of the dam would prove a delusion; and it is by no means certain that this leakage, combined with the increased evaporation, might not even reduce the water below the level of inlet to conduit, when of course the supply would cease.

The French dams are constructed of and in material nearly impermeable (mica slate), but notwithstanding this, the outer surface of the lower portion of dam is uniformly damp, shewing that water slowly filters through the stone and mortar.

The water was never allowed to pass over the French dams, and the rain-basin at Furens is 10 square miles—that of Warragamba, 3,247.

As this dam is the principal feature in the Warragamba project, my disapproval of it, in any shape, either as proposed by Mr. Woore, or as constructed in France, renders it unnecessary for me to enter further into the details of the conduit and other accessories of the scheme.

I have, &c.,

WILLIAM C. BENNETT.

MEMORANDUM and Estimate from Mr. Moriarty, relating to the scheme of supplying Sydney with Water from the Nepean, at Penrith.

AMONGST other sources from which an ample, unfailing, and, as regards quality, unexceptionable supply of water might be obtained, the attention of the Commission was, at an early period of our inquiries, directed to the Nepean, near Penrith, where nature has already formed a reservoir of the amplest dimensions, fed by the drainage of over 3,900 square miles of country.

Owing, however, to the inconsiderable elevation of the river above sea level at this place, the water could only be obtained from this source by pumping. An estimate has accordingly been prepared of the cost of machinery and piping requisite to supply twelve million gallons per day—four million being for the high service, and eight for the low service of the city.

The water would be pumped from the river up to reservoirs on the high ground adjoining, at sufficient elevation to allow of its flowing into Sydney by gravitation.

This project would, of course, be open to all the objections as to liability, to accidents of machinery, and the heavy annual working expenses common to all pumping schemes.

The first cost of the machinery and piping, &c., will be seen to exceed the estimated cost of bringing down the water by gravitation from higher points on the river, in addition to which would be the large annual expenses of working, repairs to machinery, labour, &c., which are not required in a gravitation scheme.

In the estimate I have not allowed anything for the present engines and pumping plant, inasmuch as they are likely to be required in connection with the sewage works, which will be found referred to in another place.

Memoranda.—Water Supply from Nepean, at Penrith.

Height of surface of water in Paddington Reservoir,	214 ft. above high-water level.
Do. Crown-street	140 "
Height of river surface at Penrith	50 "
Inclination of pipes on low level,	2.5 ft. per mile.
Do. high level,	3.0 "
Distance from Sydney,	35 miles.
Quantity to be discharged in low level =	8 million gallons.
Do. high level	4 "

LOW-LEVEL SYSTEM.

$35 \times 2.5 = 87.5$ total fall.

$(140 + 87.5 + 20) - 50 = 197.5$; but allow the river to be 2.5 lower, the lift will be 200 feet.

Engines to pump 8 million gallons 200 ft. high in 16 hours, or 500,000 gallons per hour.

$$HP = \frac{500,000 \times 10 \times 200}{33,000 \times 60} = 505$$

The diameter of main to discharge 14.7 cubic feet per second = 40 inches.

Weight of 40-inch main 1" thick = 11.57 cwt. per yard run = £12,216 per mile.

HIGH-LEVEL SYSTEM.

$35 \times 3 = 105$ total fall.

$(214 + 105 + 20) - 50 = 289$ feet.

Engines to pump 4 million gallons 289 ft. high in 16 hours, or 250,000 gallons per hour.

$$HP = \frac{250,000 \times 10 \times 289}{33,000 \times 60} = 365$$

The diameter of main to discharge 7.35 cubic feet per second = 28 inches.

Weight of 28" main 1" thick = 7.3 cwt. per yard run = £8,232 per mile.

First cost of Steam-engines, Boilers, and Pipes to supply Sydney and Paddington with Water from the Nepean, at Penrith:—

Quantities—	
Sydney.....	8 million gallons per diem.
Paddington.....	4 do.
Total.....	12

	£
HP 865, including boilers, &c., at £40	34,600
Spare engines, HP 200, at £40	8,000
High level pipes, 28" diam., 1" thick, 35 miles, at £8,232	288,120
Low level pipes, 40" diam., 1" thick, 35 miles, at £12,216	427,560
Engine and boiler houses, with chimney, &c.	6,000
Estimated cost of reservoirs to contain one week's supply, 50,000 cubic yards, at 3s.	75,000
Pipes connecting engines with storage reservoirs (assumed), 880 tons, at £13	11,440
Stop-valves, air-valves, and other contingencies	10,000
	<u>£860,720</u>

Annual

Annual working expenses :—	£
14,828 tons of coal = 8 lbs. per horse per hour, @ £1	14,828
Wages and superintendence	5,500
Repairs to machinery	5,000
Stores	1,000
	£26,328

The cost of piping laid, estimated at £12 per ton.

The foregoing figures represent the first cost, as well as the annual working expenses, for supplying the full estimated quantity of twelve million gallons per day; but as it is probable that this would not be required for many years to come, it may be well to consider what would be the probable cost of supplying half the above-named quantity, delivering it only into the low-service reservoir, and allowing the Botany engines to be employed in pumping only to the high-service reservoir; this would necessitate keeping up the two establishments, thereby incurring additional expense; the plan would be open also to very many other obvious objections which need not be enumerated here.

First cost of Steam-engines, Boilers, and Pipes, &c., to supply Crown-street Reservoir with 6,000,000 gallons of water per diem from the Nepean at Penrith :—

	£
HP. 380, including boilers, &c., at £40	15,200
Spare engines, HP 100, do., at £40	4,000
Cast-iron pipes 34 inches internal diameter, to discharge 6,000,000 gallons per diem = 9 cwt. 2 qrs. per yard = 836 tons, at £12 = £10,032 per mile × 35	351,120
Engine and boiler-house at Penrith	4,000
Cost of storage reservoir to contain one week's supply, 250,000 cubic yards of excavation at 3s.	37,500
Pipes connecting engines with storage reservoir (assumed)	6,000
Stop-valves, air-valves, and other contingencies	5,000
	£422,820

Annual working expenses for the low-level system :—	£
6,514 tons of coal = 8 lbs. per horse per hour, @ £1	6,514
Wages and superintendence	4,000
Repairs to machinery	3,500
Stores	750
	£14,764

Annual working expenses for high-level system with the present engines at Botany :—	£
Total annual expenses, as per return of the City Treasurer for 1868..	7,039
	£21,803

NOTE.—The expenses of working this system are estimated in the same proportion to those at Botany; but the greater height to which the water has to be pumped at the Nepean to allow it to flow into Sydney, appears to make the cost of pumping somewhat higher.

E. O. MORIARTY.

(Letters addressed to the President, by the Hon. Thomas Holt, M.L.C., on George's River as a source of water supply.)

"The Warren," Tempe, near Sydney,
30 March, 1869.

My dear Sir,

You informed me, when I had the pleasure of seeing you last week, that you had given instructions to have a survey made of the country between Salt-pan and Woollli Creeks (branches of George's and Cook's Rivers), as part of a scheme by which the City of Sydney and its suburbs might be supplied with an abundance of pure water.

My attention has since been called to another plan which could be combined with that of a water supply, and I think it well worthy the serious consideration of the Water Commission. There is an almost continuous line of creeks or swamps between George's and Cook's Rivers, and there is a creek, known as Shea's Creek, from Cook's River to not far from the Railway, near Redfern, which could be easily converted into a navigable canal.

If George's River were dammed at Sans Souci, and Cook's River at or near the Waterworks, a few floods would wash out all the salt water therefrom, and a canal, cut through the swamps and creeks, would convey this vast body of fresh water close to the suburbs of Sydney, without the expense of one shilling for iron pipes. Shea's Creek, which is now polluted by the drainage from the wool-washing establishments, &c., would, by deepening and widening, become thoroughly cleansed of every impurity. A dam near the Waterworks at Botany would tend to secure the present limited supply in the Botany Swamps, and the water of the united rivers (George's and Cook's), when sweet, could be pumped by the same engines that now supply Sydney.

Newtown could also be supplied with water from the same source, by merely deepening a natural creek from Cook's River to near the Railway. If the question were merely the water supply of Sydney and its suburbs, it would be immaterial where George's and Cook's Rivers were dammed. A dam at Tom Ugly's Point, or at Kangaroo Point, would

would be somewhat shorter than a dam at Sans Souci (Rocky Point), but the river is much shallower at Sans Souci, and therefore I do not think there would be much (if any) difference in the cost. The cost of damming Cook's River at the Waterworks would be greater than that of constructing a dam at Unwin's Bridge; but a few hundred, or even a few thousand pounds, are no object in a matter of such vast importance; besides, a dam over Cook's River, at the Waterworks, would probably be worth every shilling it cost, as a road to the Seven-mile Beach. But the advantages of damming George's River at Sans Souci and Cook's River, near the Waterworks, appear to me to be of inestimable value, more especially on account of the ease with which a ship's canal could be cut from George's River to within a short distance of Sydney, and the comparatively trifling cost of such a work.

There is something grand in the idea of having a canal of fresh water close to Sydney, and something equally grand, although not so useful, in having a *navigable* canal to some of the most beautiful scenery in the world. I saw no beach in Europe so beautiful as the Seven-mile Beach; yet, although only about half a dozen miles from Sydney, probably not more than ten dozen of the citizens have ever been on it. Indeed, the approaches to it, until very recently, were almost inaccessible, and at present they are exceedingly difficult. George's River would make as beautiful a lake as any to be found in Europe, if we except the high mountains by which some of them are surrounded.

Mr. Lucas' idea, to make a railway passenger station in the centre of the city, at the George-street Markets, is most excellent, and will, I doubt not, be carried out. If the citizens could start from the centre of the city for our "*New River*" (whose terminus should be close to the Railway, where of course there would be a station), and proceed thence by steamer either to the Waterworks or to the Seven-mile Beach, or to Sans Souci, or to the numerous bays and branches in George's River (or rather Lake), or to Liverpool,—the people of almost every other city might then envy Sydney as "*the Queen of Cities*."

Mr. Bell, C.E., it appears, requires £200,000, in addition to the large sums already sunk for excavating and damming, and for storing the limited quantity of water in the Botany and Lachlan Swamps. But is it not common sense that we should use the gigantic excavations nature has made for us in the immediate neighbourhood, which would contain probably ten thousand times as much as all Mr. Bell could store at Botany, if he had the use of as much of the public money as he pleased? For considerably less than £200,000, I doubt not, George's and Cook's Rivers could be dammed, and the natural creeks and swamps between those rivers made into a navigable canal, and the water brought, without the expense of a single main, to near Redfern.

This would be a work of which the entire Colony would have reason to be proud, instead of being humiliated, as at present, at the waste of large sums of money on the Botany Swamps, whilst the cry of an "insufficient supply" continues to increase.

So long as Sydney is exclusively supplied with water from the Botany and Lachlan Swamps, the chief business of the Mayor and Aldermen will be to *economize* it. They will thus *discourage* manufactories, and leave the sewers to breed a pestilence during the long droughts.

I enclose a copy of a petition presented to the Legislative Assembly, praying that the dam-head of George's River at Liverpool may be raised, as the manufactories already established there are dependent, and others which "*would at once be commenced*," must depend, they say, upon a "*pure and sufficient supply of water*." There is no question about the "purity" of the George's River water, where the sea-water is excluded; the only complaint is that "there is not a sufficient quantity," for George's River at Liverpool is little better than a creek, and therefore can store but a very limited supply. If George's River were dammed near its mouth, Liverpool and a large portion of the County of Cumberland would have an inexhaustible reservoir.

I hope you will think the subject of sufficient importance to have a survey made, and report thereon to the Government.

I remain,

My dear Sir,

Yours very truly,

THOMAS HOLT.

"The Warren," near Sydney,
4 May, 1869.

My dear Dr. Smith,

I have had some conversation, within the last two or three days, with a person who has had considerable experience in damming, embanking, &c. He told me that there could not be better materials for a dam than sand and gravel, provided there was *abundance* of them, so that the dam could be made sufficiently wide, with a slope similar to that of the sea beach. His idea of making a dam across George's River was, first to make it of stone, just as it comes out of the quarry, in order to lay a railroad thereon for the sand and gravel, which could be shot out of the trucks at the sides. He said he had constructed a dam in Tasmania of sand and gravel, and that there was a flood almost immediately after he had finished it, when the water rose 25 feet above the dam, without injuring it in the slightest degree.

I told him that there was a high mountain of sand three miles long, about four miles from Cummins' Point, where the trucks could be filled with very little labour, from the top of the mountain, by means of a shoot, and that the land from the mountain to Cummins' was on a slight decline; also, that there was abundance of stone close at hand. He said—"You have all the materials required for a dam, and, with such natural advantages, it could be constructed at comparatively little expense." Between Cummins' and Rocky Point (Sans Souci) the river is very shallow, and there is little if any mud. One-third of the river is dry at low tides. But, as you had told me that there is a great depth of mud at Tom Ugly's Point, I thought I would ask my practical informant how he would get rid of it? "Get rid of it!" he answered, "Why the weight of the stones and sand would effectually *squeeze* it out." Do not your very footsteps, on muddy roads, demonstrate to you that this is practicable? This really appears to me to be a very common-sense view to take of it. I asked him if he thought there was any fear of the sea-water oozing through the dam and making the water above it brackish? He answered, "Never." "Be sure," he said, "to make your dam wide enough—it cannot be too wide—with the natural slope, and it will become as durable and as impervious as the sea beach."

I thought the ideas of a man who has had considerable experience in constructing dams and embankments would be interesting to you. Although I had seen this huge mountain of sand hundreds of times (and I should think you can see it from the University), it never once occurred to me previously that it could be so advantageously used in constructing a dam. As sand from the neighbouring mountain could be brought to the river, on a decline, and there is such an abundance of it, there is no reason why the dam should not be made very wide—exceedingly so—as the greater the width the stronger it must necessarily become.

The sand-bank on the Seven-mile Beach, where you and I were, could be used in like manner for a dam across Cook's River, and there is also an abundance of stone close at hand.

What more could nature do than she has done to assist the citizens of Sydney in providing for themselves an inexhaustible supply of pure water? There is a watershed which could not be surpassed; there are enormous reservoirs (George's, Cook's, and Woronora Rivers, beside some creeks as large as rivers), and there are swamps almost the entire distance from George's River to the Sydney suburbs.

I look upon a ship's canal, from the Railway, near Calder House (Mr. Castle's) to George's River, or rather Lake George, and running parallel with the Seven-mile Beach at Botany Bay (one of the finest beaches in the world), as a grand idea, and I know nothing that would be so much immortalized in history as a work of this kind, or that would so much tend to promote the prosperity, wealth, and happiness of the people. Manufactories to any extent could be established on the banks of the "New River," and the refuse water therefrom could be drained into Shea's Creek. A ship's canal, through the swamps, from George's River to the Railway, near Redfern, would not cost a large amount, but a watercourse or canal capable of supplying hundreds of thousands of persons would be very inexpensive. For instance, instead of the canal being made to George's River, it need not go further than to the head of Koggurah Bay (a branch of George's River), and within 200 or 300 yards of Pat Moore's Swamp. There is a low place about a mile on this side of Sans Souci which would require very little cutting. The distance between the head of Koggurah Bay (or Townsend's Bay, as it is sometimes called) and Newtown is not more than about nine miles. A canal through the swamps, say 12 feet wide at the top and 9 feet at the bottom, would not cost more (I think) than £2 a rod, or £640 a mile. At a rough estimate, I think, Sydney might be supplied with as much water as it is ever likely to require, for less than £25,000 (exclusive of compensation for land); say—

For cutting a canal 9 miles long, at £640 a mile ...	...	£5,760
For damming George's River, say ...	...	15,000
For damming Cook's River, say ...	...	1,000
		£21,760

But if it were to cost £40,000, £60,000, or even £100,000, it would be the cheapest and most valuable work ever executed in New South Wales. I am told that the rough stones in the centre of the dams would soon settle down and become as solid as a rock, and that the large body of sand on both sides would soon fill up all the interstices of the stones. Cummins' Point is also a most excellent site for a weir—equal to Tom Ugly's or Kangaroo Point, so that not one drop of water ever need run over the dam.

If, as I firmly believe, neither piles, nor cut stones, nor cofferdams are required in making the dams, but only an abundance of materials which nature has so liberally furnished, it is mere labourers' work. There are no engineering difficulties whatever. We have merely to use the stone and sand, and separate the salt water from the fresh, deepen and widen the watercourses nature has prepared, and the numerous complaints, so frequently made, by the citizens, of a *scarcity of water*, would cease for ever.

Believe me ever

Yours very sincerely,

THOMAS HOLT.

"The Warren," Tempe, near Sydney,
10 June, 1869.

My dear Dr. Smith,

Permit me to trouble you with one more communication on the great question of the day—*our water supply*. I had no idea, until within the last few days, that the swamp between Cook's and George's Rivers was so extensive as I have ascertained it to be. It is so much surrounded by trees, that very little of it can be seen at a distance. At one place I really think it is more than a mile wide, with a depth of probably 4 or 5 feet of good water, which is now running to waste, through Muddy and other creeks, into the bay and Cook's River. These creeks could be dammed at little cost—probably not more than a few hundred pounds; and I have ascertained that the swamps could be easily united with Cook's River by means of Woolli Creek, the distance being only 76 chains of low or swamp land. I am told that with a cutting of 3 feet the two waters would meet, but of course the canal would require to be much deeper. The canal from Woolli to Muddy Creek would run at the back of Mr. Yates' house, and a short distance beyond the second toll-bar on the road to Sans Souci.

In a former letter, I suggested the construction of *another* dam across Cook's River, below the present dam; but, on further consideration, I am of opinion that it would not be at all necessary to incur this additional expense. The present dam could easily be made perfectly water-tight, and at a fractional part of the cost of constructing a new dam. The fresh water could without difficulty be conducted, by means of a culvert under the road, and by a canal along the low or swamp land on the eastern side of the Cook's River Road (at the back of the houses of Messrs. Tucker, Talbot, Lance, &c.), to Rickety-street, St. Peter's, Newtown, Waterloo, and almost as far as Redfern, with very little cutting.

This almost inexhaustible supply of water would be invaluable for manufactories, wool-washing, &c., and more especially as a considerable natural drain (Shea's Creek) would run parallel with the fresh water canal. Then, there is a natural creek in the Marrickville Municipality, extending from Cook's River to a point between Mr. S. Cook's residence and the Marrickville Council Chambers, near the Railway and the Newtown omnibus stand. I am told that when Cook's River rises 3 feet, the water spreads out nearly as far north as Camden College, in a distant but parallel line.

I have seen many wonderful works that have been constructed, and read about most of those which have been executed in all parts of the world, but I do not think there ever was a work of such incalculable utility which could be constructed at so small a cost as that of supplying Sydney, its suburbs, and a large portion of the County of Cumberland, with fresh water, by damming George's and Cook's Rivers, and uniting them by means of the swamps running parallel with the Seven-mile Beach. A water-course, or canal, about 10 or 12 feet wide at the top, and about 8 or 10 feet deep, would probably be sufficient to bring the united waters to the back of Mr. Cook's house, Newtown, and to Rickety-street (St. Peter's). A temporary weir could easily be made at Sans Souci, so that not a drop of water would ever flow over and injure the dam at Cook's River. But I am very strongly of opinion that a wide canal (say 50 or 100 feet), should be cut, in nearly a straight line, from Mr. Kingsbury's paddock, at the back of Mr. Cook's house, to Woolli Creek, and through the swamps to Sans Souci, George's River. It would run parallel with the beautiful Seven-mile Beach. The Cook's River water, which, above the dam, is brackish, would soon become perfectly sweet, after the dam was made water-tight. Woolli Creek water, and that of the swamps, is sweet, so that these waters could be used in a very short time, and the quantity is much greater than that in the Botany Swamps.

But, when George's River shall become sweet (which it would after a few floods), and an opening be made between that river, by means of the canal, it will be one of the most delightful excursions in the world, from near the Railway at Newtown to the Railway Station at Liverpool, and passengers may be landed either on the Seven-mile Beach or at any of the intermediate places.

George's River, or rather Lake, would always remain at high-water-mark. The quantity of water used would make no perceptible difference. The incessantly running creeks would more than replace that consumed and lost by evaporation. There is a natural weir of solid rock at Cummins' Point, which would not require more cutting than 18 inches to 2 feet, and almost any quantity of water could pass over it.

The dam at Cook's River is in excellent condition as a roadway. It has, however, cost very considerable sums for repairing damages caused by the floods; but if my suggestion be adopted, not one drop of water will ever run over it, and, in all probability, it will not require any repairs for very many years.

With respect to the suggested dam at George's River, I thought you smiled, when I last spoke to you, at the idea of constructing it of stones and sand. I merely mentioned, in my previous letter, what had been done in Tasmania, and how well it had answered. But, can we do better than carefully observe what nature has done? We see the sandy beaches far more durable than the rocky shores. We know that the purest water is frequently found on sea beaches, and within a few yards of the sea water. Mr. Mort told me of a lake on the Tuross River which is frequently opened by the settlers, during heavy rains, to let off the water, in order that it may not inundate their lands. The tides force up the sand again, and the water becomes perfectly sweet. Another instance was mentioned to me of a lake in Illawarra (Tom Thumb's Lagoon), which the settlers opened in like manner to let out the water, during heavy rains, and the tides closed it again, and the water became quite fresh.

The more we study nature in the minutiae of her operations, the more must we admire the inexhaustible fertility of her resources, and the simplicity by which she produces the most important results.

If

If the dam were required to be used also as a *wharf*, then, of course, there must be a *sea-wall*, so that vessels could come alongside, and this could only be constructed by means of cofferdams, sheet piling, or the diving-bell, and with cut stone, cement, &c. But, as I think, no wharf at George's River Dam is at all necessary, a beach would answer all the purposes of a wall, and be incomparably more durable, and only cost a fractional part of the money.

Macadam, in making his roads, never used anything but stones—no clay or any other material; and these stones, not exceeding 6 ozs. in weight, united in one mass like a piece of timber, and became impervious to wet. Macadam recommended a thickness of 10 inches; but a road has been taken up which had only 4 inches of stones, and the ground below was found to be quite dry.

A considerable portion of the kingdom of Holland is below the sea-level, and we know how wonderfully nature has protected that country by means of sand-banks. If Macadam could make a road impervious by means of small stones, and the Dutch can keep out the ocean by means of sand, is it not possible for us to separate the salt from the sweet water in George's River, by means of stone and sand?—I feel certain that it is, provided that a *sufficiency* be used. There is a huge mountain of sand at a short distance, from which any quantity could be brought to the river, along a gentle slope, by *gravitation*; there is abundance of stone close at hand; and, I may add that, as little skilled labour is required, nearly the whole of the work could be done by convicts.

If a dam were begun, it should of course be pushed forward with the utmost vigour, or otherwise the river would deepen as the opening became reduced, and more materials would be required.

I was reading, a few days ago, of the wonderful power of some of the Cornish engines. One of Taylor's, at the Consolidated Mines, Cornwall, lifted 63,020,000lbs one foot high, by the consumption of one bushel of coal, which cost 1s. Another engine pumped up 43,500 hogsheads of water in 24 hours, from a depth of 1,441 feet.

With facts like these before us, would it not be madness to go fifty or sixty miles, and expend millions of money for water, merely because of its coming by *gravitation*, when we can have an inexhaustible supply at our doors, and raise it, as the Cornish men do, at such a trifling cost? If it were not that water can be raised so inexpensively by means of the steam-engine, many of the first-class collieries and rich metallic mines would be abandoned.

The ancient Romans brought water to their cities by *gravitation*, at an enormous cost, but it is not to be wondered at, because at that time the steam-engine was unknown.

I remain,

My dear Sir,

Yours very truly,

THOMAS HOLT.

Memorandum by Mr. Moriarty on the proposition to supply Sydney with water from George's River.

HAVING given the most serious and careful consideration of which I am capable to the proposal which has been submitted to the Commission for supplying Sydney with water from George's River, and having had careful surveys, sections, and borings of the several sites for dams, and for the lines of aqueduct, &c., made, I have now the honor to submit them for the consideration of the Commission, with such observations as the case seems to require at my hands.

This project involves not only the withdrawal of the ordinary daily supply of water for the city from George's River, but also the storage in its channel of such quantity as may be required to preserve the surplus of wet seasons for the deficiency of the dry. As regards the former, I have taken for this the same figures as were fixed by the Commission in the other schemes which we have considered; and as for the latter, I have assumed the period of possible drought at twelve months, and have estimated that storage should be provided at the above rate for that time; this, although forming an item in the cost as well as the difficulty of executing the work, is not, after all, very material, because a few feet (2 or 3) more or less in the height of the dam would not sensibly affect either its cost or the difficulties in the way of its construction.

The supply of Sydney with water from George's River involves the construction of a dam at some point near its embouchure, and three positions have been recommended,—one at Rocky Point near Sans Souci, one at Tom Ugly's Point, and the third at Kangaroo Point; and although the construction of a dam at either of these sites would be an operation of considerable difficulty, magnitude, and cost, still, as the Kangaroo Point site presents somewhat less unfavourable features than either of the others, I shall, in the following observations, assume that it would be selected, and examine the case on that supposition.

The feasibility of the project depends wholly on the successful construction of the dam; and there can be no doubt that, owing to the great depth of the water, the nature of the bottom, which is composed of semi-fluid mud and sand, the permeability of the sand, and the fissured and open character of the rock forming the sides of the channel, to make a dam watertight in such a situation would be a work of extreme difficulty.

In reference to the dam, the first question which presents itself for consideration is, as to the character of the work of which it should be composed—whether it should be constructed of masonry carried down to and founded on the bed rock which underlies the

the

the sand at depths varying from 50 to 60 feet below high-water-mark; or, of puddle enclosed by sheet piling, and faced on either side by a stone embankment; or, of sand wholly, as has been suggested. And I must here observe, that I cannot think that any of those persons who have talked of damming George's River as if it were a trifling matter, have been at the pains to satisfy themselves as to the nature or extent of the difficulties they would have to encounter, or the inevitable expense of overcoming them.

In considering the dam, one of the main things to be determined is its height,—not the height only which would be necessary to divert the water of George's River into the Botany engine ponds, or to any others whence the water would be pumped into Sydney, but the height which would be sufficient for storage of the required supply for such period as may be considered necessary, as well as for the allowance to be made for evaporation and loss by leakage during the same period. To arrive at the first, we must commence at the engine ponds, and trace the levels thence back to George's River.

I think I am safe in assuming that the permanent level of the water in the engine ponds, say at Botany (for that would be as convenient a place to pump from as any other, and all the appliances are to be found there already), should not be less than 1 foot above high-water-mark spring tides. If below the spring tide mark, the percolation from the sea through the porous subsoil would taint the fresh water in the ponds. Starting then with an elevation of 1 foot above high-water springs at the engine ponds, we should cross the estuary of Cook's River with a syphon, which would require a mean rate of inclination in the half-mile of piping and conduit, of (say) 18 inches, such being quite small enough fall to deliver the quantity of water which would be required to pass. This would give the surface level of the water in the canal, where it enters the syphon, at 2 feet 6 inches above high-water springs, and the bottom of the canal would be about the level of high-water. The canal would be about 6 miles in length, and the fall per mile could not be taken at less than 6 inches, or 1 in 10,560, giving a total rise of 3 feet in its whole length, and bringing up the level of the water, at its inlet from the river, to 5 feet 6 inches above the high-water springs. The rate of fall might perhaps be reduced to (say) 4 inches per mile, by considerably increasing the cross sectional area of the channel; but the result would be, to render the stream so sluggish—such a mere stagnant ditch—so full of impurities, animal and vegetable, which would develop under the hot summer sun, as would make it quite unfit for human use. I do not, therefore, think it would be safe to estimate for any less rate of inclination than 6 inches per mile, which, as I have stated, gives 5 feet 6 inches above high-water, for the surface level of the canal at George's River—that is to say, the lowest permanent level to which the water in George's River could be drawn off.

We next come to consider the quantity of water which must be stored in the reaches of the river, between the proposed dam and Liverpool, to meet the consumption during a period of drought; and, assuming the same quantity in this as we have been estimating for the Nepean and other projects, namely, 12 millions daily supply, for twelve months, we should require 4,300 million gallons of storage.

And, as the area of the channel of George's River, between Tom Ugly's Point and Liverpool, may be taken at 3,000 acres approximately, we should require a depth of fully 5 feet over this area to represent the required quantity; but again, over and above the quantity of water required for consumption in the city, we should require to make provision for what would be lost by evaporation and leakage during the time the reservoir would be receiving no accessions from the river, and when the whole supply must be drawn from it. The evaporation alone would be about 4 feet in the twelve months; but, for the sake of argument, taking that figure to represent all the sources of loss, and adding it to the before-enumerated figures, we should require the water in the reservoir to stand at the height of 14 feet 6 inches above high-water at spring tides at the commencement of the dry seasons, viz. :—

Ascent of canal and syphon	...	...	...	...	...	ft. in.
Storage	...	...	...	...	...	5 6
Evaporation and other sources of loss...	...	...	...	...	...	5 0
						4 0
						14 6

It may be asserted that those figures are too high, that the storage of so large a quantity as 4,300 million gallons would not be required, and that to make provision for so long a period as twelve months' supply is demanding too much of any scheme; but even if half the rates above demanded for storage and evaporation be taken as sufficient, it would not materially affect the question—it would only reduce the level at which the water in the reservoir must stand by about 4 feet 9 inches, which would not appreciably diminish the cost of the dam or the difficulties in the way of its execution, which, in either view, would be most formidable. No person who has not had experience in hydraulic works can comprehend the difficulties in the way of constructing a perfectly watertight dam of the dimensions the George's River one would be, in such a great depth of water and on such a bottom. I do not hesitate to say that it would be a work of exceeding difficulty. A glance at the sections and borings which have been taken at the different sites recommended will show this, the water for a considerable distance across the channel at Kangaroo Point being over 45 feet in depth, and beneath this again there are in places unknown depths of sand and soft mud certainly not less than from 12 to 25 feet, in not many cases has the boring rod been got down to the rock.

To attempt a masonry dam in this position, it would be obviously necessary to get down to the bed rock for a foundation. This would involve coffer-damming the full width of the river; and the cost of the coffer-dam and of the dam itself, which would not be less than 70 feet in height, could not be estimated at less than about £650,000—a sum which puts this class of work out of the question. It

It has been suggested that a dam might be formed by throwing down across the river the mountain of sand near Kirranulla Beach, and making a dam of it; and it seems to have been assumed that because the mouths of many of the rivers and lakes on the coast become at times silted up by the action of the waves, that the same thing may be done artificially at the mouth of George's River; but the conditions under which this silting takes place are totally dissimilar to those which exist at George's River; the mouths of the smaller rivers and lakes are never silted up unless when exposed to the action of the waves, which at certain seasons and with certain winds throw up large quantities of sand on the beaches and bars, and then when the tidal action is weak, by reason of the insufficient back-water area, the channel at the outlet frequently becomes altogether silted up, and remains so till the first land-flow forces a passage, and restores the channel to its original dimensions. At the mouth of George's River, situated far up in a still bay, the waves have little, if any, tendency to deposit sand within the river proper, whilst the rapid floods which at times occur, would sweep away any obstacle so easily moved as sand. No one who witnessed the ravages of the floods of 1857 and 1867 could for one moment doubt this. And again, the height at which the water in the river must stand above mean tide level to afford the requisite supply would render the cases still more dissimilar, for in no instance that I am acquainted with (and I have examined many of them) does the water ever rise in the rivers or coast lakes many inches above high-water level before it commences to cut a passage for itself through the sand; whereas, as I have before shown, the level of the water in George's River would require to be kept permanently at from 11 to 15 feet above high-water springs, to be of much use, and it is quite obvious that no sand-dam could effect this.

The only kind of dam that I can see which would afford any prospect, however small, of being water-tight—and even that I should be sorry to guarantee—would be one of similar construction to the Palder Dykes of North Holland, but the circumstances here would be far less favourable to success than there. The dykes in Holland are, for the most part, constructed in positions where the water is of inconsiderable depth in comparison to what we should here have to encounter, and the bottom is composed of mud—the alluvial deposit from the Rhine and other great rivers which intersect Holland. The material deposited by them in the swamps and marshes is a rich alluvium thoroughly impervious to water—is in fact, equal in all respects to good puddle; while at George's River, the bottom consists of sand, which cannot be considered an impermeable or water-tight stratum; and if, as is the case in the Palder dykes, their leakage be very considerable, and involve constant pumping, how much more so would it be at George's River, where even if the dam itself could be made water-tight, the underlying sand would not be so. The cost of a clay-puddled dam of this kind could not be estimated at less than £297,500, say £300,000, to which must be added the cost of the canal, additional pumping, plant, &c., amounting to £115,000 more, making in all £415,000, exclusive of the annual cost of pumping.

I am far from stating that such a dam as I have referred to would be water-tight. I believe, on the contrary, it would not; but, as it is the only kind of work which appears to me to offer even a chance of being successful, I have considered the matter as if it would be.

An ordinary embankment thrown down on the natural surface of the sand, without any attempt at puddling into the sand, would not retain the fresh water under any pressure, and the least leakage would be destructive of the whole thing; because, being impossible to discover where it existed, it could not be staunched, and would go on increasing till it ruined the whole structure. The difficulty of constructing embankments on dry land, which shall be thoroughly watertight, is sufficiently understood where every part of it can be seen and carefully examined as it is carried up, and when faults and leaks, if they exist, can be got at and repaired; whereas a dam at the site under consideration, formed in 46 feet of water, and subject to a strong and unceasing tidal action, as well as to considerable risk from land floods, could never be examined from first to last; for the examination by a diver would be quite valueless under such circumstances; the clay could not be touched at all, to press or ram it in place, as any such process would merely dissolve it into mud; and, on the other hand, if merely put down and allowed to consolidate by its own weight, who can assert that it must settle into a uniform and homogeneous mass, so as to make it a perfectly watertight wall? Who can say that all the precaution in laying and punning the clay which would be considered indispensable in a dam constructed on dry land would be unnecessary in 46 feet of water? I do not hesitate to say that, so far from being so, the very opposite would be the case—far more care in every detail of the execution would be necessary in the latter than in the former case; the mere scour of the flow and reflux of the tide would of itself be a most formidable difficulty in the way of getting the puddle to settle and consolidate.

But even letting it be granted that the dam could be constructed and made water-tight, what then have we got? How far are we advanced towards the attainment of our object—the providing of an unfailing supply of the purest water for Sydney? We should, it is true, have dammed up an estuary of salt water—an estuary fringed with a vast number of bays, coves, and with deep creeks branching off it on either side, all highly impregnated with salt. Who would venture to say, under the circumstances, when this estuary would become fresh, or how many years it might take to wash all the salt water out of the bays, coves, and creeks, and out of the sand and mud which forms the bottom of the channels, and the salt marshes which abound on their margins? I do not think it is possible even to conjecture; and having besides heard the evidence of many intelligent witnesses examined before the Commission, to the effect that not only are many of the creeks falling into George's River—notably Prospect Creek, Salt-pan Creek—in fact all its tributaries which flow off the Wianamatta shales, salt, but that

even the waters of George's River itself above the dam at Liverpool become brackish during droughts,—with all these facts before us—first, the difficulty amounting almost to an impossibility, of constructing an efficient dam, and the enormous cost of such a work; and secondly, the hoplessness of ever washing the salt water not only out of the main channel of the estuary, but also from its numberless bays and indentations; and thirdly, the fact of many of the principal tributaries being themselves salt,—with all those facts, I say, before us, the conviction cannot, I think, be resisted that George's River is not the source from which we should look to drawing a supply of pure water for Sydney.

And further, if none of those, as I consider them, fatal objections existed, we should have this weighty one,—that if this source were selected, it would be necessary to remove the Benevolent Institutions which have been established at Liverpool, the drainage from which finds its way into the river, as well as the Paper Mills and Wool-washing Establishments, and close for ever the most convenient and promising outlet for the manufactories which may be expected to spring up near the city. The suitability of George's River for these purposes has been already clearly indicated, by the establishment on its banks of two of those most promising industries. If they be banished from their present abodes, I cannot very well see where they would again find so convenient a "location."

E. O. MORIARTY.

Mr. Bennett's estimate of the expense of supplying Sydney from the Grose River.

A MASONRY dam, 60 feet greatest height, and about 700 feet long, to be built across the river valley, near Mount George. Pipes to start from a small dam, 5 miles above Barton's Creek, and 425 feet over high-water; to deliver water in Sydney at 150 feet, giving a fall of 5 feet per mile.

To deliver 12,000,000 gallons per diem, with one pipe. Pipe to be 41 inches diameter; 1.3643 inch thick, for 20 miles, in depressions; remainder, 1.25 inch thick:—

1.3643 pipe weighs 1,531 tons per mile, at £11 per ton, laid = £16,841, say £17,000 per mile.

1.25 thick pipe weighs 1,349 tons per mile, at £11 per ton, laid = £14,839, say £15,000 per mile.

	£
20 miles, at £17,000	340,000
35 miles, at £15,000	525,000
	<hr/>
	865,000
Check and air valves, water-locks, man-holes, and relief-valves, say ...	30,000
	<hr/>
	895,000
Dam in the Grose Valley, and other works at Sydney end ...	150,000
	<hr/>
	<u>£1,045,000</u>

With two 31-inch mains, to deliver 6,000,000 gallons per diem each:—

1 mile of 31-inch main, 1.14 inch thick, weighs 957 tons, at £12 per ton, laid, £11,500 per mile.

	£
55 miles, at £11,500 per mile... ..	632,500
Check, air, and relief valves, man-holes, &c.	20,000
Dam at the Grose, and other works	150,000
	<hr/>

Cost of delivering 6 million gallons per diem ... 802,500

2nd pipe:—

55 miles, at £11,500	632,500
Check and air valves, &c.	20,000
	<hr/>
	<u>£1,455,000</u>

WILLIAM C. BENNETT.

27 February, 1869.

(Circular

(Circular sent by the Water Commission to the Suburban Municipalities, and replies thereto.)

Sydney Water Commission,
Public Works' Office, Phillip-street,
Sydney, 28 October, 1867.

Sir,

I have the honor, by direction of the Commission appointed to inquire into the Water Supply of Sydney and Suburbs, to invite your attention to this inquiry, and to request you will be good enough to inform the Commissioners how your Municipality is supplied with water, and whether you consider the supply sufficient, and if not, what suggestions you can offer towards improving it.

I have, &c.,

GEO. E. FAITHFULL,
Secretary to the Commission.

The Chairman of the _____ Municipality.

The Council Clerk, Balmain, to The Secretary to the Sydney Water Commission.

Council Chambers, Balmain,
30 October, 1867.

Sir,

In reference to your letter of 28th instant, requesting the Chairman of this municipality to inform the Sydney Water Commission how this municipality was supplied with water, and whether he considered the supply sufficient, and if not, what suggestion he could offer towards improving it,—I have the honor, by direction of the Chairman, to state in reply,—

1. That the municipality is supplied at present by means of some private wells, rain-water collected off roofs of houses into tanks, and from a very small creek which is rapidly becoming a second *Tank Stream*.

2. That the supply is not, even now, sufficient, and that last year application was made to the City Council for a supply from them by means of a pipe, *via* Glebe Island, or otherwise; to which they replied stating that they were not then in a position to entertain the question, and

3. That the only suggestion he can offer at present for getting a supply is the laying down of a pipe from Sydney, should there be sufficient water there to spare, or in the event of the water being brought from the Nepean or George's Rivers along the Railway line, a branch pipe from Sydenham into the municipality.

I have, &c.,

J. M'DONALD,
Council Clerk.

The Mayor, St. Leonards, to The Secretary to the Sydney Water Commission.

St. Leonards,
6 November, 1867.

Sir,

I beg to acknowledge the receipt of your circular letter to me of date the 28th ultimo, and, by request of the Municipal Council of St. Leonards, to inform you, for the information of the Commissioners, that this municipality is supplied with water from wells connected with surface springs, from tanks of various kinds attached to the roofs of houses, and from creeks, all of which modes of obtaining a supply of fresh water are inefficient and uncertain, as practically depending on *frequent* rain for their replenishment, and fail as a rule when most needed, *viz.*, in hot and dry weather.

The water of this neighbourhood is however of good quality, as that which passes through the sandy soil is thought to take up but little impurities from it; and the land at present being but sparsely occupied with people, is not artificially charged with organic or other deleterious matter, and therefore does not add anything to materially affect the quality of the water.

The creek leading to the Willoughby Falls, and some land on a portion of its banks, are reserved by Government for a supply of water for this municipality; but the gathering ground or watershed is comparatively small, and much of it has been sold as town allotments, and partly occupied with houses and their offices; and there are already two milkmen, having a number of cows, pigs, and other animals located on the alienated portion of the stream, together with several water-closets erected in near proximity to it, the filth of which is washed in by every rain; and it is not certain that the Protestant Episcopal Burying Ground does not also drain into the same creek. All these considerations, together with its want of elevation to supply water by gravitation, renders the reserve obviously unfit for the purpose intended (but nevertheless very desirable for many other purposes); nor is there, that I am aware of, any land sufficient in quantity and elevation attainable anywhere in this district to furnish a permanent and abundant supply of fresh water to this neighbourhood.

I have examined the Lachlan and Botany Swamps, with the object of judging of their capability of supplying Sydney and suburbs with water, and am willing to admit that a large quantity of that element may be obtained from them, but nothing approximating, in my opinion, to a certain and sufficient quantity for all time; besides which, the
pumping

pumping process must always be expensive and liable to accident ; and, from the position of the Botany Waterworks alone, the precariousness and uncertainty of the supply must be increased. I therefore suggest that a careful examination and survey be at once commenced, with a view of determining an eligible situation for an abundant and permanent supply of pure water by gravitation for the whole of the County of Cumberland, not only for domestic and manufacturing purposes, but for public baths, fountains, and irrigation of land, and all other requirements depending on a large and constant supply of fresh water. To carry out this suggestion of course implies the outlay of a large sum of money, and, in my opinion, the management of the water supply generally to be entrusted to Commissioners under an Act of Parliament, rather than to the Municipal Council of the City of Sydney. The first, and probably the most important consideration in this matter is, to obtain a gathering ground of sufficient extent, elevation, and purity of soil for an abundant supply to the highest levels in Cumberland ; and the second, to secure the land for reservoirs and ducts to Sydney and the principal gatherings of population, at a fair valuation as to price. In an engineering point of view, the site for the gathering ground should be one capable of extension in future years, as the demand upon it increased, and we could afford the additional outlay of money.

Force seems indispensable in supplying towns with water, as I am convinced that much water is wasted in Sydney in closets and sewers, without accomplishing the object intended, simply from the want of *force* to sweep them clear.

As regards the supply of water to the North Shore, I confess my inability to see how we may reasonably expect to procure a supply from Botany ; but if a sufficient head of water is stored at the Blue Mountains, we may, I think, confidently hope that at some future time an abundant and cheap supply may be had by way of Sydney, across the harbour or by the proposed bridge across the Parramatta River at Five Dock, thereby including Hunter's Hill Municipality, and the north side of the Parramatta River generally.

If the Commissioners desire it, I shall be most happy to attend them and afford verbally such further particulars as may be in my power to give, as I am anxious that this inquiry should be conducted to a satisfactory conclusion.

I have, &c.,

WILLIAM TUNKS,
Mayor.

The Council Clerk, Redfern, to The Secretary to the Sydney Water Commission.

Municipal Council Chambers, Redfern,
11 November, 1867.

Sir,

I have the honor, by direction of the Chairman, to acknowledge the receipt of your communication of the 28th ultimo, in which you request information as to the sufficiency of the supply of water to this municipality, and if not sufficient, inviting suggestions towards improving it.

In reply, I am directed to state that occasionally the supply of water is very deficient, but the Chairman is unable to offer any suggestions for improving it.

I have, &c.,

THOMAS FRASER,
Council Clerk.

The Council Clerk, Cook, to The Secretary to the Sydney Water Commission.

Municipal Council Chambers of Cook,
Camperdown, 14 November, 1867.

Sir,

In reply to your letter of the 28th ultimo, inviting the attention of this Municipal Council to the inquiry now being made into the Water Supply of Sydney and Suburbs, I am directed by the Chairman to inform you that the supply of water in this municipality is in part obtained from wells, which become dry during a continuance of drought, when water is procured from Sydney and hawked about the streets. The Council, therefore, consider that the quantity at present obtainable by the inhabitants is not sufficient for their purposes.

I am to add that, if any scheme can be carried out by which the inhabitants of this district could be supplied with water, without having recourse to wells for the same, it would be deemed a great boon, as, from the small size of the allotments in this neighbourhood, the number of cesspits in close contiguity to the wells is very large ; it is therefore thought that the water must be tainted to a very great extent. Many of the inhabitants are willing to connect with a main pipe, should one be ever laid in the district for the supply of water ; and I am informed that subscriptions towards the laying of the same would be contributed, in the event of such a work being about to be carried out.

I have, &c.,

WM. J. HOWE,
Council Clerk.

The

The Council Clerk, Paddington, to The Secretary to the Sydney Water Commission.

Council Chambers,
Paddington, 18 November, 1867.

Sir,

I have the honor, by direction of Chas. Artlett, Esq., Chairman of the Paddington Municipal Council, in reply to yours of the 28th ult., asking information for the Commissioners appointed to inquire into the Water Supply for the City and Suburbs, to state that Paddington is wholly dependent on wells and water-carts.

Various applications have been made, by petition and otherwise, to the City Corporation, to supply this locality, and promises in abundance have been given, but not kept by that body. Their first excuse was, that until the reservoir was built they could not put on pressure enough; but now, although it has been finished some time, we are as far off as ever of having the earnest desire of the inhabitants gratified, as the reservoir seems hardly capacious enough to supply the higher levels of Sydney and water many of its streets.

The annexed copy of a letter addressed by this Council to the Sydney Corporation, in March last, will clearly state our present position in this matter.

The conference referred to, as appointed by the Mayor, was not held, on account of his absence at the time appointed.

Previous to the finishing of the reservoir, the then Mayor and the Engineer promised that pipes would be laid from it down the Old South Head Road, so that the Lower Ward and the Glenmore Road might be easily supplied, instead of which the pipes are laid at the back of the Barracks.

I have also to state that the Council, having lost all confidence in the Sydney Corporation as a Water Supply Committee, are erecting public pumps for the benefit of the rate-payers.

As to a general and permanent supply of water to the city and suburbs, they believe that the Nepean is the most suitable locality for a reservoir to be constructed, where arrangements might be made for filtering the water through rubble and sand, to prevent any impurities the water might contain entering the basin supplying the pipes. Two basins holding about (30,000,000) thirty million gallons each, one filtering into the other from the dam, would give a constant supply for centuries to come.

The whole district of Paddington could be supplied if a reservoir was built on the Reserve within the Randwick Municipality, and a pump of a few horse-power placed thereon. To carry out this, permission should be obtained to borrow upon the joint rates of Paddington, Woollahra, Waverley, and Randwick, which might be supplemented by an equal amount from the general Revenue.

I am also directed to say, that both the Chairman and myself will be happy to afford any oral information the Commissioners may require in explanation or illustration of this communication.

I have, &c.,
JOHN DAVIS,
Council Clerk.

[Enclosure.]

Council Chambers,
Paddington, 14 March, 1867.

To the Right Worshipful the Mayor and Aldermen of Sydney.

Sir and Gentlemen,

I am instructed by the Chairman of the Municipality of Paddington, to remind you of the subject the Deputation was to have conversed with you upon, on Monday last, at half-past 11 A.M., but were disappointed, viz., "Water Supply to this Municipality."

In March, 1864, it was distinctly promised that when the Reservoir was finished, pipes would be laid down to supply the lower levels of Paddington; and in order to facilitate the work, the then Mayor and the Engineer asked for a plan of the municipality, with the general levels of the streets marked thereon. This was supplied in January, 1865. Subsequently, a petition for a supply to 666 rooms was sent to your office.

On the 24th February, 1866, this Council were informed that the subject was to come under consideration on the then 1st proximo; that a bond-book should be forwarded to this office, for the convenience of persons living near to the Council Chambers; and that, in order to supply the higher levels, your Council had reserved from sale the engine which was formerly used at the Swamp, for the purpose of fixing it on the reservoir to supply the higher levels to Waverley; that arrangements had already been made for attaching a 12-inch main at the head of Dowling-street, for supplying our lower levels.

The bond-book not having been forwarded, application was made for it on the 9th March, 1866. No reply being given, a deputation waited upon the Mayor, and were informed by him and the Engineer, that there was no doubt about the supply of water being granted, after the necessary inspection of the rooms.

The Inspector came, and to facilitate his work, was accompanied by our Clerk to the various houses.

Then, subsequently, we were told that as soon as the Bill extending the powers of your Corporation was passed we *should have* the water.

I have likewise to inform you, specially, now that the Bill has become law, that within the lower levels from the junction of Dowling and Botany Streets there are over 900 rooms which can be easily supplied—the highest point being the Council Chambers; which, at the usual rates, would give an interest on £2,200. Query—Would the outlay be more than *one-half* that amount?

From the city boundary at William-street East to M'Lean-street at the Darling Point Road there are 240 rooms which can be supplied if the 6-inch pipe which is laid in William-street be continued. The short length of 3-inch which is laid down at the bottom of said street would suit for the Glenmore Road. 240 rooms at the usual rates would give 10 per cent. on £600. Query—Would the outlay required amount to £400?

By

By placing the pump on the reservoir as formerly promised, Upper Paddington, Woollahra, and Waverley, could be supplied, which would no doubt give an interest of 10 per cent. on £10,000. Query—Would the required outlay amount to £8,000? Beside all this, where the mains are laid down, houses will increase in number.

Trusting this subject will be at once decided, and the Council informed thereof,—

I have, &c.,
JOHN DAVIS,
Council Clerk.

The Council Clerk, Waterloo, to The Secretary to the Sydney Water Commission.
Municipal Council Chambers,
Waterloo, 18 November, 1867.

Sir,

I am directed by the Municipal Council of Waterloo to acknowledge the receipt of your letter of the 28th ultimo, respecting the supply of water in this locality, and have the honor to state in reply, that the municipality is supplied with water from wells, that the supply is sufficient for present requirements, and that a large quantity exists within the boundaries of the district, which is used by parties engaged in the fellmongering business.

I have, &c.,
T. M. SLATTERY,
Council Clerk.

The Council Clerk, Glebe, to The Secretary to the Sydney Water Commission.
Municipal Council Chamber,
Glebe, 26 November, 1867.

Sir,

No meeting of the Council has been held since the receipt of your letter of the 28th October respecting the supply of water to this municipality. This has caused delay in sending a reply.

I have been directed by the Chairman to inform you that complaints have, in some instances, been made that the supply of water has not been regular.

The requirements of persons residing in the lower parts of the municipality have been generally met, but in some other localities the residents have been for two or three consecutive days without water. This appears to have occurred in the higher levels of the municipality, such as Arundel-terrace, Derwent-street, and the higher parts of Glebe Road.

In these parts the water scarcely ever flows during the day-time, and great inconvenience is thus experienced.

I have, &c.,
HENRY COLLEY,
Council Clerk.

The Council Clerk, Randwick, to The Secretary to the Sydney Water Commission.
Municipal Council Chambers,
Randwick, 26 November, 1867.

Sir,

I have been directed by the Chairman and Councillors of the municipality of Randwick to state, in reply to the inquiries contained in your letter of 28th October, touching the supply of water to this municipality,—

1st—That our supply is derived from wells, tanks, and surface springs.

2nd—That the supply is inadequate for present wants.

3rd—That if this municipality cannot be supplied from the Lachlan Swamp, some other more distant source must be looked for.

I have, &c.,
H. HAMBURGER,
Council Clerk.

The Council Clerk, Newtown, to The Secretary to the Sydney Water Commission.
Municipality of Newtown,
Council Chamber, 30 November, 1867.

Sir,

In reply to your letter of the 28th ultimo, requesting to be informed how Newtown is supplied with water, and whether the supply of the same is considered sufficient, and if not, what suggestions can be offered towards improving it,—I have the honor, by direction of the Chairman, to respectfully request that you will lay the enclosed Report (which has recently been adopted by this Council) before the Commissioners, for their consideration.

I have, &c.,
ROBERT BANKS,
Council Clerk.

[Enclosure.]

[Enclosure.]

Report respecting the present and future supply of Water, adopted by the Municipal Council of Newtown, 27th November, 1867.

1. Newtown is at present supplied with water chiefly obtained from the roofs of houses, and retained in wells and tanks. During the summer months one-fourth of the inhabitants have to purchase a considerable quantity of water from persons who deliver it at their houses with water-carts, and the present supply is very inadequate.

2. The City Corporation will not, it is believed, be able to supply Newtown with a permanent supply of water from the present Waterworks at Botany, in consequence of the great scarcity after a short period of dry weather. Even supposing they had a superabundant supply for the city of Sydney and suburbs, where the water-mains are already laid, it is very doubtful whether Newtown can ever look to that source for water; because the mains laid down at the Glebe and South Sydney are not connected with the high-level reservoir at Paddington, consequently they are not high enough to supply Newtown; and the City Corporation have never evinced any disposition to expend money to lay on water-mains in connection with that reservoir which would be serviceable to Newtown.

3. Newtown would be placed in a very deplorable condition in case of a fire occurring during the summer months; and the suggestions we would respectfully offer are, that steps cannot be taken too soon by the Government, in procuring a permanent supply of water for Sydney and its suburbs, from one of the rivers that arise in the Blue Mountains, so frequently of late pointed out by professional gentlemen, through the medium of the public Press, as the only means of insuring a permanent and wholesome supply of water.

The Chairman, Marrickville, to The President and Members of the Sydney Water Commission.

Municipal Council Chambers,
Marrickville, 5 December, 1867.

Sir and Gentlemen,

In reply to your communication of the 28th October last, I have the honor to state that the inhabitants of Marrickville are inadequately supplied with surface water only from wells and tanks.

Marrickville is a rapidly increasing suburb, every year an abundant supply of pure water will become of greater importance, and it seems impossible that this can be obtained by any local effort. If the city be supplied from any of the fresh water tributaries of George's River, the main or canal would probably pass through Marrickville, on account of the nature of the land; in that case, of course, the inhabitants of the district could be readily supplied.

From what I have heard, I think it likely that a supply of pure water could be brought by gravitation through Marrickville into Sydney from the upper portion of the Warrenora branch of George's River. I do not know this from my own observations; but perhaps the Commissioners would think such a supposition of sufficient importance to induce them to ascertain the fact for themselves by personal inspection.

I have, &c.,
SAMUEL PAYTEN,
Chairman.

The Chairman, Woollahra, to The Secretary to the Sydney Water Commission.

Municipal Council Chambers,
Woollahra, 19 December, 1867.

Sir,

In reply to your letter of the 28th October, inquiring how this municipality is supplied with water, and inviting suggestions as to the best means of improving it,—I have the honor to inform you that this Council have given the subject full consideration, and I beg to submit the following as the result of the deliberations of the Council:—

At present there is no supply but what the inhabitants themselves obtain from wells or tanks; and the only modes of obtaining a proper supply that appears at all practicable are the following:—

1st. By making a reservoir on the high ground on the south side of the Old South Head Road, opposite Ocean-street, which could be supplied by having a standing engine at the Paddington Reservoir.

2ndly. By making a reservoir in the above spot, and having a separate engine at the Lachlan Swamp wherewith to keep it supplied.

3rdly. There is a locality on the eastern side of the Old South Head Road, between Rose Bay and Bondi, into which a very large watershed is drained, and where many acres are constantly covered to a depth of several feet with good water. By collecting it here, and forcing it up to a reservoir on the top of Bellevue Hill (where there is a piece of Government land sufficient for the purpose), it is believed a good supply might be obtained for the whole municipality of Woollahra, and probably Waverley also.

I have, &c.,
RANDOLPH NOTT,
Chairman.

(Queries sent to Municipalities of Sydney and Suburbs, and replies thereto.)

The Secretary to the Sydney Water Commission to The Mayor of Sydney.

Sydney Water Commission,
Public Works' Office, Phillip-street,
Sydney, 17 October, 1868.

Sir,

I have the honor, by direction of the Sydney Water Commissioners, to request that you will kindly assist them in their inquiries, by supplying them with information on the following points:—

1. The assessed annual value of city property.
2. The rate per £ levied for all purposes (except water).
3. The number of houses on which water rates are levied, distinguishing those in the city from those in the suburbs.
4. Is there any general water rate levied in addition to 5s. per room on houses actually supplied?
5. The gross amount of water rate for 1867, or for the latest financial year.
6. Total revenue from all sources on account of water supply.
7. The total amount of charges on account of water supply for the latest financial year—distinguishing working expenses, additions to "plant," and interest on debt.

I have, &c.,
GEO. E. FAITHFULL,
Secretary to the Commission.

The Town Clerk, Sydney, to The Secretary to the Sydney Water Commission.

Town Clerk's Office,
Sydney, 28 October, 1868.

Sir,

In compliance with the request contained in your letter of the 17th instant, I have the honor, by direction of the Right Worshipful the Mayor, to furnish, for the information of the Sydney Water Commissioners, the following replies to your questions, viz. :—

1. The assessed annual value of city property, on the 31st December last, was £700,000.
2. The rates levied are,—
City rate, 1s. in the £.
Watering-street rate, upon properties in the streets which are watered, varying from 1d. to 6d. in the £.
Sewerage rate, varying from $1\frac{1}{2}$ to $3\frac{1}{4}$ per cent., upon all properties which can connect with a public sewer.
3. The number of houses upon which water rates are collected are 12,900 in the city, and 2,200 in the suburbs.
4. Besides the general rate of 5s. per room, special rates are collected in all cases where extraordinary or additional supply of water is required.
5. The water rate collected during the year 1867 was £25,500.
6. The total revenue on account of the Waterworks for the same period was £28,000.
7. The detailed expenditure on account of the Waterworks, sufficient, it is hoped for the purposes of the Commissioners, will be found in the enclosed printed abstract of the accounts for the year 1867.

I have, &c.,
CHAS. H. WOOLCOTT,
Town Clerk.

The Mayor, Balmain, to The Secretary to the Sydney Water Commission.

Borough of Balmain,
Council Chambers,
21 October, 1868.

Sir,

I have the honor, in reference to the application from the Sydney Water Commission, as contained in your letter of the 17th instant, to forward, for your information, the following :—

1. The assessed annual value of the property in this borough is £1,966.
2. The number of houses on which rates are levied, 1,044.
3. The rate levied for all purposes, 1s. in the £.
4. I am of opinion that the rate-payers generally would gladly avail themselves of the opportunity of obtaining a supply of water, and that they would freely pay a reasonable additional tax for that purpose.

I have, &c.,
H. PERDRIAU,
Mayor.

The Council Clerk, Balmain, to The Secretary to the Sydney Water Commission.

Borough of Balmain,
Council Chambers,
30 October, 1868.

Sir,

In reference to the application in respect to the annual value of the property in this borough on which the assessment is made, I have the honor, by direction of the Mayor, to state that the amount as per rate-book, according to the valuation made for 1868, is £39,320.

I may state that, since that valuation was made, there has been a considerable number of houses erected in the borough, which, for the valuation of 1869, will probably bring the annual value of property for that year to £41,000.

I have, &c.,
HENRY CATT,
Council Clerk.

The Council Clerk, Camperdown, to The Secretary to the Sydney Water Commission.

Municipal Council Chambers,
Camperdown, 3 November, 1868.

Sir,

In reply to your letter of the 17th ultimo, requesting information for the assistance in their inquiries of the Sydney Water Commission, I have the honor, by direction of the Mayor, to inform you that the assessed annual value of the rateable property, for the current year, is £2,134, the number of houses on which rates are levied are 81, and the rate per £ for all purposes 1s.

I am also to add, that the Council is of opinion that the inhabitants are willing to pay an additional rate for a pure and sufficient supply of water.

I have, &c.,
WM. J. HOWE,
Council Clerk.

The Council Clerk, Cook, to The Secretary to the Sydney Water Commission.

Municipal Council Chambers,
Cook, 31 October, 1868.

Sir,

I have the honor, by direction of the Mayor, to acknowledge the receipt of your letter of the 17th instant, requesting information on certain points respecting this municipality; and, in reply thereto, I am to state that it is the opinion of this Council that the inhabitants generally of this district are in favour of an additional supply of water, could it be obtained, as they have at the present time frequently to purchase water brought from Sydney by water-carriers, and that they would be willing to pay an additional rate for the extra accommodation.

I am also to add, that the assessed annual value of the rateable property in the borough, for the current year, is £7,091; the rate per £, levied for all purposes, 1s.; and the number of houses on which rates are levied, 295.

I have, &c.,
WM. J. HOWE,
Council Clerk.

The Council Clerk, Glebe, to The Secretary to the Sydney Water Commission.

Municipal Council Chambers,
Glebe, 21 October, 1868.

Sir,

Referring to your letter dated the 17th current, requesting to be informed on certain points respecting this municipality,—I have been directed by the Mayor to reply as follows:—

The assessed annual value of property within the borough, as shown by the assessment for the current year, is £31,468.

The number of houses on which rates are levied is 1,007.

The rates for the current year are 1s. 2d. in the £.

In answer to your question as to whether the inhabitants would be willing to pay an extra rate for a supply of water, I have been instructed by the Mayor to state that he is not able, at present, to offer an opinion on the subject, nothing having come under his notice calculated to assist him in forming one.

I have, &c.,

HENRY COLLEY,
Council Clerk.

The Council Clerk, Marrickville, to The Secretary to the Sydney Water Commission.

Municipal Council Chambers,
Marrickville, 24 October, 1868.

Sir,

In reply to your letter of the 17th instant, I have the honor to furnish you with the following information:—

1st. The assessed annual value of property in the borough is £11,445 8s.

2nd. There are 219 houses on which rates are levied.

3rd. The rate per £, levied for all purposes, is 1s. in the £.

In answer to the 4th question, I am directed to inform you that the Marrickville Council are entering upon a work by which they hope to be able not only to provide an abundance of good water for their own borough, but for other suburbs adjacent, and even, if necessary, to furnish a considerable supply to Sydney.

I have, &c.,

G. C. TOMPSON,
Council Clerk.

The Council Clerk, Newtown, to The Secretary to the Sydney Water Commission.

Borough of Newtown,
Municipal Council Chambers,
Newtown, 21 October, 1868.

Sir,

I beg to acknowledge the receipt of your letter of the 17th instant, requesting information on the following points, viz.:—

1. The assessed annual value of property in the Newtown Municipality.

2. The number of houses on which rates are levied.

3. The rate per £ levied for all purposes.

4. In the opinion of the Mayor, would the inhabitants generally be willing to pay an additional rate of a reasonable amount for a sufficient supply of water?

In reply, I am instructed by His Worship the Mayor, to inform that—

1. The assessed annual value exceeds (£1,200) twelve hundred pounds sterling.

2. The number of houses on which rates are levied is (852) eight hundred and fifty-two.

3. The rate per £ levied for all purposes is 1s.

4. And that the Mayor's opinion is, that the inhabitants generally would be willing to pay an additional rate, of a reasonable amount, for a sufficient supply of water.

I have, &c.,

ROBERT BANKS,
Council Clerk.

The Council Clerk, Newtown, to The Secretary to the Sydney Water Commission.

Municipal Council Chambers,
Newtown, 29 October, 1868.

Sir,

I beg to acknowledge receipt of your letter of the 26th instant, requesting to know the total value of property in Newtown on which the assessment is made.

In reply, I have the honor, by direction of the Mayor, to inform you that the estimated value of property in the borough is (£268,213) two hundred and sixty-eight thousand two hundred and thirteen pounds sterling.

I have, &c.,
ROBERT BANKS,
Council Clerk.

The Council Clerk, Newtown, to The President, Sydney Water Commission.

Municipal Council Chambers,
Newtown, 2 November, 1868.

Sir,

In reply to your letter of the 31st ultimo, I beg to inform you that the estimated annual rental value of property in this borough is (£26,449) twenty-six thousand four hundred and forty-nine pounds sterling.

I have, &c.,
ROBERT BANKS,
Council Clerk.

The Town Clerk, Paddington, to The Secretary to the Sydney Water Commission.

Town Hall, Paddington,
21 October, 1868.

Sir,

I have the honor to acknowledge the receipt of your letter of the 17th instant, requesting information for the benefit of the Sydney Water Commission. In reply, I beg to state as follows:—

- 1st. The assessed annual value of the various properties amounts to £19,836 5s.
- 2nd. The number of houses last February, 731.
- 3rd. The rate per £ is 1s.
- 4th. Although the Council of this borough have gone to considerable expense in erecting public pumps, yet I believe a goodly number of the inhabitants would take the water if laid on at a reasonable rate, for which the Municipalities Act of 1867 provides.

Will you kindly inform the Mayor and Aldermen of this borough, for the information of the rate-payers, what probability there is for a supply of water, and from what source?

I have, &c.,
JESSE COWLEY,
Town Clerk.

The Council Clerk, Randwick, to The Secretary to the Sydney Water Commission.

Council Chambers,
Randwick, 24 October, 1868.

Sir,

I am directed by the Mayor and Council of this borough to acknowledge the receipt of your letter of the 17th instant, and to supply you with the information asked for therein, viz. :—

Annual value of property assessed	...	...	£13,231
Number of houses on which rates are levied	...	...	146
Rate per £	...	...	1s.

I am further directed by the Mayor to inform you that, although the inhabitants are supplied from their own private wells, in his opinion there are many who would avail themselves of a supply from Sydney, and would willingly contribute thereto.

I have, &c.,
E. T. SAYERS,
Council Clerk.

The Council Clerk, Redfern, to The Secretary to the Sydney Water Commission.

Municipal Council Chambers,
Redfern, 26 October, 1868.

Sir,

I have the honor to acknowledge the receipt of your letter of the 17th instant, addressed to the Mayor, asking information on the following points:—

1. The assessed annual value of property in this municipality.

Reply:—£1,588.

2. The number of houses on which rates are levied.

Reply:—1,125.

3. The rate per £ levied for all purposes.

Reply:—1s.

4. Would the inhabitants generally be willing to pay an additional rate, of a reasonable amount, for a sufficient supply of water?

Reply:—The Mayor is of opinion that they would, for the supply at present is very deficient, and numerous complaints have reached His Worship on the subject.

I have, &c.,

THOMAS FRASER,
Council Clerk.

The Council Clerk, Redfern, to The President, Sydney Water Commission.

Municipal Council Chambers,
Redfern, 2 November, 1868.

Sir,

I beg to express my regret at the trouble I have occasioned by copying (in the hurry of my engagements on the 26th ultimo) the amount payable as rates, instead of the assessed annual value of property in this municipality, which is £31,760.

Have the goodness to substitute this sum for the one given in error in my reply to the 1st query.

I remain, &c.,

THOMAS FRASER,
Council Clerk.

The Council Clerk, St. Leonards, to The Secretary to the Sydney Water Commission.

Municipal Council Chambers,
St. Leonards, 22 October, 1868.

Sir,

In reply to your letter of the 17th instant, asking for certain information respecting this borough, I have the honor, by direction of His Worship the Mayor, to supply you with the same, viz. :—

1. The assessed value of all rateable property in this borough is £14,265.

2. The number of houses within this borough is 375.

3. The rate per £ levied for all purposes is 1s.

4. In the opinion of His Worship the Mayor, the inhabitants of this borough generally would be willing to pay an additional rate, of a reasonable amount, for an adequate supply of water.

I have, &c.,

GEORGE PILE, JUN.,
Council Clerk.

The Council Clerk, Waterloo, to The Secretary to the Sydney Water Commission.

Municipal Council Chambers,
Waterloo, 21 January, 1869.

Sir,

I am directed by the Mayor to acknowledge the receipt of your letter of the 16th instant, and to inform you that the rental of property in this municipality averages from £13 to £30 per annum; that there are 562 houses in it; and that the present rate per £ is 1s.

I have, &c.,

T. M. SLATTERY,
Council Clerk.

The Council Clerk, Waverley, to The Secretary to the Sydney Water Commission.

Borough Chambers,
Waverley, 24 October, 1868.

Sir,

By direction of the Mayor of this borough, I have the honor to acknowledge receipt of your letter of the 17th instant, and beg respectfully to furnish you with all the information we can afford you.

- 1st. The assessed annual value of property within this borough is £16,906.
- 2nd. There are 242 houses assessed, and upon which rates are levied.
- 3rd. A rate of 1s. in the £ for all purposes.
- 4th. In consequence of the large extent of ground over which the house property extends, it is impossible to tell what would be a reasonable amount for an additional rate, and, in consequence of a considerable number of houses being abundantly supplied, whether the whole of the inhabitants would be willing to pay, or merely those upon whose property water for domestic purposes cannot be obtained by wells.

I shall be most happy to furnish any further information you may require.

I have, &c.,

W. MORTIMER,
Council Clerk.

The Council Clerk, Woollahra, to The Secretary to the Sydney Water Commission.

Municipal Council Chambers,
Borough of Woollahra, 1 February, 1869.

Sir,

In reply to your letter of the 16th January, I have the honor to state, for your information, that the estimated annual rental of property in this borough is £39,840, the number of houses 679, and the rate per £ 1s.

I have, &c.,

HENRY J. KILLICK,
Council Clerk, Borough of Woollahra.

Summary of the above Returns.

	Assessed	Number of	Rate per £
	Annual Value.	Houses rated.	for all purposes.
	£		s. d.
The City.....	700,000	12,900	2 6
Suburbs—			
Alexandria.....	7,645	336	0 3
Balmain.....	39,320	1,044	1 0
Camperdown.....	2,134	81	1 0
Cook.....	7,091	295	1 0
Glebe.....	31,468	1,007	1 2
Marrickville.....	11,445	219	1 0
Newtown.....	26,449	852	1 0
Paddington.....	19,836	731	1 0
Randwick.....	13,231	146	1 0
Redfern.....	31,760	1,125	1 0
St. Leonards.....	14,265	375	1 0
Waterloo.....	16,111	562	1 0
Waverley.....	16,906	242	1 0
Woollahra.....	39,840	679	1 0
	<u>977,501</u>	<u>20,594</u>	

TABLE showing the amount of Rain, the number of rainy Days, and Evaporation in each Month, from 1840 to June 30th, 1869, inclusive. Return furnished to the Sydney Water Commission, by the Government Astronomer.

Year.	Name of Station.	January.		February.		March.		April.		May.		June.		July.		August.		September.		October.		November.		December.		Total for the year.	Total for the year.	Total for the year.
		Rain in inches.	No. of days.	Rain in inches.	No. of days.	Rain in inches.	No. of days.	Rain in inches.	No. of days.	Rain in inches.	No. of days.	Rain in inches.	No. of days.	Rain in inches.	No. of days.	Rain in inches.	No. of days.	Rain in inches.	No. of days.	Rain in inches.	No. of days.	Rain in inches.	No. of days.	Rain in inches.	No. of days.	Rain.	No. of days.	Evaporation.
1840	South Head	2.61	13	16.30	16	3.93	15	7.01	13	0.89	6	4.87	14	1.75	13	1.95	7	4.94	11	44.25	108	No register kept.
1841	"	5.63	17	0.53	6	3.83	18	25.43	13	6.73	12	1.73	7	11.11	14	1.47	7	4.20	10	7.05	10	4.35	14	4.25	14	76.31	142	
1842	"	5.82	12	11.06	14	3.07	14	7.84	9	5.51	9	0.27	8	6.60	9	3.80	15	1.10	14	0.07	11	0.14	8	3.04	15	48.32	137	
1843	"	1.58	14	12.33	17	5.36	20	7.86	13	6.67	17	3.01	18	4.18	13	12.77	16	3.63	11	1.10	11	0.75	10	3.54	8	62.78	168	
1844	"	9.88	17	1.88	16	2.28	5	1.31	14	1.95	10	10.04	12	2.89	14	2.94	17	3.72	12	24.69	15	4.51	15	4.57	9	70.66	157	
1845	"	4.86	11	4.67	14	3.46	10	16.40	15	9.64	15	3.42	9	4.91	12	0.60	7	3.62	8	1.89	14	0.80	4	7.74	14	62.01	132	
1846	"	1.00	6	5.91	9	2.69	15	1.26	9	1.43	8	5.61	12	2.31	10	5.48	14	5.94	18	2.75	16	3.97	10	5.48	12	43.83	139	
1847	"	10.68	17	6.12	12	2.49	16	7.35	14	6.18	13	2.84	9	0.79	10	0.84	11	1.19	13	1.20	10	1.59	11	1.54	6	42.81	142	
1848	"	8.03	18	2.55	14	13.85	10	2.78	14	0.85	10	5.47	8	11.63	15	1.89	15	3.37	7	5.35	17	0.48	10	2.92	17	59.17	155	
1849	"	0.57	11	0.81	15	1.18	4	1.13	10	5.61	13	1.80	11	3.48	14	1.66	11	1.33	15	1.95	10	1.56	15	0.41	11	21.49	140	
1850	"	1.37	12	1.73	17	4.80	12	4.27	12	1.22	11	3.52	15	10.16	22	1.44	10	4.50	14	8.66	17	1.69	9	1.52	6	44.88	157	
1851	"	1.74	8	6.17	12	1.79	12	5.60	17	2.27	14	1.55	12	2.02	15	2.99	10	0.58	6	4.32	11	2.50	15	3.61	10	35.14	142	
1852	"	3.39	12	0.87	8	5.17	17	1.25	7	5.41	13	10.30	11	0.59	10	5.05	16	3.17	12	2.23	13	4.80	14	1.51	10	43.79	143	
1853	"	4.45	16	0.16	9	3.09	13	1.85	10	3.90	9	14.25	13	2.33	11	7.00	10	0.12	7	2.71	9	4.48	14	1.78	9	46.12	130	
1854	"	3.09	14	0.11	10	4.67	16	3.40	12	0.89	9	8.46	19	1.64	6	1.52	11	2.50	10	1.08	8	1.54	13	0.39	8	29.29	136	
1855	"	2.53	12	4.34	10	7.58	15	10.24	17	7.10	7	2.17	10	2.96	13	0.59	4	5.35	12	2.38	13	2.35	6	5.27	19	52.86	138	
1856	Petersham	3.52	13	2.31	13	3.91	12	4.67	11	3.73	9	0.46	6	3.41	9	0.65	5	2.20	8	2.55	9	11.13	12	4.77	9	43.31	116	
1857	Double Bay	3.02	10	6.69	12	4.39	13	6.04	16	5.74	15	5.39	12	5.55	8	4.56	12	1.54	7	5.26	14	1.51	8	1.26	8	50.95	135	
1858	Near Sydney	1.16	6	1.31	8	3.74	12	5.02	13	11.85	12	5.94	14	0.06	11	0.79	9	1.42	9	3.72	16	2.48	14	2.10	15	39.59	139	
1859	Sydney	6.99	18	7.22	10	1.02	12	0.44	4	0.97	6	4.33	13	4.69	9	0.29	6	10.90	18	0.30	6	1.31	11	3.62	15	42.06	128	
1860	"	6.57	8	10.87	17	5.23	17	20.02	14	0.18	6	2.81	9	11.95	18	9.48	19	2.54	19	4.08	19	7.29	17	1.75	19	82.81	182	
1861	"	3.59	15	3.27	16	4.40	19	24.49	17	1.57	10	1.84	11	4.77	12	7.72	18	1.77	6	2.71	13	1.62	10	0.61	10	58.36	157	
1862	"	3.72	13	4.74	9	1.90	13	1.39	13	1.47	7	3.32	10	0.12	4	1.95	9	0.63	7	0.72	10	1.03	9	2.99	7	23.98	111	
1863	"	6.45	14	6.31	14	5.64	16	6.30	14	0.40	10	5.85	19	1.41	8	6.39	14	3.27	10	3.48	16	0.68	6	0.91	11	47.09	152	
1864	"	1.10	11	7.19	16	11.68	23	7.46	19	4.03	20	15.38	14	8.02	10	3.03	15	1.14	12	5.41	17	1.25	8	3.42	12	69.11	187	
1865	"	5.07	14	3.94	9	0.95	11	2.40	11	1.05	14	5.30	11	1.89	12	2.99	10	1.13	8	0.92	7	9.88	12	0.77	9	36.29	128	
1866	"	4.10	17	3.95	17	2.70	15	1.02	7	3.26	14	8.89	17	4.42	14	1.07	11	0.14	5	1.39	9	3.61	13	2.26	10	36.81	149	
1867	"	1.73	10	3.69	13	12.05	14	17.50	23	3.83	15	12.64	12	2.62	7	0.98	7	3.35	14	0.21	4	0.20	2	0.85	7	59.63	119	
1868	"	4.52	16	15.30	16	0.85	9	0.06	4	5.03	11	3.08	9	4.81	15	2.60	9	2.01	11	1.46	6	2.42	14	0.92	7	43.58	127	
1869	"	1.03	10	7.21	14	5.18	9	5.99	15	12.42	10	1.42	10	33.25	68
Sums	117.19	372	143.24	367	128.95	392	203.38	380	137.19	345	155.02	356	128.33	338	93.43	324	81.27	317	101.44	344	81.87	311	78.74	318	1450.53	4164	464.682
Means.	4.041	12.8	4.939	12.7	4.446	13.5	6.779	12.6	4.573	11.5	5.134	11.8	4.425	11.6	3.221	11.2	2.802	10.9	3.497	11.8	2.823	10.7	2.715	10.9	49.591	142.4	48.914

NOTE.—The numbers indicating the amount of rain in the months June, July, August, September, October, and December, 1864, in this table, are different from those in the succeeding table of daily rainfall for that year; the reason being that, during 1864, the rain was entered on the day it fell, instead of at 9 a.m. on the day following, as is usual.

WATER SUPPLY OF SYDNEY AND ITS SUBURBS—APPENDIX.

WATER SUPPLY OF SYDNEY AND ITS SUBURBS—APPENDIX.

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Return of Rainfall—continued.

	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
						1860.						
1	.....	.....	.....	0·800	.....	1·427	.....	0·888	.....	0·030	0·047	.....
2	.....	0·083	.....	0·336	.....	0·050	0·012	5·325	0·056	0·020	.....	0·220
3	.....	0·100	.....	.....	.....	.....	0·011	0·105	0·420	0·300	.....	.....
4	1·090	.....	0·225	.....	.....	0·006	.....	0·047	0·495	0·447	.....	.....
5	.....	.....	0·541	.....	.....	0·003	0·368	0·495	0·108	0·140	0·012	0·050
6	0·002	0·024	.....	.....	.....	0·287	.....	0·700	.....	.....	0·210	.....
7	3·130	.....	.....	.....	.....	0·525	.....	0·300	0·020	.....	0·448	.....
8	0·256	0·052	.....	.....	.....	0·292	0·025	0·004	.....	.....	0·123	.....
9	0·380	2·976	0·273	.....	0·010	.....	0·233	0·500	0·035	0·010	.....	.....
10	0·001	1·160	0·155	.....	0·010	.....	0·003	0·192	.....	.....	.....	0·012
11	.....	2·389	0·400	0·004	.....	.....	.....	0·157	0·290	.....	0·200	.....
12	.....	0·872	.....	.....	.....	.....	0·048	0·115	0·537	.....	.....	0·287
13	.....	1·661	1·385	.....	.....	0·010	.....	0·083	.....	.....	0·030	0·050
14	.....	0·412	0·616	.....	.....	0·004	.....	.....	.....	.....	.....	0·001
15	.....	.....	0·423	.....	.....	0·160	.....	.....	.....	.....	0·017	.....
16	.....	.....	0·055	0·210	.....	0·031	.....	.....	.....	0·043	0·885	0·067
17	.....	.....	0·001	.....	.....	.....	.....	.....	0·045	.....	1·613	.....
18	.....	.....	.....	1·058	0·027	.....	.....	.....	0·001	.....	0·765	0·241
19	0·613	0·117	0·012	0·694	.....	0·005	0·066	.....	.....	1·065	1·106	0·001
20	.....	.....	0·023	0·010	.....	.....	0·047	.....	.....	0·131	.....	.....
21	.....	.....	.....	.....	.....	.....	0·755	.....	0·040	0·595	1·003	0·170
22	.....	0·089	.....	.....	.....	.....	2·660	.....	0·070	0·001	.....	0·416
23	.....	0·242	.....	.....	0·010	.....	2·680	0·082	0·012	.....	.....	.....
24	.....	0·003	0·512	.....	0·034	.....	1·313	0·160	0·107	0·070	0·030	.....
25	.....	0·138	.....	0·071	.....	.....	1·131	.....	0·030	0·084	0·650	.....
26	1·100	0·076	.....	1·702	0·042	.....	0·883	.....	0·242	.....	.....	0·036
27	.....	0·041	.....	2·440	0·023	.....	1·010	.....	0·034	0·001	0·040	0·060
28	.....	0·430	0·081	5·151	0·020	.....	0·446	.....	.....	.....	.....	0·007
29	.....	.....	0·040	7·522	.....	0·005	0·188	0·320	.....	0·813	0·110	0·093
30	.....	.....	.....	0·025	.....	.....	0·070	0·011	.....	0·080	.....	0·040
31	.....	.....	0·483	.....	.....	.....	0·003	.....	.....	0·245	.....	.....
Sums ...	6·572	10·865	5·225	20·023	0·176	2·805	11·952	9·484	2·542	4·075	7·289	1·751
Evap....	7·941	4·393	3·090	2·667	1·907	1·290	1·065	1·725	2·197	4·124	4·817	5·947
						1861.						
1	.....	0·028	.....	.....	0·005	.....	.....	.....	.....	.....	.....	.....
2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0·104
3	0·020	.....	0·838	6·616	.....	.....	0·017	.....	.....	.....	0·032	0·047
4	.....	0·250	.....	5·827	0·002	.....	.....	.....	0·009	.....	0·540	0·137
5	0·063	0·014	.....	0·190	.....	0·388	.....	0·052	0·032	.....	.....	.....
6	0·025	.....	0·025	.....	.....	0·078	.....	0·060	.....	0·165	.....	.....
7	0·125	0·170	.....	.....	0·053	0·913	.....	3·246	.....	.....	0·001	.....
8	0·013	0·461	0·022	0·245	.....	0·137	.....	1·594	.....	.....	0·084	.....
9	.....	1·059	0·090	1·412	0·008	0·012	0·030	1·277	0·001	.....	.....	.....
10	.....	0·380	.....	0·053	.....	0·010	0·036	0·001	.....	.....	.....	.....
11	.....	.....	.....	.....	0·010	.....	0·026	0·004	0·122	.....	.....	.....
12	.....	0·130	0·024	.....	0·045	.....	.....	0·012	0·036	.....	0·383	.....
13	0·010	0·015	.....	0·202	0·377	.....	.....	.....	0·012	1·595	0·090	0·087
14	.....	.....	.....	.....	.....	.....	.....	.....	.....	0·090	.....	.....
15	0·128	.....	.....	.....	0·066	.....	.....	0·507	.....	.....	.....	0·055
16	0·370	0·310	.....	.....	0·704	.....	.....	0·008	.....	.....	.....	0·020
17	0·017	0·004	0·001	.....	0·071	0·004	.....	.....	.....	.....	.....	.....
18	0·087	.....	.....	.....	.....	.....	.....	0·310	.....	0·010	0·045	.....
19	0·126	0·006	0·116	.....	0·060	0·163	0·043	0·018	.....	.....	.....	.....
20	.....	.....	.....	0·204	.....	.....	0·054	.....	.....	.....	.....	.....
21	0·890	.....	.....	0·030	0·170	0·105	.....	0·082	.....	.....	.....	.....
22	0·036	.....	.....	2·630	.....	.....	.....	.....	.....	.....	0·317	.....
23	.....	.....	.....	0·023	0·001	.....	.....	0·040	.....	0·013	0·070	0·020
24	0·287	0·320	.....	1·109	.....	.....	0·337	0·157	1·505	0·753	.....	0·026
25	.....	.....	0·360	0·213	.....	0·007	1·177	0·080	0·056	.....	.....	0·075
26	.....	0·012	2·347	1·125	.....	0·009	2·477	.....	.....	0·001	.....	.....
27	.....	0·060	0·083	0·461	.....	.....	0·102	0·109	.....	.....	.....	.....
28	.....	0·055	0·032	0·065	.....	.....	0·470	0·072	.....	.....	.....	.....
29	.....	.....	0·070	2·473	.....	.....	0·005	0·088	.....	0·078	0·050	.....
30	0·363	.....	0·390	1·614	.....	0·010	.....	.....	.....	.....	0·007	.....
31	1·030	.....	.....	.....	.....	.....	.....	.....	.....	0·006	.....	0·035
Sums...	3·590	3·274	4·398	24·492	1·572	1·836	4·774	7·717	1·773	2·711	1·619	0·606
Evap...	6·470	4·300	3·290	1·880	2·020	1·270	1·790	1·550	3·310	6·540	8·000	9·100

Return of Rainfall—continued.

	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
						1862.						
1	0.038	.....	0.012	.....	.....	.....	.....	.....	.....	0.057	.....	.....
2	0.013	.....	.....	0.015	.....	.....	.....	0.110	.....	0.055	.....	.....
3	.....	.....	.....	0.001	.....	.....	.....	0.683	.....	0.120	.....	.....
4	.....	.....	.....	0.007	.....	.....	.....	0.840	0.002	0.225	.....	.....
5	.....	0.242	.....	0.293	.....	0.002	.....	.....	.....	.....	0.098	.....
6	.....	.....	.....	.....	.....	.....	.....	0.011	0.060	.....	.....	.....
7	0.010	0.270	.....	.....	0.880	.....	0.028	0.012	0.199	.....	.....	.....
8	0.060	1.161	.....	0.020	0.490	.....	.....	.....	0.002	.....	.....	.....
9	.....	1.555	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.126
10	.....	0.590	.....	.....	.....	.....	0.026	.....	.....	0.003	.....	.....
11	.....	0.008	.....	.....	.....	.....	.....	.....	.....	.....	0.002	.....
12	0.160	.....	0.054	.....	.....	.....	.....	0.015	.....	.....	0.162	.....
13	.....	0.010	.....	0.295	0.053	.....	0.055	.....	0.240	.....	.....	.....
14	.....	0.060	.....	0.295	.....	0.008	.....	.....	.....	.....	.....	0.010
15	.....	.....	.....	.....	.....	0.398	.....	0.163	.....	.....	0.230	1.902
16	.....	.....	.....	0.001	.....	0.231	.....	.....	.....	.....	0.049	0.010
17	0.112	.....	0.010	0.110	0.006	0.785	.....	0.010	.....	.....	0.008	.....
18	0.480	.....	0.004	.....	.....	0.045	.....	.....	.....	0.018	.....	.....
19	1.090	.....	0.040	.....	.....	.....	.....	.....	.....	0.001	.....	.....
20	0.031	.....	0.210	.....	.....	.....	.....	.....	0.004	0.211	0.142	.....
21	0.032	0.848	.....	.....	0.043	.....	.....	.....	.....	0.003	0.020	.....
22	0.933	.....	0.133	0.198	.....	.....	.....	.....	.....	.....	.....	0.070
23	0.310	.....	0.410	.....	.....	1.292	.....	.....	.....	.....	.....	.....
24	0.223	.....	0.955	.....	.....	0.370	0.010	0.004	.....	.....	.....	.....
25	0.233	.....	0.001	.....	.....	0.075	.....	.....	.....	.....	.....	.....
26	.....	.....	0.060	.....	.....	.....	.....	.....	.....	.....	.....	0.160
27	.....	.....	.....	.....	.....	0.096	.....	.....	0.120	.....	.....	0.715
28	.....	.....	0.004	.....	.....	.....	.....	.....	.....	0.025	.....	.....
29	.....	.....	0.007	0.160	.....	.....	.....	.....	.....	.....	.....	.....
30	.....	.....	.....	.....	.....	0.020	.....	.....	.....	.....	0.320	.....
31	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Sums...	3.725	4.744	1.900	1.395	1.472	3.322	0.119	1.948	0.627	0.718	1.031	2.993
Evap....	8.199	6.262	6.717	5.480	4.840	3.241	4.889	4.855	7.102	7.511	9.155	7.864
						1863.						
1	.....	.....	1.378	0.005	0.152	.....	.....	0.002	.....	.....	.....	.....
2	0.063	.....	.....	0.112	0.062	.....	.....	.....	0.003	0.034	.....	.....
3	.....	.....	.....	.....	.....	.....	.....	.....	0.820	0.124	.....	.....
4	.....	0.212	0.729	.....	.....	1.321	.....	.....	0.011	0.104	.....	0.017
5	.....	0.252	.....	.....	.....	0.241	.....	.....	.....	0.040	0.035	0.047
6	0.045	.....	0.190	0.073	.....	0.011	.....	.....	1.440	.....	0.110	.....
7	.....	.....	0.792	0.010	.....	0.473	.....	.....	0.702	.....	.....	0.018
8	.....	0.140	.....	.....	0.026	0.749	0.019	.....	.....	0.224	.....	.....
9	.....	0.145	.....	.....	.....	0.030	.....	.....	0.030	0.346	0.153	0.070
10	.....	.....	.....	.....	.....	0.707	.....	0.290	.....	.....	0.263	.....
11	.....	.....	.....	.....	.....	0.590	.....	1.339	.....	.....	0.052	0.330
12	0.010	.....	0.250	.....	.....	0.107	.....	1.687	0.089	0.044	.....	.....
13	0.190	.....	0.122	.....	.....	0.420	.....	1.396	.....	0.363	.....	.....
14	0.953	.....	.....	.....	.....	.....	0.146	0.891	.....	0.002	.....	0.182
15	.....	1.043	.....	.....	.....	0.014	.....	0.480	.....	.....	.....	.....
16	0.037	0.373	0.095	0.004	0.002	.....	.....	0.001	.....	0.378	.....	.....
17	.....	1.314	0.101	0.004	.....	.....	.....	0.280	.....	0.002	.....	.....
18	.....	0.098	0.984	0.176	0.010	0.008	0.068	0.010	.....	0.983	.....	.....
19	.....	.....	.....	1.067	0.040	0.173	0.278	.....	.....	.....	.....	0.001
20	.....	.....	.....	0.541	0.010	0.276	0.135	.....	.....	.....	.....	0.106
21	0.050	.....	0.328	0.016	0.046	0.250	0.006	.....	.....	.....	.....	0.060
22	3.750	0.550	0.150	0.009	.....	.....	.....	.....	.....	.....	.....	.....
23	0.253	0.002	.....	2.025	.....	.....	0.717	0.007	0.087	0.126	.....	.....
24	.....	0.062	.....	2.218	0.054	0.002	.....	.....	.....	0.252	.....	.....
25	0.055	.....	0.001	0.040	.....	.....	0.037	0.001	.....	.....	.....	.....
26	0.553	1.174	0.003	.....	.....	0.066	.....	0.001	.....	0.050	.....	0.079
27	0.159	0.439	.....	.....	.....	.....	.....	.....	0.067	0.410	0.066	.....
28	.....	0.503	0.100	.....	.....	0.210	.....	.....	0.017	.....	.....	.....
29	0.326	.....	0.304	.....	0.001	0.200	.....	.....	.....	.....	.....	.....
30	.....	.....	0.116	.....	.....	.....	.....	0.001	.....	.....	.....	.....
31	0.003	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.003
Sums ...	6.447	6.307	5.643	6.300	0.403	5.848	1.406	6.386	3.266	3.482	0.679	0.913
Evap....	6.247	5.197	3.938	3.088	2.686	1.642	1.880	3.902	4.688	6.545	9.540	9.466

Return of Rainfall—continued.

	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
						1864.						
1	.....	.....	0.589	0.055	0.093	.....	0.752	0.022	0.514	0.330	.....	.....
2	.....	.....	0.010	.....	0.131	3.720	1.260	.....	0.103	0.056	.....	.....
3	.....	.....	0.232	0.005	0.004	1.060	0.015	.....	.....	0.014	.....	0.045
4	0.037	0.630	.....	.....	0.003	0.030	0.009	.....	0.002	.....	0.691	0.207
5	0.210	.....	0.005	.....	0.008	.....	.....	0.016	.....	.....	.....	0.026
6	0.128	0.170	0.340	.....	.....	.....	.....	0.265	.....	.....	.....	.....
7	0.057	1.376	0.061	0.700	0.290	.....	.....	0.160	0.001	.....	.....	.....
8	.....	.....	.....	1.630	0.001	.....	.....	0.683	0.083	.....	.....	.....
9	.....	0.726	0.529	.....	0.001	0.400	.....	0.146	.....	.....	.....	0.762
10	0.014	2.118	0.493	0.650	0.008	2.510	0.005	0.762	0.110	.....	.....	0.363
11	0.180	0.342	.....	0.230	.....	3.930	.....	0.465	0.027	0.004	.....	.....
12	0.020	0.033	.....	.....	.....	0.405	0.272	0.004	.....	.....	0.002	.....
13	.....	.....	.....	.....	.....	0.080	1.228	0.060	.....	.....	.....	.....
14	.....	0.337	.....	0.119	.....	0.237	1.921	0.156	0.195	.....	.....	0.370
15	0.175	0.364	0.778	0.310	.....	1.170	1.910	.....	.....	0.313	0.175	.....
16	.....	0.009	0.085	0.220	.....	0.268	.....	0.060	.....	0.003	.....	.....
17	.....	0.001	0.044	0.166	.....	0.273	.....	.....	.....	.....	0.090	.....
18	.....	.....	0.428	0.020	.....	.....	.....	.....	0.006	.....	0.144	0.130
19	0.004	.....	0.720	0.134	0.280	.....	.....	.....	.....	.....	.....	0.377
20	0.070	.....	0.273	0.001	0.047	0.590	.....	0.200	.....	0.027	.....	0.429
21	.....	.....	0.035	0.004	0.375	0.710	.....	.....	.....	0.201	.....	.....
22	.....	0.031	0.302	0.046	0.193	.....	.....	.....	0.025	0.386	.....	.....
23	.....	0.030	.....	.....	0.215	.....	.....	0.023	.....	0.284	0.057	.....
24	.....	.....	.....	.....	0.013	.....	.....	.....	.....	0.465	.....	.....
25	.....	.....	0.001	.....	0.009	.....	.....	.....	.....	.....	.....	0.521
26	.....	0.224	0.502	.....	.....	.....	.....	.....	0.068	0.036	0.072	0.033
27	.....	0.510	0.991	0.001	.....	.....	.....	.....	.....	0.389	0.023	.....
28	.....	0.290	2.045	0.933	0.030	.....	.....	.....	.....	.....	.....	.....
29	.....	2.398	0.640	1.979	0.040	.....	.....	.....	0.006	0.845	.....	.....
30	.....	.....	0.184	2.280	0.009	0.643	.....	.....	2.020	0.136	.....	0.160
31	.....	.....	0.260	.....	.....	.....	0.010	.....	.....	.....	.....	.....
Sums ...	0.895	9.589	9.547	9.483	1.750	16.026	7.382	3.022	3.160	3.489	1.254	3.323
Evap....	6.872	5.686	3.351	1.579	2.042	1.239	2.103	4.315	3.800	6.368	5.966	7.243
						1865.						
1	.....	0.052	.....	.....	0.287	.....	.....	.....	.....	.....	.....	0.193
2	.....	.....	0.381	.....	0.035	.....	.....	.....	.....	0.415	0.200	0.048
3	.....	.....	0.043	.....	0.289	.....	.....	0.001	.....	.....	2.010	.....
4	.....	.....	.....	.....	0.003	.....	.....	1.006	.....	.....	1.643	0.073
5	0.347	.....	.....	0.001	.....	.....	.....	0.140	.....	.....	.....	.....
6	0.037	.....	0.188	.....	.....	.....	0.001	0.175	.....	.....	0.885	.....
7	.....	0.110	0.001	0.001	.....	.....	0.199	0.036	.....	.....	.....	0.001
8	.....	.....	.....	.....	.....	0.614	0.080	0.718	.....	.....	.....	.....
9	0.829	.....	0.007	0.005	0.001	1.168	0.008	0.146	0.109	.....	.....	.....
10	0.001	.....	.....	0.040	.....	0.777	0.009	0.728	0.022	.....	.....	.....
11	.....	0.144	.....	.....	.....	0.070	0.158	0.037	0.526	0.311	.....	0.094
12	0.655	0.383	.....	.....	.....	0.458	0.232	0.001	0.001	0.013	0.003	.....
13	0.313	1.801	.....	0.138	.....	1.353	0.015	.....	.....	0.094	0.140	.....
14	0.645	1.205	0.020	.....	.....	0.619	.....	.....	.....	.....	.....	.....
15	0.150	0.010	.....	.....	0.014	0.131	.....	.....	.....	.....	.....	.....
16	0.070	0.131	.....	.....	.....	0.093	.....	.....	.....	.....	.....	0.204
17	.....	0.001	.....	0.002	.....	.....	.....	.....	.....	.....	.....	0.087
18	.....	.....	.....	0.994	0.057	0.002	.....	.....	0.020	.....	.....	0.059
19	.....	.....	.....	0.186	0.013	0.002	0.084	.....	0.322	0.020	0.024	.....
20	.....	0.100	.....	0.739	.....	.....	.....	.....	0.122	0.020	.....	.....
21	0.050	.....	0.263	0.001	.....	0.007	0.485	.....	.....	.....	.....	.....
22	.....	.....	0.001	.....	0.008	.....	0.600	.....	.....	.....	.....	.....
23	0.001	.....	0.001	.....	0.208	0.005	.....	.....	.....	.....	0.002	.....
24	0.028	.....	0.001	.....	0.110	.....	.....	.....	0.003	.....	0.003	.....
25	.....	.....	.....	.....	0.013	.....	.....	.....	.....	.....	0.541	0.013
26	.....	.....	.....	.....	0.010	.....	.....	.....	.....	.....	3.950	.....
27	.....	.....	.....	0.116	0.003	.....	0.019	.....	.....	.....	0.449	.....
28	0.040	.....	0.040	.....	.....	.....	0.001	0.001	.....	.....	0.001	.....
29	0.044	.....	.....	0.089	.....	.....	.....	.....	.....	0.042	.....	.....
30	1.290	.....	.....	0.092	.....	.....	.....	.....	.....	.....	0.026	.....
31	0.572	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Sums ...	5.072	3.937	0.946	2.404	1.051	5.299	1.891	2.989	1.125	0.915	9.877	0.772
Evap....	5.195	5.294	5.126	3.473	2.777	1.986	1.495	2.898	4.922	6.157	5.678	7.655

Return of Rainfall—*continued.*

	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
						1866.						
1	.....	0·004	.....	0·450	0·001	.....	.....	.....	0·058	.....	.....	0·020
2	0·001	0·054	0·097	.....	0·155	0·001	0·070	.....	0·002	.....	.....	1·000
3	0·013	0·156	.....	.....	0·002	.....	0·010	.....	.....	.....	.....	.....
4	0·008	0·339	.....	.....	0·002	.....	.....	.....	.....	.....	0·030	0·180
5	.....	0·106	.....	0·002	.....	.....	0·001	.....	.....	0·155	.....	0·117
6	.....	0·048	.....	0·101	.....	.....	.....	0·080	.....	0·193	.....	0·016
7	.....	.....	0·126	0·008	.....	.....	.....	0·130	.....	0·150	0·016	.....
8	.....	0·172	.....	.....	.....	.....	.....	.....	.....	.....	0·267	.....
9	0·026	.....	0·001	.....	.....	.....	0·080	.....	.....	0·007	0·007	.....
10	0·160	.....	0·147	.....	.....	0·325	0·040	.....	.....	.....	.....	.....
11	.....	0·010	.....	.....	0·050	0·848	0·027	.....	.....	.....	1·413	0·260
12	0·077	.....	.....	.....	0·008	0·014	3·005	.....	.....	.....	0·464	.....
13	0·037	.....	0·001	.....	0·210	0·465	0·290	.....	.....	.....	.....	.....
14	.....	0·023	.....	0·001	0·035	0·427	0·258	.....	.....	0·203	.....	.....
15	.....	1·039	0·187	.....	0·080	3·010	0·025	.....	.....	.....	.....	.....
16	.....	1·600	0·116	.....	0·513	0·005	0·017	0·056	.....	.....	.....	.....
17	.....	0·010	0·110	0·057	2·080	0·183	.....	.....	.....	.....	.....	0·020
18	.....	.....	.....	0·208	.....	.....	0·045	0·170	.....	.....	.....	0·490
19	1·025	.....	.....	0·027	.....	1·338	0·553	0·394	.....	.....	.....	0·146
20	0·002	0·068	0·008	.....	.....	1·000	.....	0·001	.....	0·111	.....	.....
21	0·052	0·130	0·067	.....	.....	0·245	.....	0·001	.....	0·342	.....	.....
22	0·040	.....	0·001	.....	.....	0·120	.....	.....	.....	.....	0·050	0·012
23	0·012	0·115	.....	0·002	.....	0·439	.....	.....	0·020	0·094	0·040	.....
24	0·012	0·056	.....	0·008	.....	0·080	0·002	.....	.....	.....	0·885	.....
25	.....	0·015	.....	.....	.....	0·242	.....	.....	0·050	.....	0·057	.....
26	.....	.....	.....	0·153	.....	0·152	.....	.....	.....	.....	.....	.....
27	0·125	.....	.....	.....	0·053	.....	.....	.....	.....	0·135	0·212	.....
28	0·233	.....	0·451	.....	.....	.....	.....	0·001	.....	.....	0·001	.....
29	1·913	.....	0·623	.....	0·047	.....	.....	0·015	.....	.....	.....	.....
30	0·360	.....	0·037	0·002	.....	.....	.....	0·048	0·010	.....	0·163	.....
31	.....	.....	0·731	.....	0·021	.....	.....	0·170	.....	.....	.....	.....
Sums ...	4·096	3·945	2·703	1·019	3·257	8·894	4·423	1·066	0·140	1·390	3·605	2·261
Evap....	6·646	4·524	4·633	2·276	1·525	1·172	1·181	1·884	4·554	5·548	5·766	6·497
						1867.						
1	.....	0·957	0·462	2·095	0·670	0·03	.....	.....	.....	.....	.....	0·10
2	.....	0·830	0·013	0·830	0·230	0·01	.....	.....	.....	.....	.....	.....
3	.....	.....	.....	0·080	0·010	.....	.....	.....	0·09	.....	.....	.....
4	.....	0·012	.....	.....	.....	0·02	.....	0·11	0·01	.....	.....	.....
5	.....	.....	.....	.....	0·001	.....	.....	.....	0·02	.....	.....	.....
6	.....	0·015	.....	0·652	0·913	.....	.....	.....	.....	.....	.....	0·01
7	.....	.....	.....	.....	0·395	0·01	.....	.....	.....	.....	.....	.....
8	.....	0·001	.....	1·430	0·045	.....	0·02	0·03	0·85	.....	.....	0·08
9	.....	0·045	0·046	0·513	.....	0·18	.....	0·27	0·05	.....	.....	.....
10	0·040	.....	.....	0·050	.....	.....	.....	.....	.....	0·08	.....	.....
11	.....	.....	0·005	0·100	0·095	.....	.....	.....	0·06	.....	.....	.....
12	.....	.....	.....	5·645	0·070	0·24	0·05	0·01	0·04	.....	0·01	0·48
13	.....	0·001	.....	0·583	.....	.....	.....	.....	.....	.....	.....	.....
14	.....	.....	.....	0·016	.....	.....	.....	.....	0·04	.....	.....	0·11
15	0·007	0·001	.....	0·132	.....	.....	.....	.....	.....	0·02	.....	.....
16	0·001	0·001	0·450	.....	0·020	.....	.....	.....	.....	.....	.....	.....
17	0·030	.....	.....	.....	.....	.....	.....	.....	.....	.....	0·19	.....
18	.....	.....	.....	.....	0·080	0·14	.....	0·02	.....	.....	.....	.....
19	.....	.....	.....	.....	0·020	1·04	.....	.....	.....	.....	.....	.....
20	0·160	1·580	2·262	0·200	.....	4·12	.....	.....	0·05	.....	.....	.....
21	0·970	0·022	.....	0·107	.....	2·18	.....	0·52	0·25	.....	.....	.....
22	.....	.....	.....	0·500	0·305	3·33	.....	.....	0·10	.....	.....	.....
23	.....	.....	.....	0·040	0·360	1·34	.....	0·02	.....	0·09	.....	.....
24	0·009	.....	4·026	0·435	0·001	.....	0·01	.....	1·53	.....	.....	.....
25	.....	.....	2·650	0·820	.....	.....	.....	.....	0·23	.....	.....	.....
26	.....	0·095	0·380	0·780	.....	.....	.....	.....	.....	.....	.....	.....
27	.....	0·130	.....	0·965	.....	.....	.....	.....	.....	.....	.....	0·01
28	.....	.....	0·245	0·613	.....	.....	0·02	.....	0·03	.....	.....	0·06
29	0·001	.....	0·235	0·700	.....	.....	1·77	.....	.....	0·02	.....	.....
30	0·142	.....	0·055	0·195	0·190	.....	0·67	.....	.....	.....	.....	.....
31	0·372	.....	0·876	.....	0·410	.....	0·08	.....	.....	.....	.....	.....
Sums ...	1·732	3·690	12·047	17·481	3·815	1·264	2·62	0·98	3·35	0·21	0·20	0·85
Evap....	7·546	4·109	4·163	1·930	1·371	0·746	2·051	1·400	3·281	6·717	7·210	7·921

Return of Rainfall—continued.

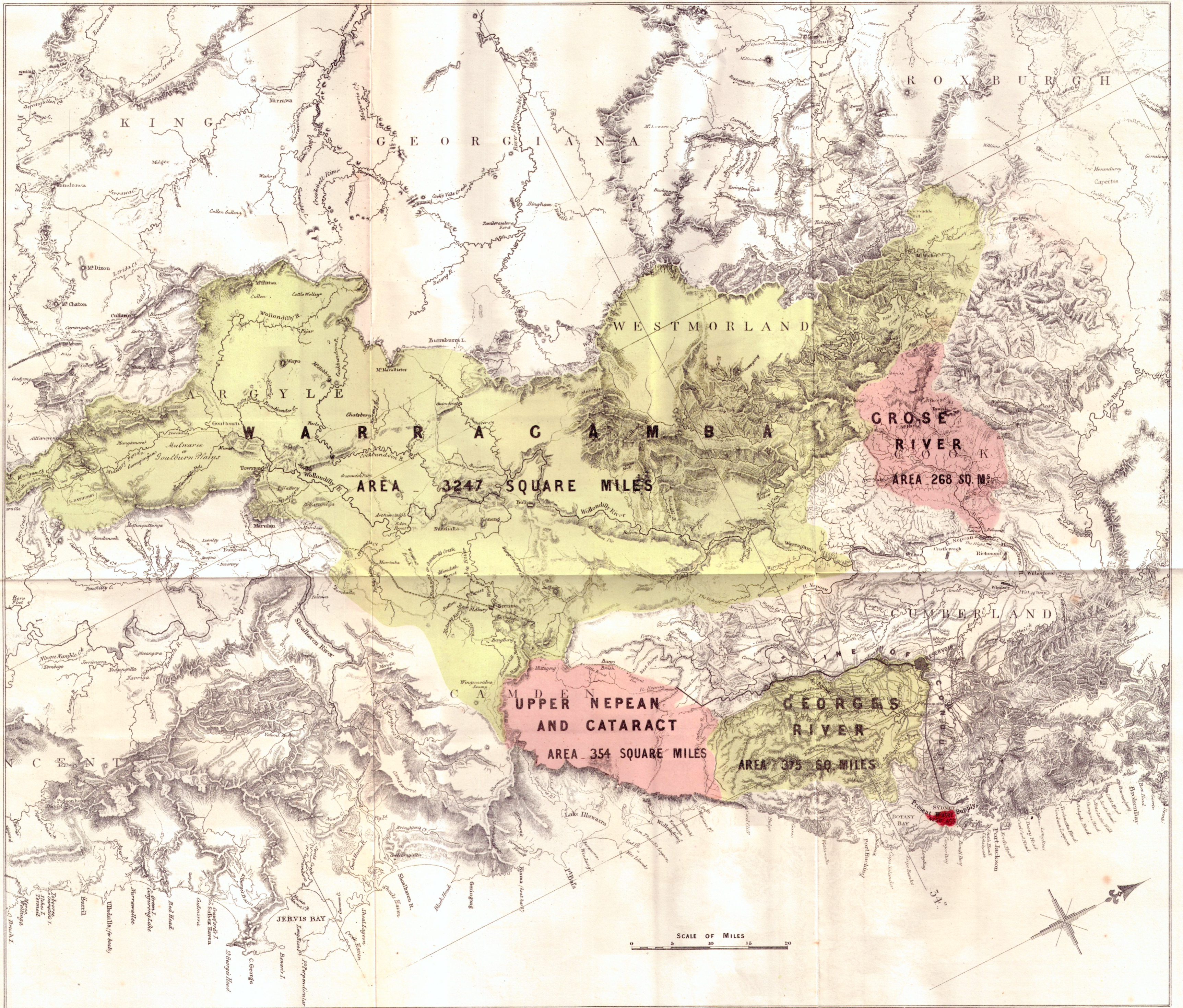
	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
						1868.						
1	.....	.....	.....	.....	.....	0.03	0.01	.....	.....	.....	.....	.....
2	.....	3.30	.....	.....	0.54	.....	.....	0.08	.....	.....	.....	0.05
3	.....	0.02	.....	.....	.....	.....	.....	.....	.....	.....	0.14	.....
4	.....	.....	.....	0.01	0.10	.....	0.02	.....	0.02	.....	.....	.....
5	.....	.....	.....	.....	.....	.....	.....	.....	0.01	.....	0.20	0.17
6	0.01	.....	.....	.....	.....	1.09	0.01	0.06	.....	.....	0.05	.....
7	.....	0.21	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
8	0.01	0.17	.....	0.02	.....	.....	.....	.....	0.09	.....	.....	.....
9	0.50	.....	.....	.....	0.01	.....	.....	.....	.....	.....	0.30	.....
10	0.47	0.09	.....	.....	.....	.....	.....	0.05	.....	.....	0.04	.....
11	.....	0.09	0.19	.....	.....	.....	0.16	.....	.....	.....	.....	.....
12	.....	0.03	.....	.....	.....	0.01	0.14	0.01	.....	0.09	0.35	.....
13	0.02	.....	.....	.....	0.01	.....	0.02	.....	.....	0.16	0.06	.....
14	.....	0.29	0.02	.....	0.44	0.04	.....	.....	0.03	.....	0.33	.....
15	.....	0.15	0.01	0.02	0.53	0.03	.....	.....	0.91	.....	0.38	.....
16	.....	2.94	0.03	.....	.....	0.90	.....	.....	0.31	.....	0.04	0.09
17	.....	6.18	.....	.....	.....	0.56	.....	0.31	.....	1.06	.....	0.14
18	1.28	1.20	0.02	.....	.....	0.37	0.16	.....	.....	.....	0.07	.....
19	0.12	.....	.....	.....	0.01	0.05	0.45	0.81	0.16	.....	.....	.....
20	0.03	.....	.....	0.01	.....	.....	0.41	0.95	0.16	.....	.....	.....
21	0.09	.....	.....	.....	0.02	.....	2.39	.....	0.02	.....	0.43	.....
22	0.52	0.29	0.04	.....	.....	.....	.....	.....	0.28	.....	0.01	.....
23	0.21	.....	0.28	.....	.....	.....	.....	.....	.....	.....	0.02	.....
24	.....	0.11	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
25	.....	0.10	0.06	.....	.....	.....	0.40	.....	0.01	.....	.....	0.02
26	.....	0.13	.....	.....	0.78	.....	0.20	.....	0.01	0.04	.....	0.21
27	0.02	.....	.....	.....	.....	.....	0.03	0.08	.....	0.05	.....	.....
28	0.79	.....	0.20	.....	.....	.....	.....	.....	.....	.....	.....	.....
29	0.28	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
30	0.16	.....	.....	.....	1.61	.....	0.17	.....	.....	.....	.....	.....
31	0.01	.....	.....	.....	0.98	.....	0.14	0.25	.....	0.06	.....	0.24
Sums...	4.52	15.30	0.85	0.06	5.03	3.08	4.81	2.60	2.01	1.46	2.42	0.92
Evap...	5.261	3.39	4.845	2.740	1.016	0.799	1.342	1.631	3.070	5.266	4.774	6.105
						1869.						
1	.....	.....	.....	0.27	0.11	0.03	.....	.....	.....	.....	.....	.....
2	0.18	.....	0.13	0.58	.....	0.04	.....	.....	.....	.....	.....	.....
3	.....	.....	.....	.....	.....	.....	.....	0.13	.....	.....	.....	.....
4	.....	.....	.....	0.64	0.06	.....	.....	.....	.....	.....	.....	.....
5	.....	0.53	.....	0.33	0.16	.....	.....	.....	.....	.....	.....	.....
6	.....	.....	0.01	.....	0.82	.....	.....	.....	.....	.....	.....	.....
7	.....	0.08	.....	1.55	2.42	.....	.....	.....	.....	.....	.....	.....
8	.....	0.15	.....	0.31	4.37	.....	.....	.....	.....	.....	.....	.....
9	.....	0.60	.....	0.02	1.89	.....	0.40	.....	.....	.....	.....	.....
10	.....	0.01	.....	0.61	0.83	0.18	.....	.....	.....	.....	.....	.....
11	0.06	2.72	.....	0.17	.....	.....	.....	.....	.....	.....	.....	.....
12	.....	2.24	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
13	.....	0.19	.....	0.01	.....	0.36	.....	.....	.....	.....	.....	.....
14	.....	0.40	.....	0.61	.....	0.28	.....	.....	.....	.....	.....	.....
15	.....	0.12	.....	0.18	.....	.....	.....	.....	.....	.....	.....	.....
16	0.04	0.04	.....	0.34	.....	0.07	.....	.....	.....	.....	.....	.....
17	0.02	0.09	0.35	.....	.....	0.03	0.03	.....	.....	.....	.....	.....
18	0.23	0.01	0.05	.....	.....	0.10	0.10	.....	.....	.....	.....	.....
19	0.15	0.03	4.45	.....	1.55	0.07	1.29	.....	.....	.....	.....	.....
20	.....	.....	.....	.....	0.21	0.22	0.89	.....	.....	.....	.....	.....
21	0.01	.....	0.01	.....	.....	.....	0.28	.....	.....	.....	.....	.....
22	0.22	.....	0.05	0.06	.....	.....	0.03	.....	.....	.....	.....	.....
23	.....	.....	.....	.....	.....	.....	.....	0.35	.....	.....	.....	.....
24	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
25	.....	.....	.....	.....	.....	.....	0.10	.....	.....	.....	.....	.....
26	.....	.....	0.09	.....	.....	.....	.....	.....	.....	.....	.....	.....
27	.....	.....	.....	0.31	.....	.....	.....	0.19	.....	.....	.....	.....
28	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
29	.....	.....	0.04	.....	.....	.....	0.16	.....	.....	.....	.....	.....
30	0.01	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
31	0.11	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Sums...	1.03	7.21	5.18	5.99	12.42	1.42	3.28	0.67	.....	.....	.....	.....
Evap...	5.957	4.273	4.027	2.377	1.530	1.211	1.031	1.967	.....	.....	.....	.....

RAINFALL AT BOTANY.

(Return furnished to the Water Commission, by the Town Clerk.)

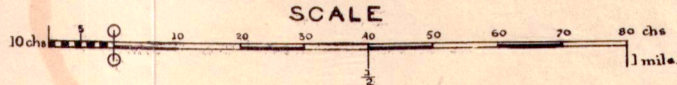
1868.									1869.								
Recorded at 8 a.m. daily.									Recorded at 8 a.m. daily.								
Date.	May.	June.	July.	August.	Sept.	October.	Nov.	Dec.	Date.	January	Feb.	March.	April.	May.	June.	July.	August.
1	...	...	.11	...	...	...	.30	...	1	...	.05	...	.28	.65	.04	...	...
2	...	...	...	.04	...	...	...	.05	2	.17	...	.08	.52	.02	.04	...	...
3	...	...	...	...	.01	...	.22	...	3	...	...	...	.20	...	...	...	.15
4	...	...	.06	...	.02	...	...	...	4	...	...	...	.53	.05	...	...	...
5	...	.06	...	...	...	...	.12	.12	5	...	.20	...	1.37	.30	...	...	...
6	...	1.01	...	.16	...	...	.04	...	6	...	...	...	...	2.30	...	...	...
7	...	...	...	...	...	...	.01	...	7	...	.23	...	.66	2.30	...	...	...
8	...	...	...	...	.8	...	...	...	8	...	.04	...	.31	3.20	...	...	...
9	...	...	...	...	...	...	.36	...	9	...	.30	.41	.02	1.55	...	.35	...
10	...	...	...	.12	...	...	.06	...	10	...	.03	...	.41	.45	.25	...	...
11	...	.04	.22	...	...	...	...	...	11	.06	1.50	...	.45	...	...	...	...
12	...	.01	.28	.01	...	.09	.18	...	12	...	1.00	...	.05	...	...	...	...
13	.04	...	...	...	...	.16	.17	...	13	...	.36	...	...	...	.38	...	...
14	.23	...	...	...	.16	...	.25	...	14	...	.28	...	.32	...	.22	...	...
15	.37	.01	...	...	.14	...	.19	...	15	...	.05	...	.44	...	...	...	...
16	.02	1.18	...	...	.30	...	.07	.11	16	...	.03	...	.20	.05	.05	...	...
17	...	.50	...	.11	.34	.92	...	...	17	...	.16	.21	...	...	.05	...	...
18	...	.37	...	...	...	...	.08	...	18	.08	.04	.08	...	...	.11	.16	...
19	.03	.05	.24	.43	.27	...	...	...	19	.30	.07	4.00	...	1.65	.04	.90	...
20	...	...	.20	.80	.08	...	...	...	20	...	...	...	...	.42	.37	.90	...
21	.19	...	2.30	...	.11	...	.32	...	21	.14	...	...	...	...	.02	.31	...
22	...	...	...	...	.63	...	.03	...	22	.21	...	.13	.28	...	...	.12	...
23	...	...	...	...	...	...	.02	...	23	...	...	...	...	...	...	...	.55
24	...	...	...	...	...	...	...	...	24	...	...	...	...	...	...	...	...
25	...	...	.12	...	.01	...	...	...	25	...	...	...	...	...	...	.27	...
26	.49	...	.58	.13	.15	...	...	.15	26	...	...	.04	...	...	...	...	...
27	...	...	.04	...	...	...	...	...	27	...	...	.04	.71	...	...	...	.22
28	...	...	...	...	...	...	...	...	28	...	...	...	.13	...	...	...	...
29	...	...	...	...	...	...	...	...	29	...	...	.05	...	...	...	.20	...
30	2.26	...	.02	...	...	...	...	...	30	...	...	...	...	...	...	...	...
31	1.00	...	.23	.27	...	.06	...	.08	31	.19	...	.07	...	...	...	...	...
Sums	4.63	3.23	4.40	2.07	2.30	1.23	2.42	.60	Sums	1.15	4.34	5.11	6.88	12.94	1.52	3.26	0.92

Sketch illustrating Watersheds in various Schemes for supplying Sydney with Water



Engraved at the Surveyor General's Office, Sydney, June 1862.

"SYDNEY WATER COMMISSION" PLAN shewing PRESENT WATER SUPPLY and PROPOSED IMPROVEMENTS



NOTE
 All subdivisions of land shewn in black lines have been alienated.
 Subdivisions at Randwick tinted pink alienated with the condition that one residence only be erected on each.
 Proposed improvements shewn in crimson.
 Boundary of present watershed edged green.
 Boundary of additional watershed edged purple.
 Line of Sections shewn in blue.
 Dams proposed by City Engineers shewn in blue.

WATERLOO ESTATE

S. Peek 50ac

Hughes Hosking 51ac

H. Holmshed 55ac

W. Hutchinson 1400ac

S. Terry 570ac

J. Hold 50ac

J. Newton 51ac

E. Hayes 52ac

M. Under 47ac

J. Newton 55ac

C. Whimsey 92ac

Simeon Lord 600ac

H. Bell

R. Ross

H. Bell

J. C. Phelps

"BUNNERONG" J. Brown.

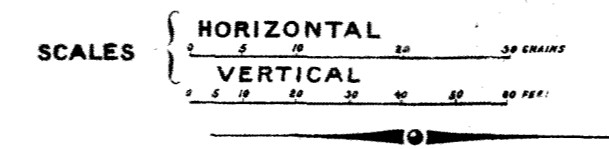
TOWNSHIP OF LONG BAY

B O T A N Y B A Y

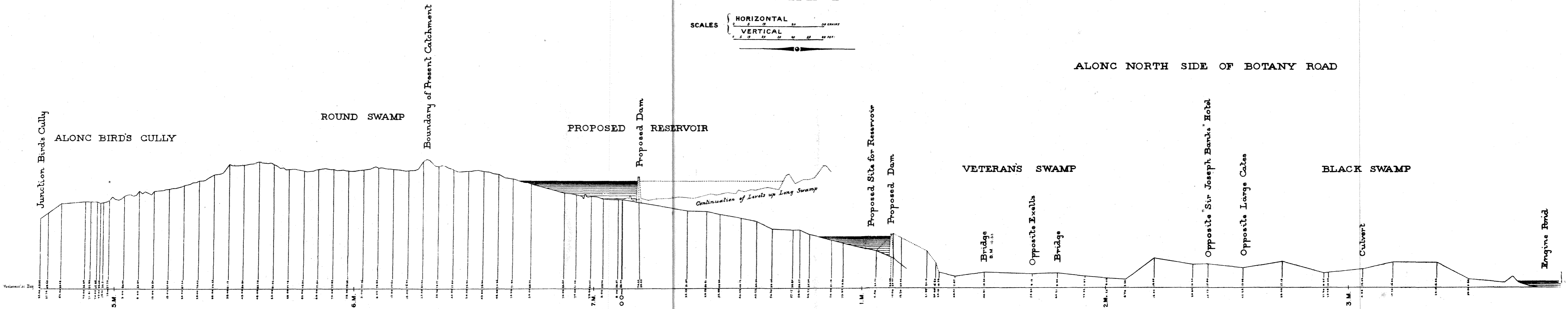
"SYDNEY WATER COMMISSION"

SECTION

FROM
JUNCTION OF BIRD'S CULLY
 VIA
LONG SWAMP AND BUNNERONG ROAD.
 TO
BOTANY



ALONG NORTH SIDE OF BOTANY ROAD

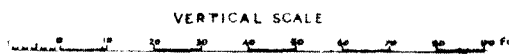
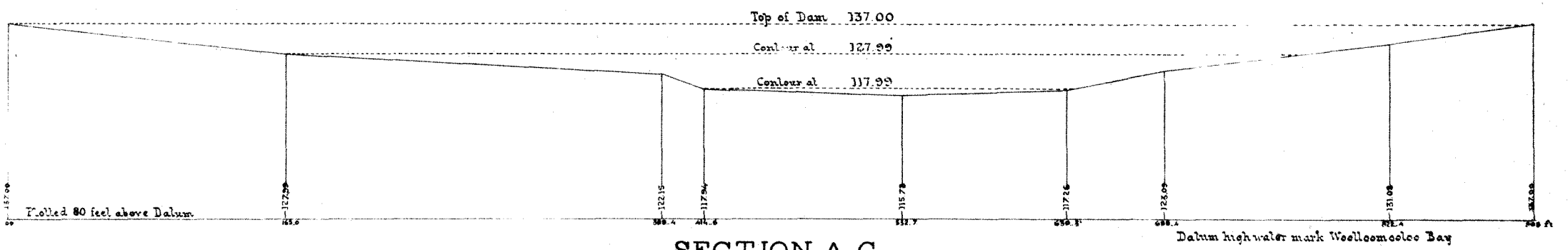
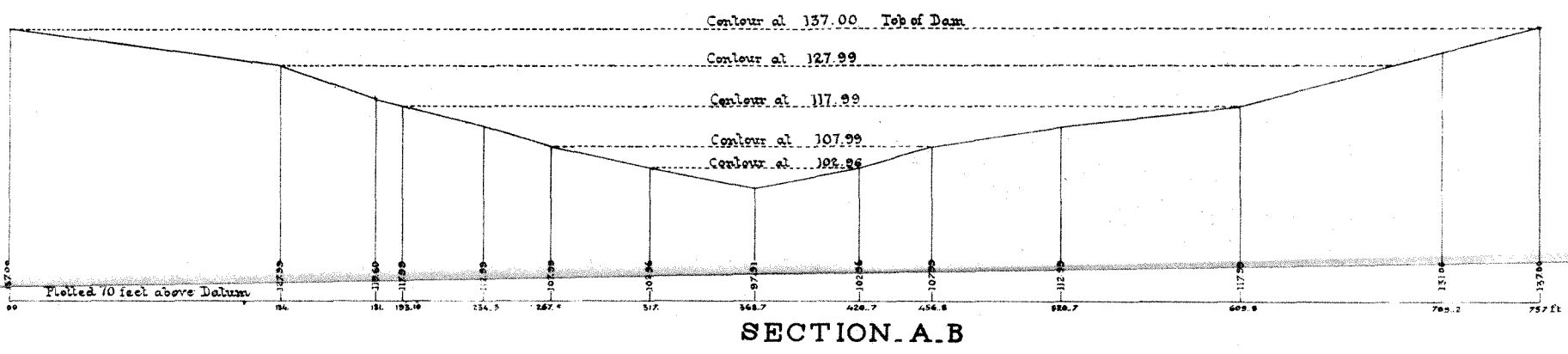
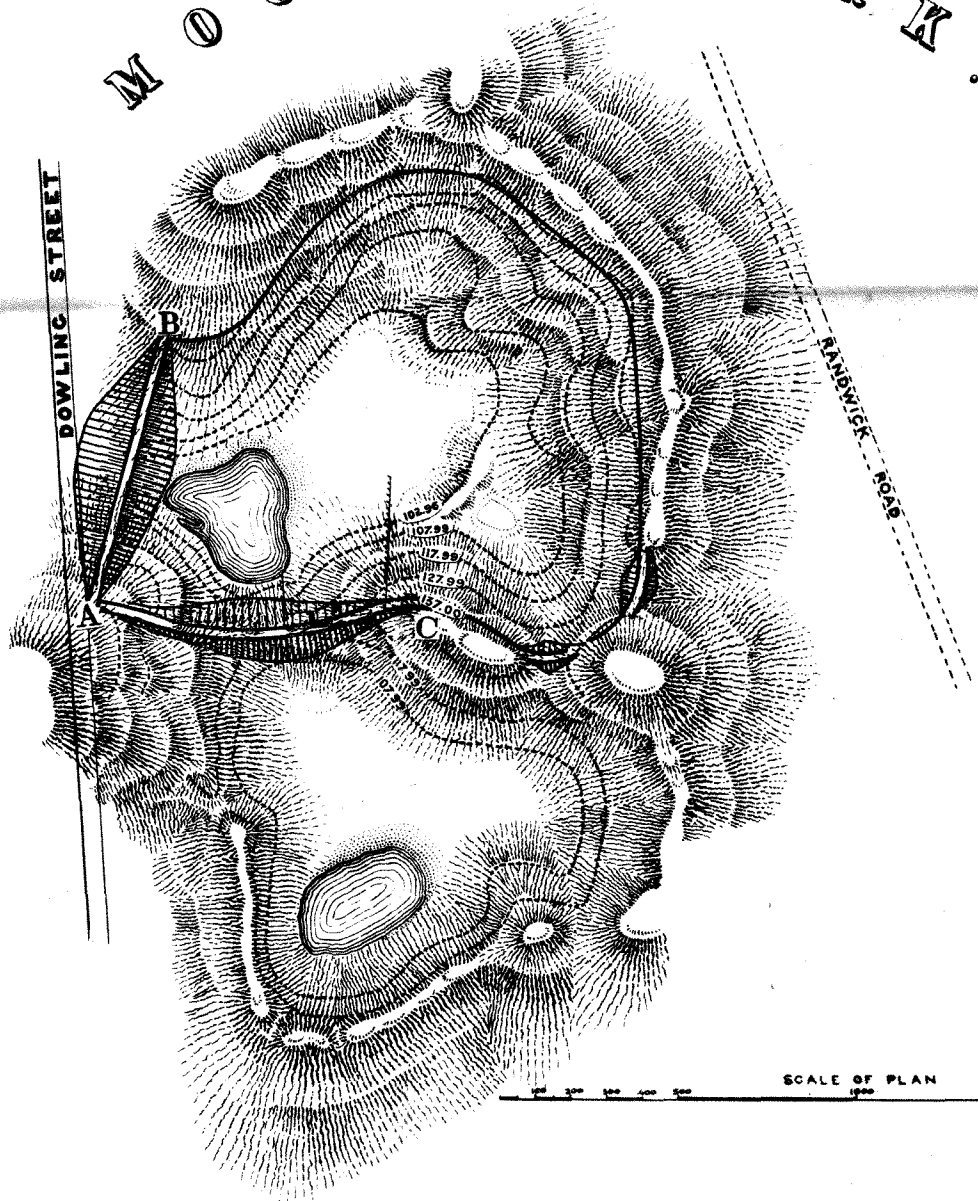
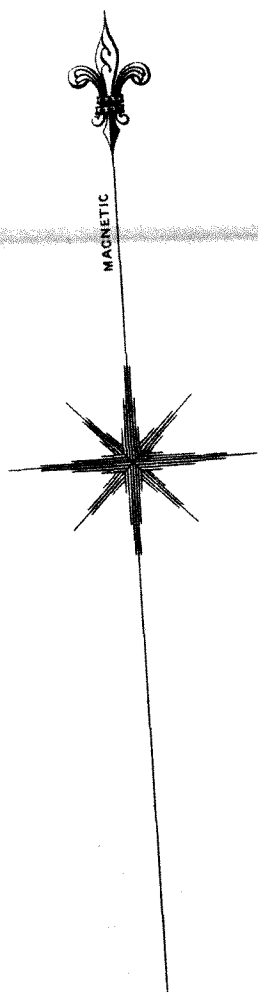


Drawn by [illegible] Roads Department.
 Photo lithographed at the Govt Printing Office
 Sydney, N.S. Wales.

SYDNEY WATER COMMISSION

CEMETERY RESERVOIR

MOORE PARK.



Drawn by F. Wells, Roads Department.

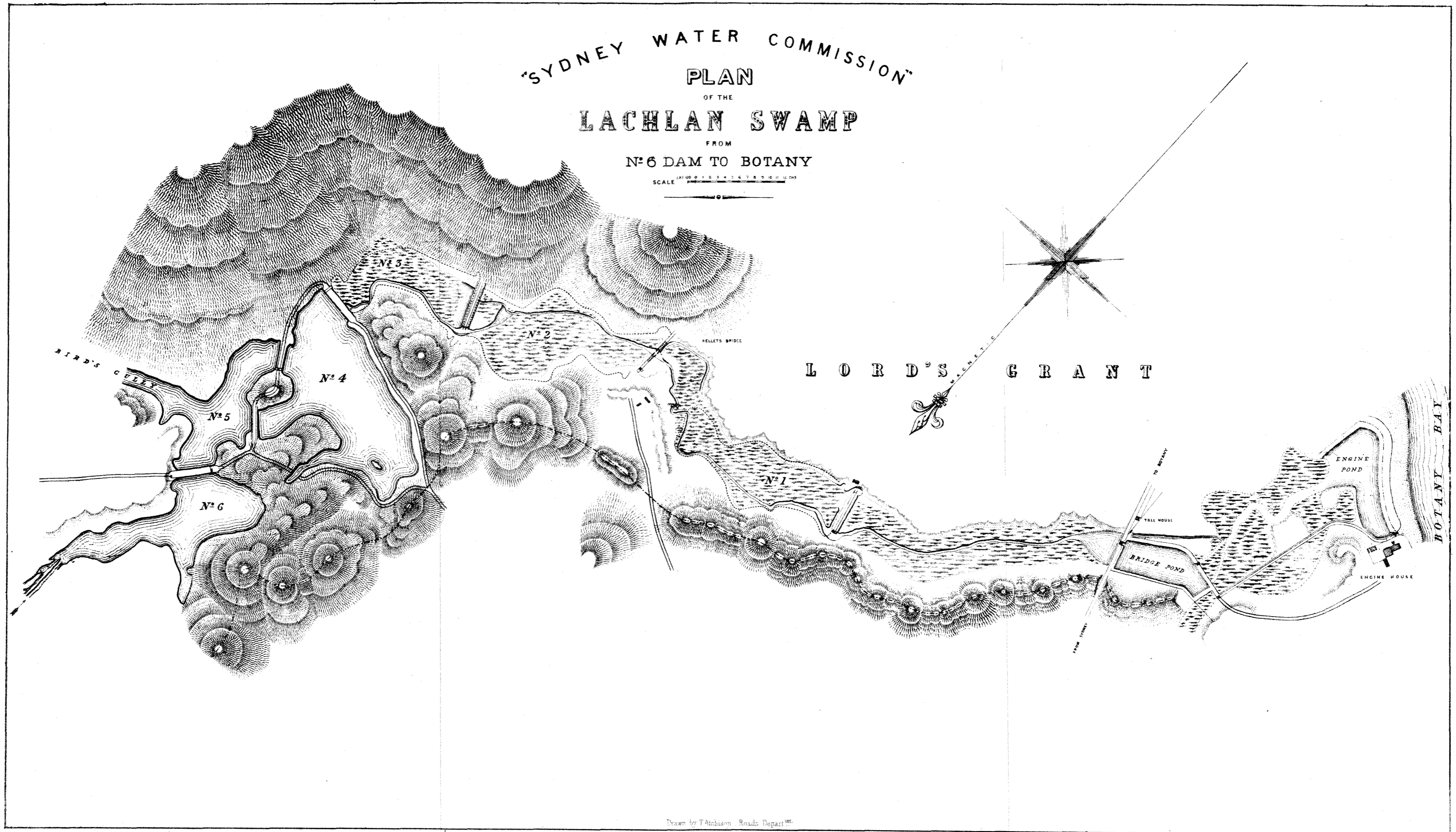
Photo-lithographed at the Govt Printing Office, Sydney, N.S.W.

"SYDNEY WATER COMMISSION"
PLAN

OF THE
LACHLAN SWAMP

FROM
N^o 6 DAM TO BOTANY

SCALE (AT 100 0 1 2 3 4 5 6 7 8 9 10 11 12 CHS)



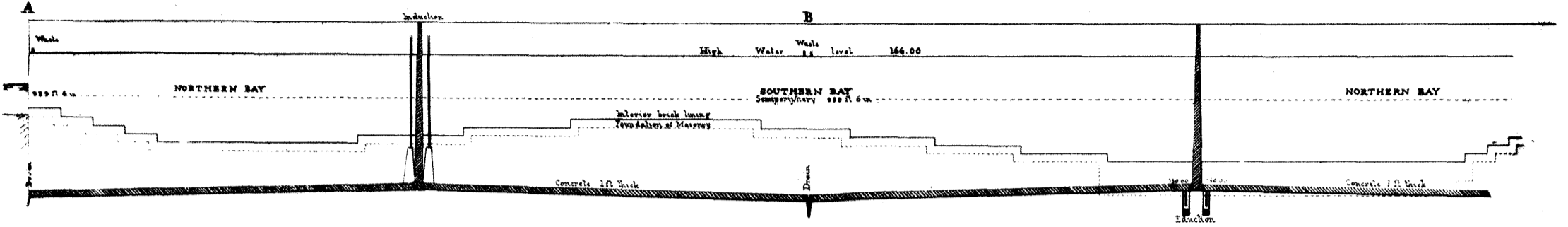
Drawn by T. Atchison, Roads Department

Photo-lithographed at the Govt. Printing Office
Sydney, N.S. Wales

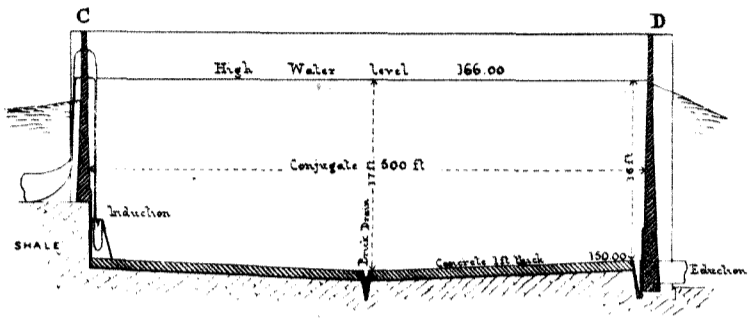
SYDNEY WATER COMMISSION

STRAWBERRY HILLS RESERVOIR

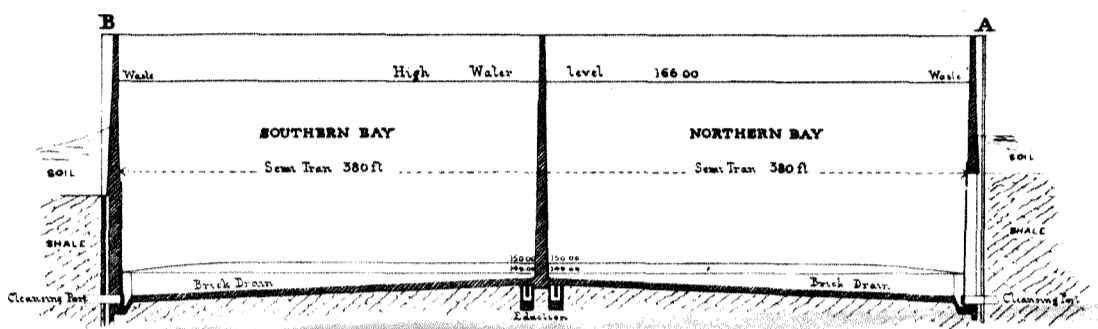
INTERIOR ELEVATION



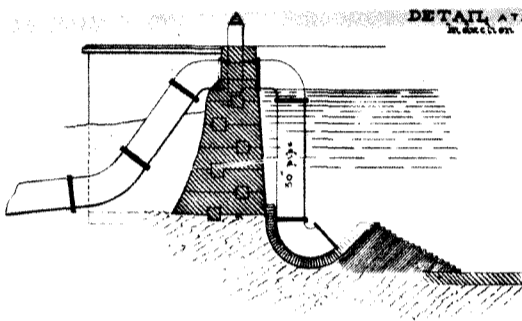
SECTION C.D



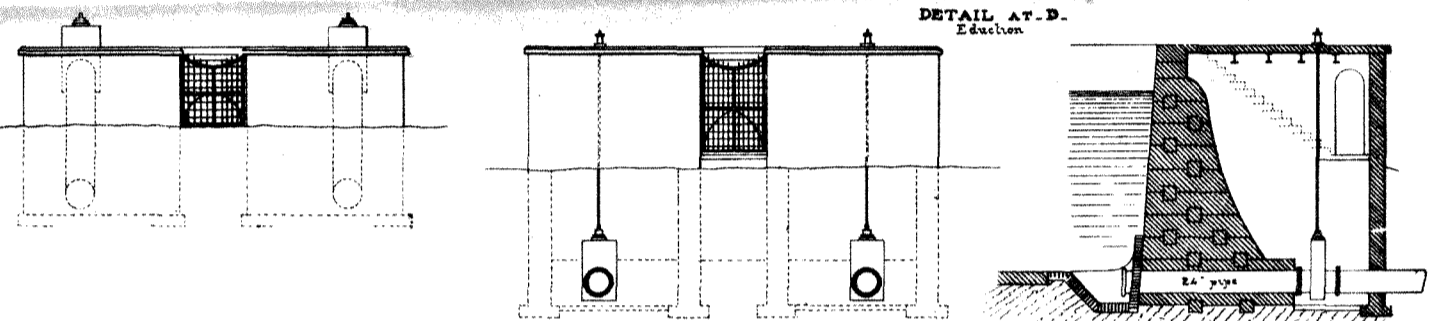
SECTION A.B



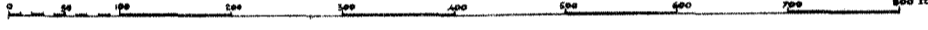
DETAIL AT C



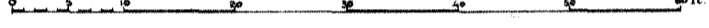
DETAIL AT D



HORIZONTAL SCALE OF ELEVATION AND SECTIONS



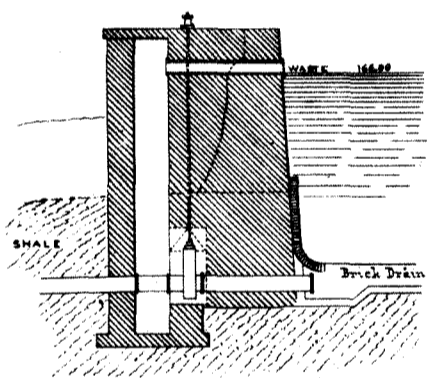
VERTICAL SCALE OF ELEVATION AND SECTIONS



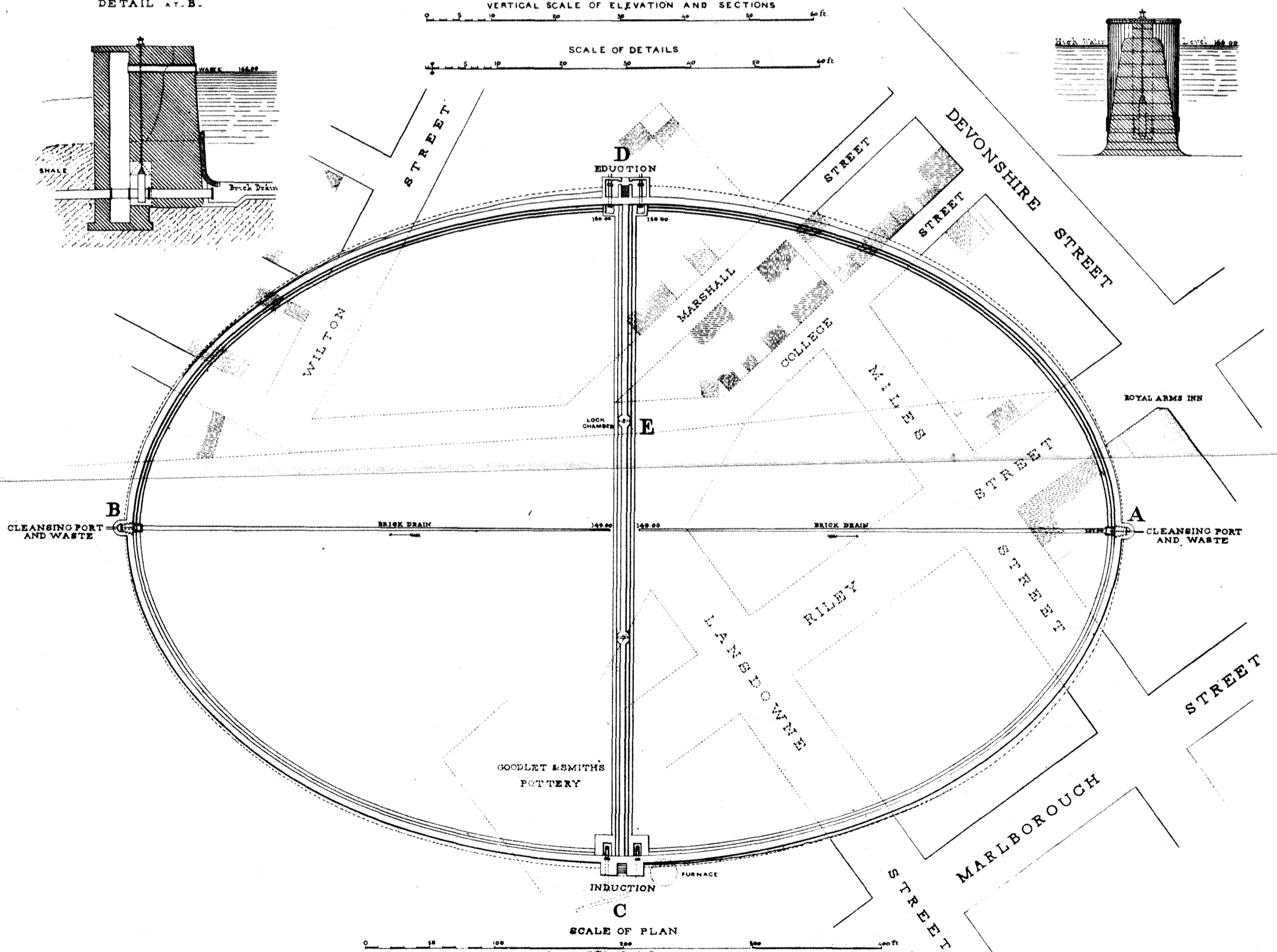
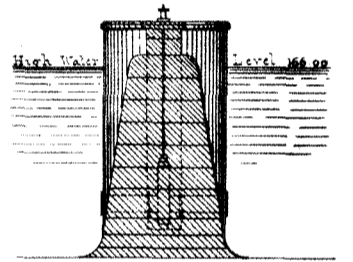
SCALE OF DETAILS



DETAIL AT B



DETAIL AT E



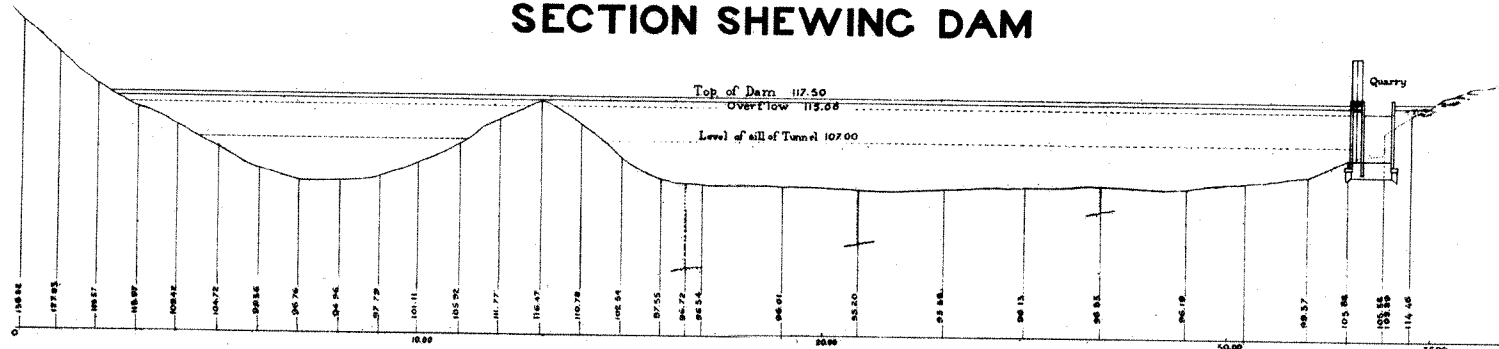
Drawn by F. Wells, Roads Department.

Photo-lithographed at the Govt Printing Office
Sydney, N.S. Wales.

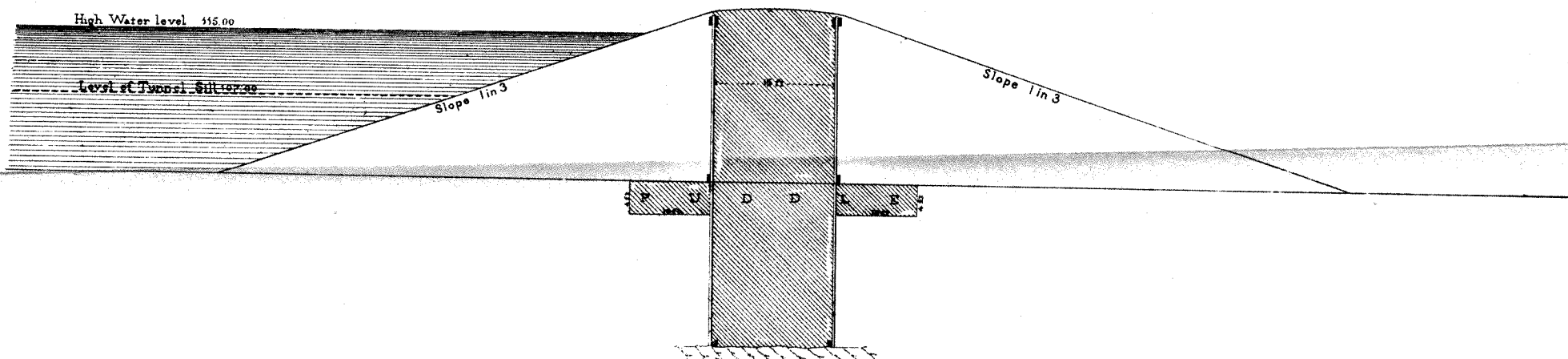
“SYDNEY WATER COMMISSION”

PROPOSED DAM AT LACHLAN SWAMP.

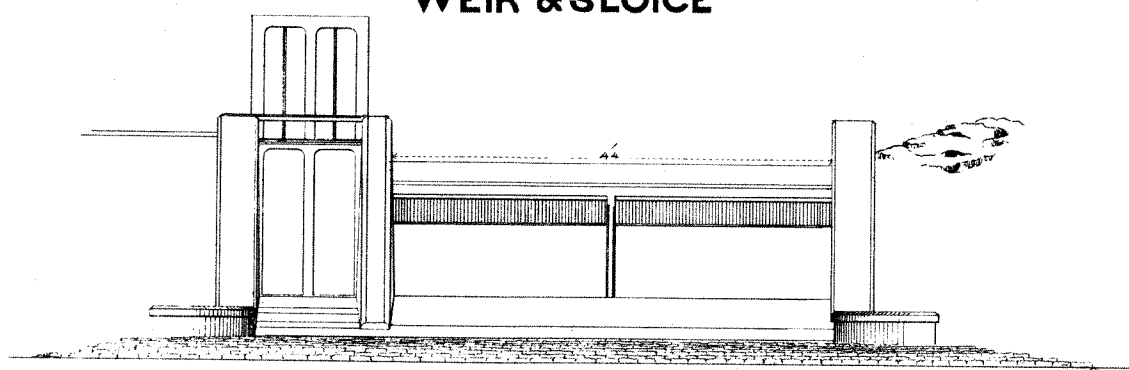
SECTION SHEWING DAM



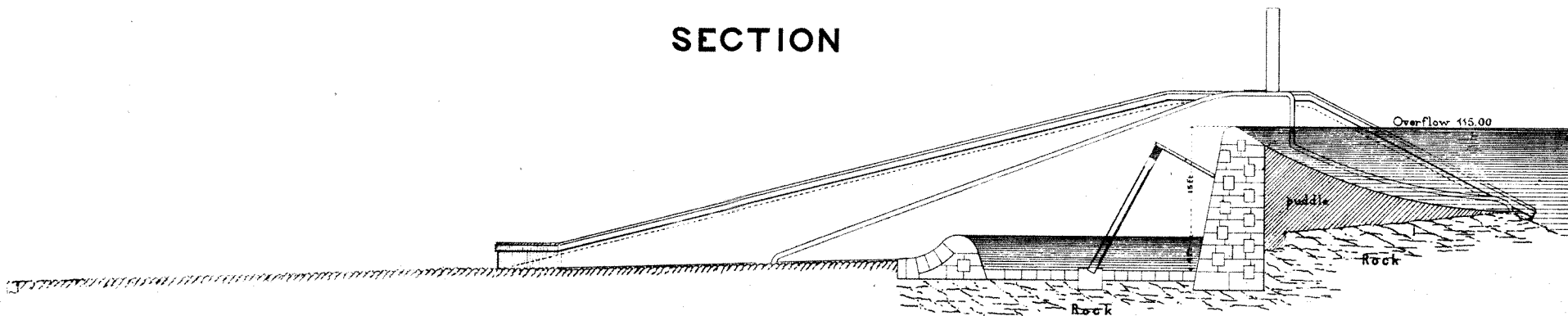
CROSS SECTION OF DAM



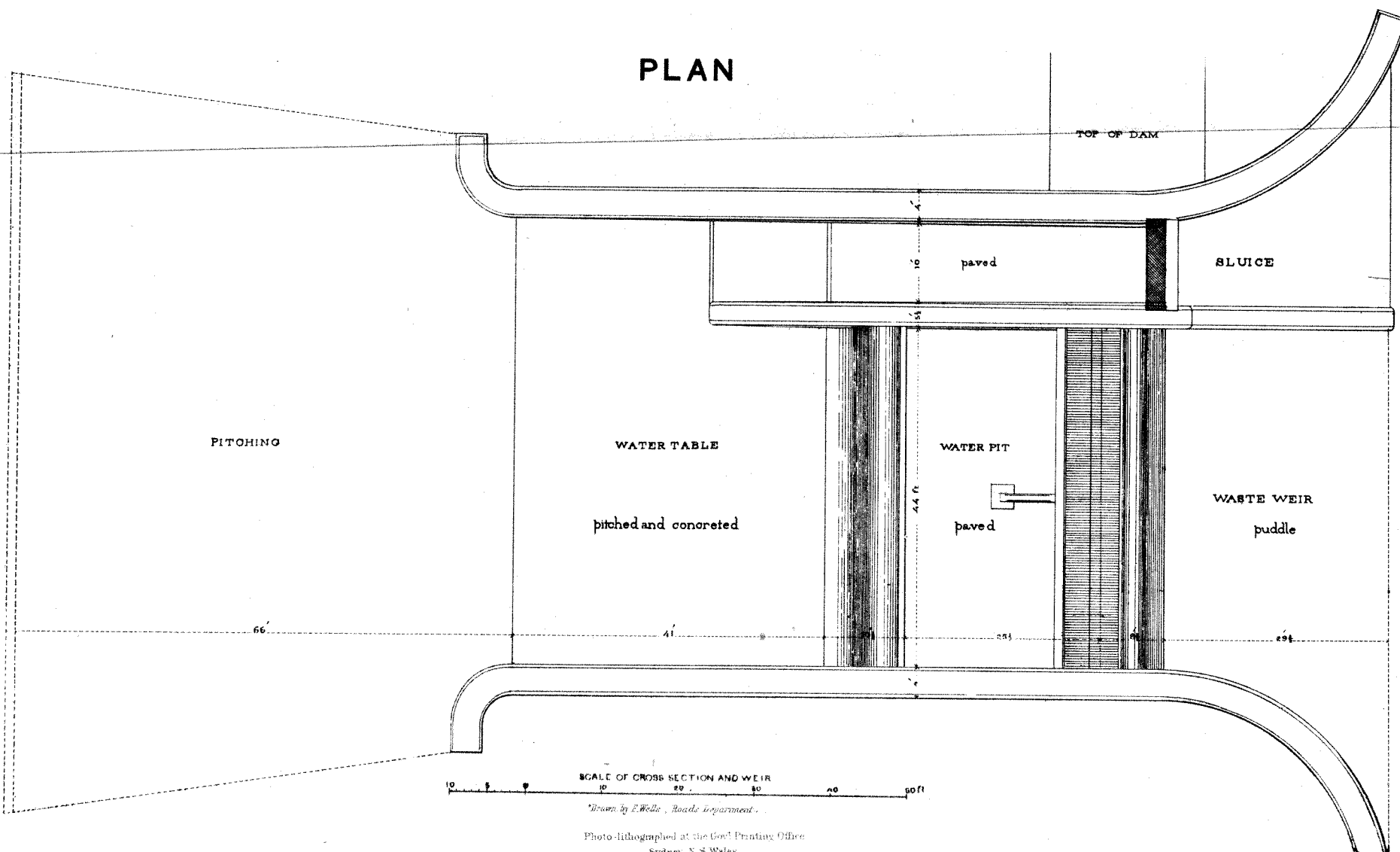
WEIR & SLUICE



SECTION

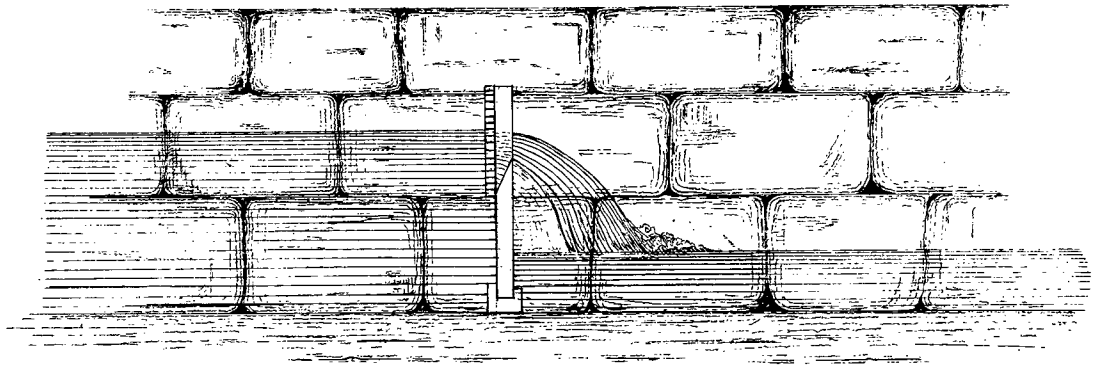


PLAN

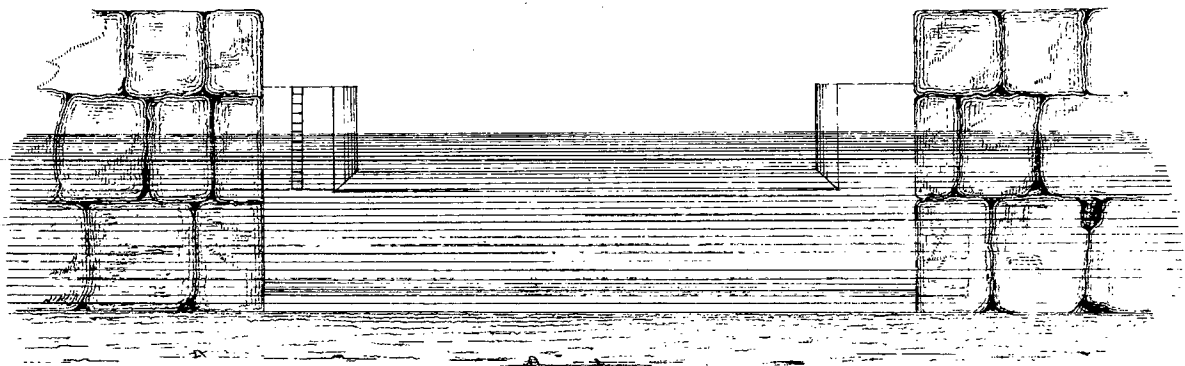


PLAN & SECTIONS
of the Wasteboard used at Botany
for gauging the escape at
LORD'S MILL.

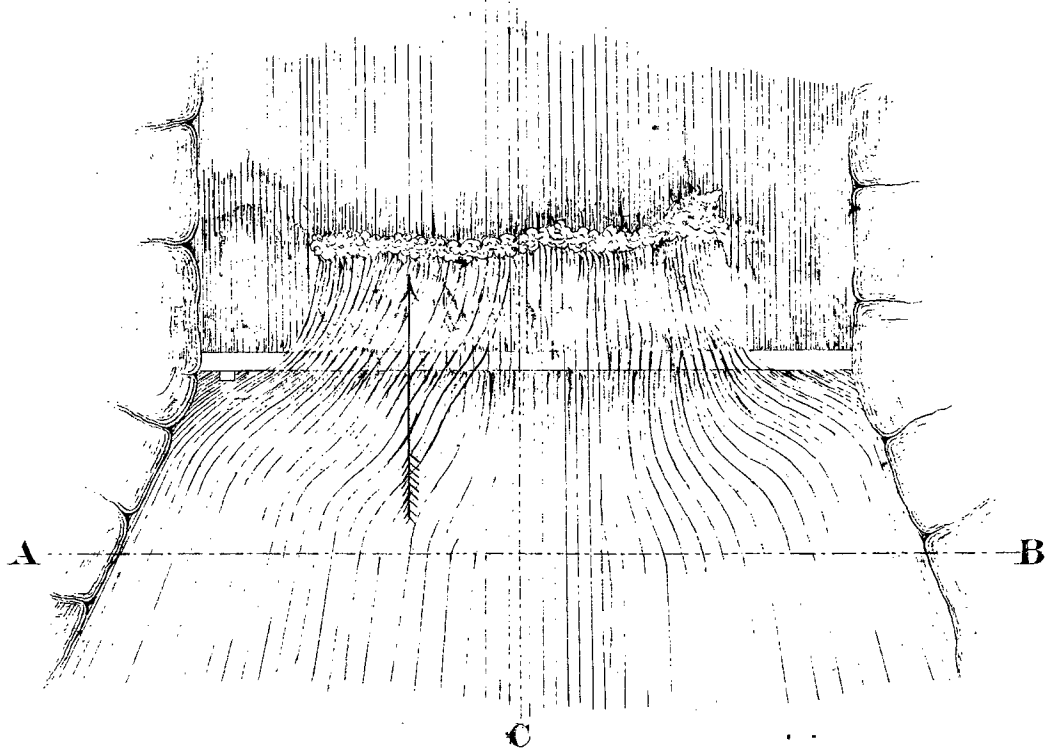
Section through C. D.



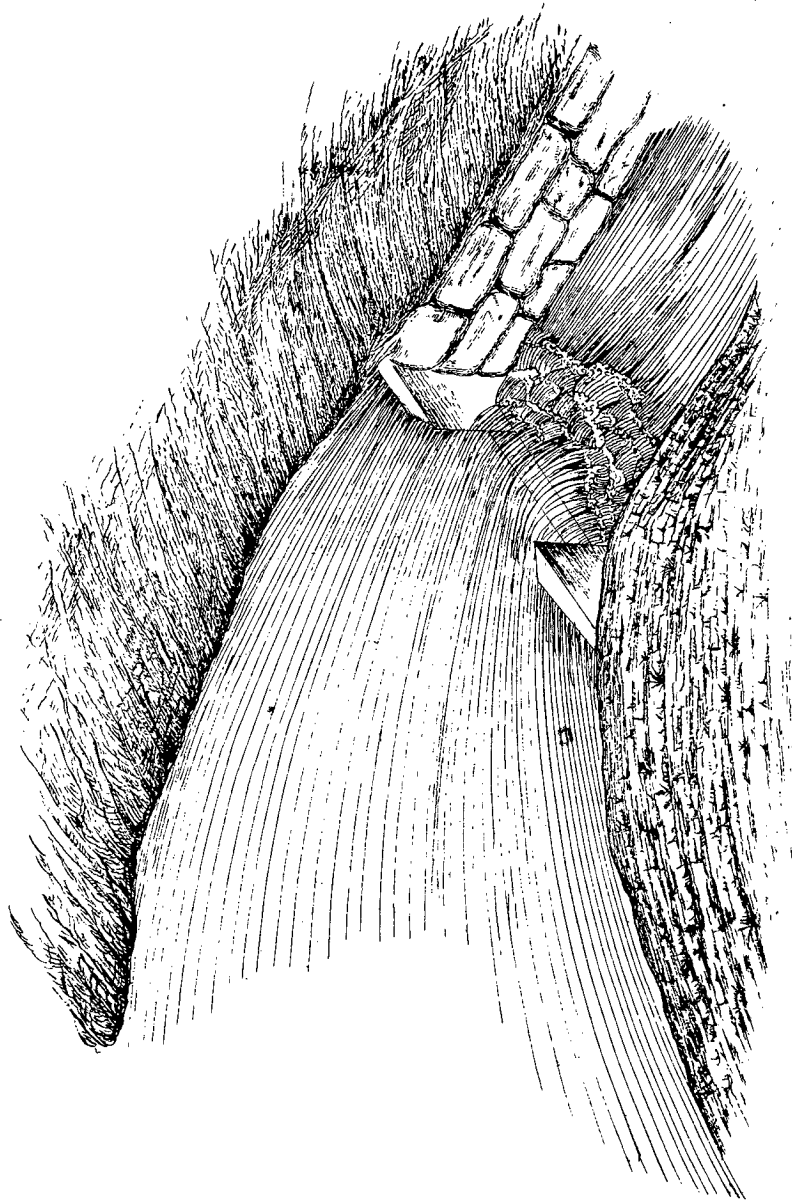
Elevation through A. B.



D



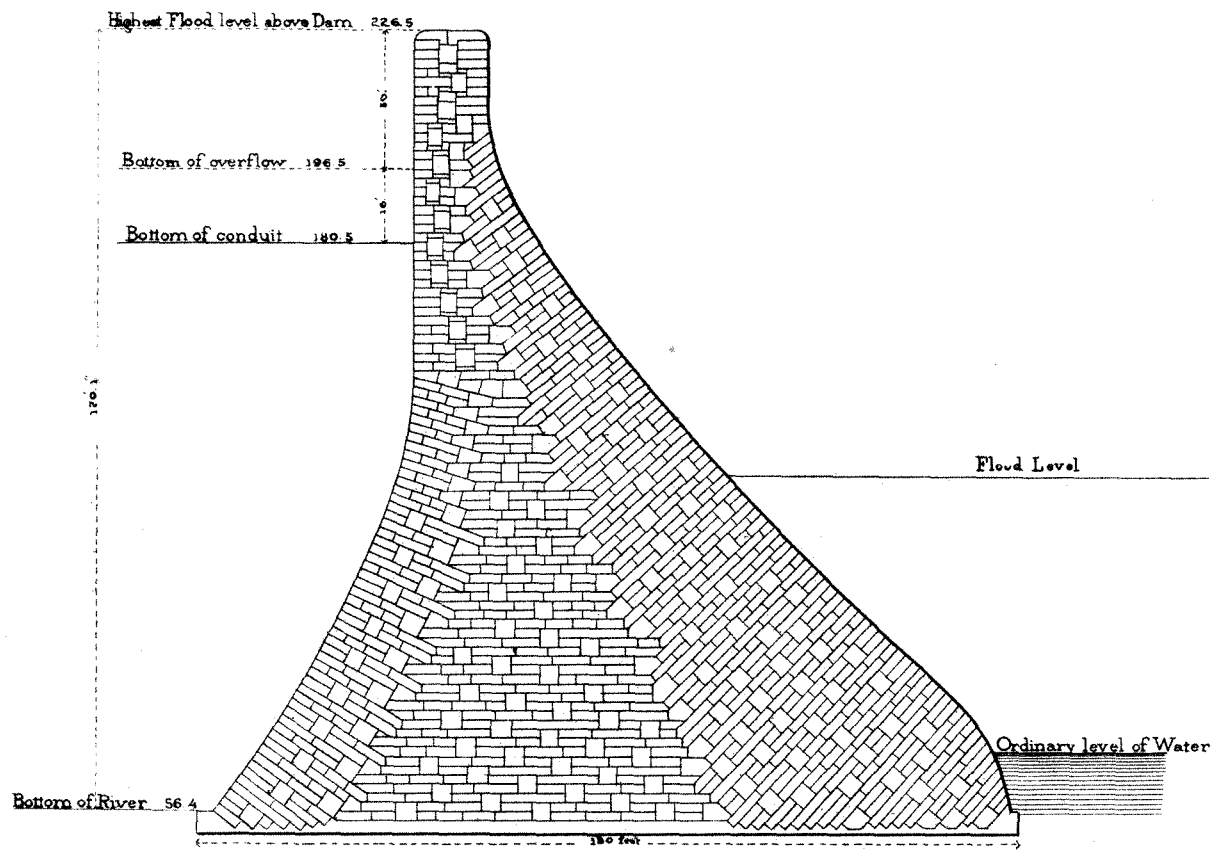
C



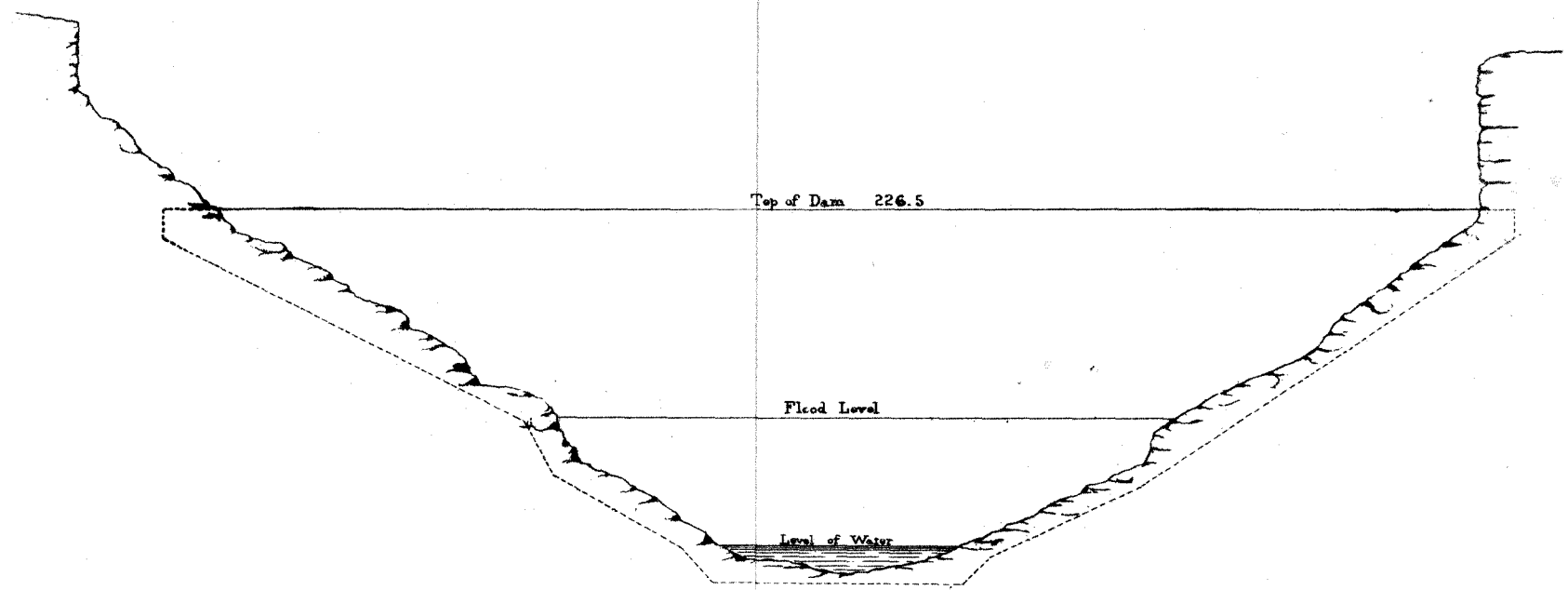
SKETCH OF WASTEBOARD
used at Botany
for gauging the quantity of water escaping at
LORD'S DAM.

[*Referred to in Appendix B to Mr. Bell's Evidence, p. 19.*]

"SYDNEY WATER COMMISSION"
 STONE DAM
 WARRAGAMBA



CROSS SECTION OF DAM



SECTION OF THE WARRAGAMBA SHEWING DAM



Drawn by F. Wells, Roads Department.

Photo-lithographed at the Govt Printing Office
 Sydney, N. S. Wales.

LONGITUDINAL SECTION of SALT PAN and WOOLLI CREEKS between Georges and Cooks Rivers

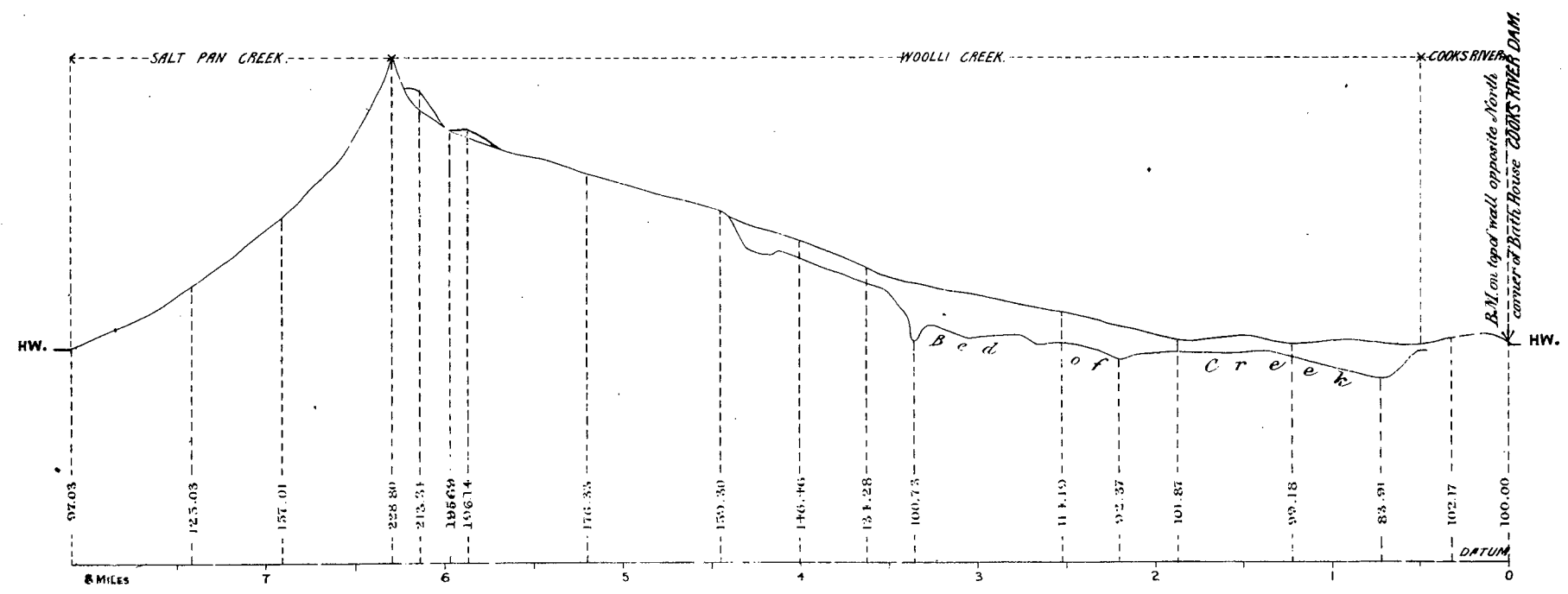
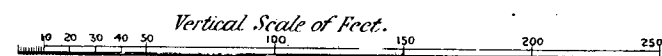
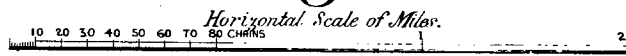
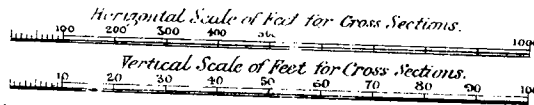
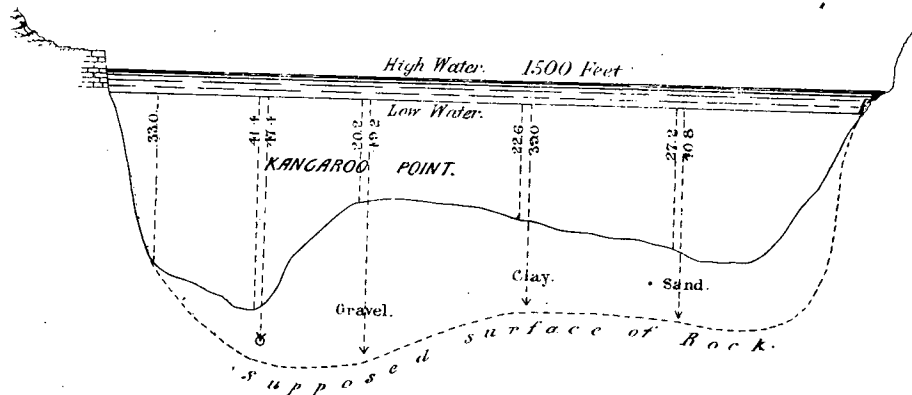
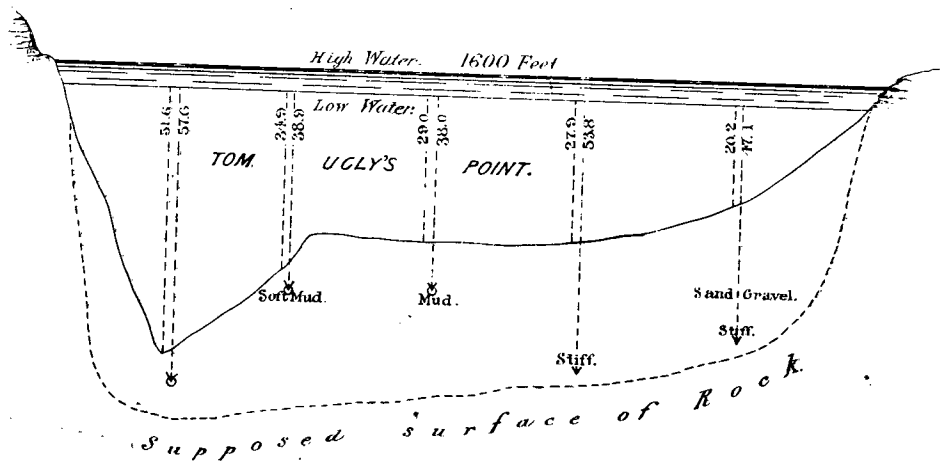
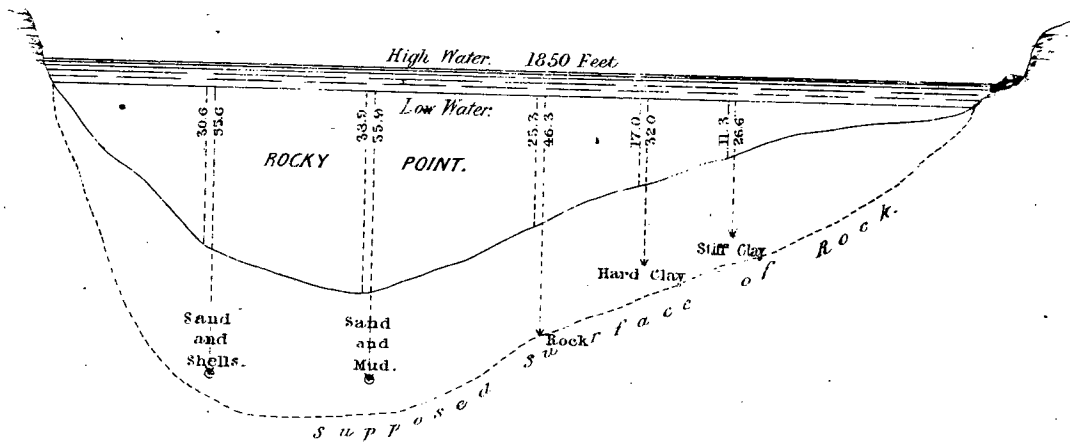


Photo-lithographed at the Govt. Printing Office
Sydney, N. S. Wales

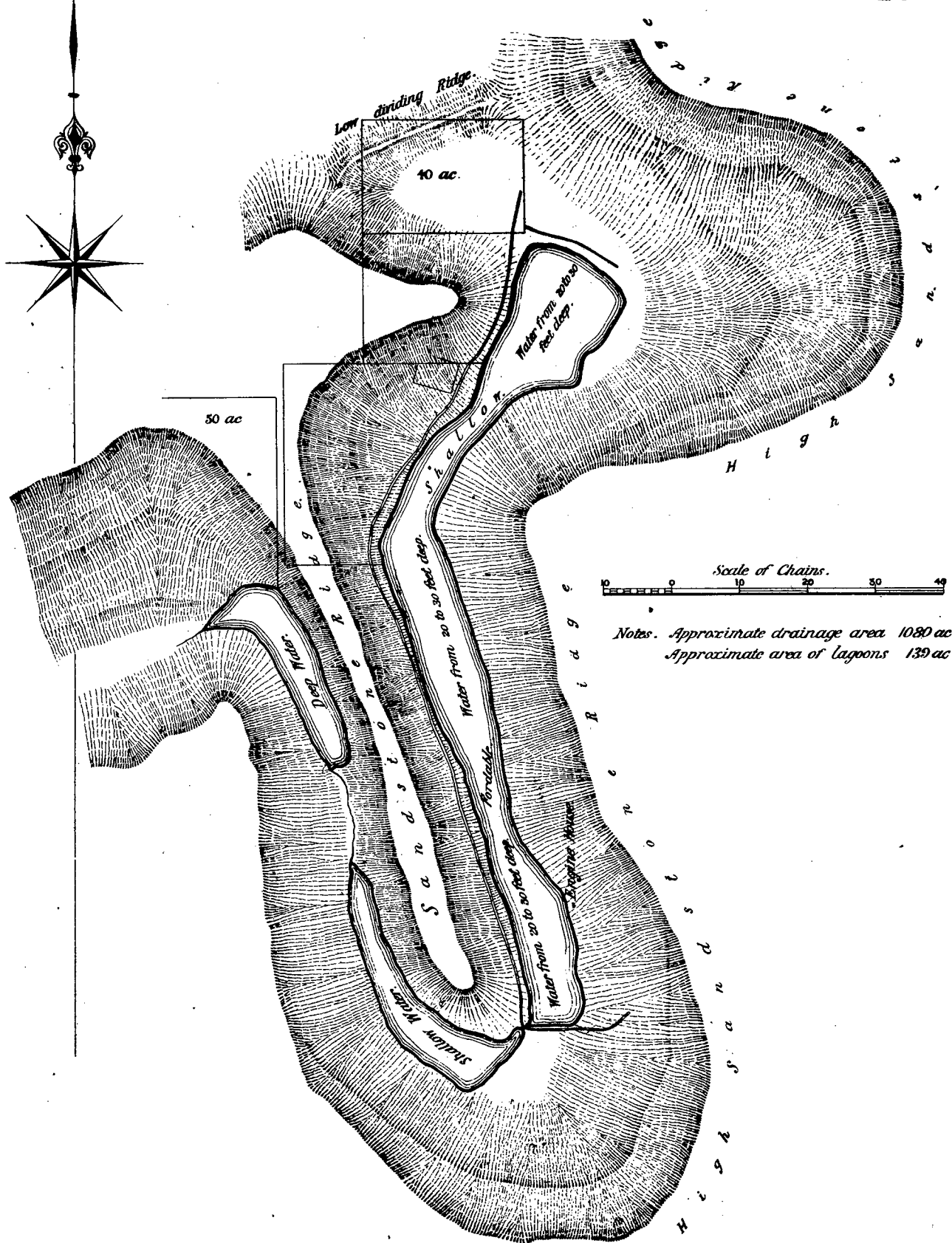
CROSS SECTIONS of GEORGE'S RIVER



Note. Borings marked thus & were not bottomed on account of depth of water and strength of current or length of Boring rod.

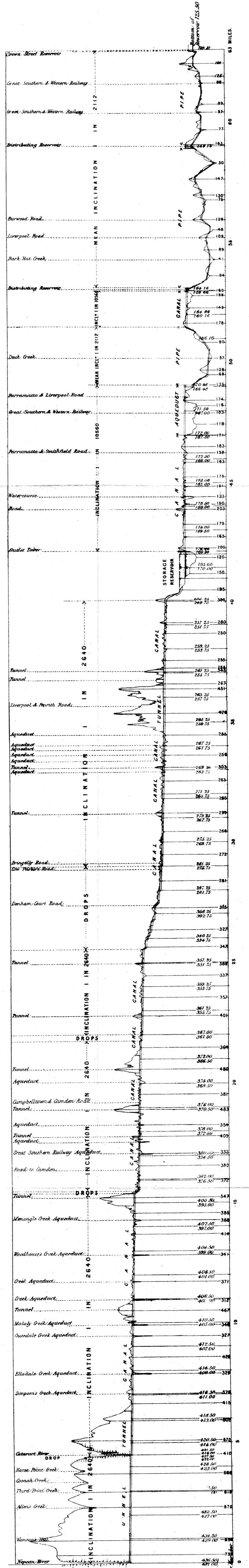
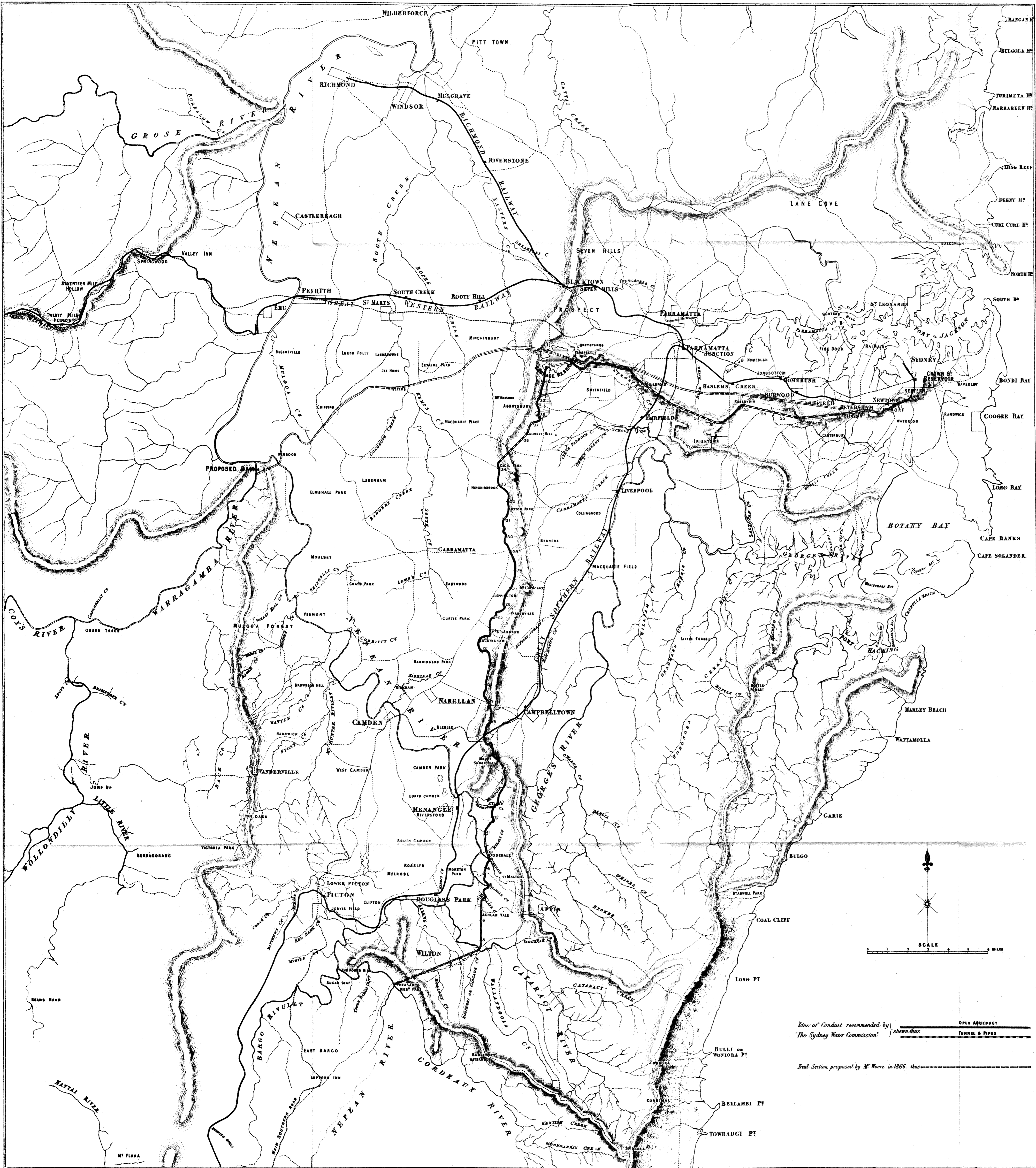


PLAN OF COURIDJAH LAGOONS COUNTY OF CAMDEN



*Notes. Approximate drainage area 1080 ac
Approximate area of lagoons 139 ac*

Plan shewing Line of Conduit recommended by Sydney Water Commission



Copyrighted by the Survey General's Office, Sydney, N.S.W. 1863.

SYDNEY WATER SUPPLY

SHEET N^o 1

Community
Feb 9. 1869

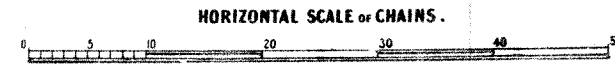
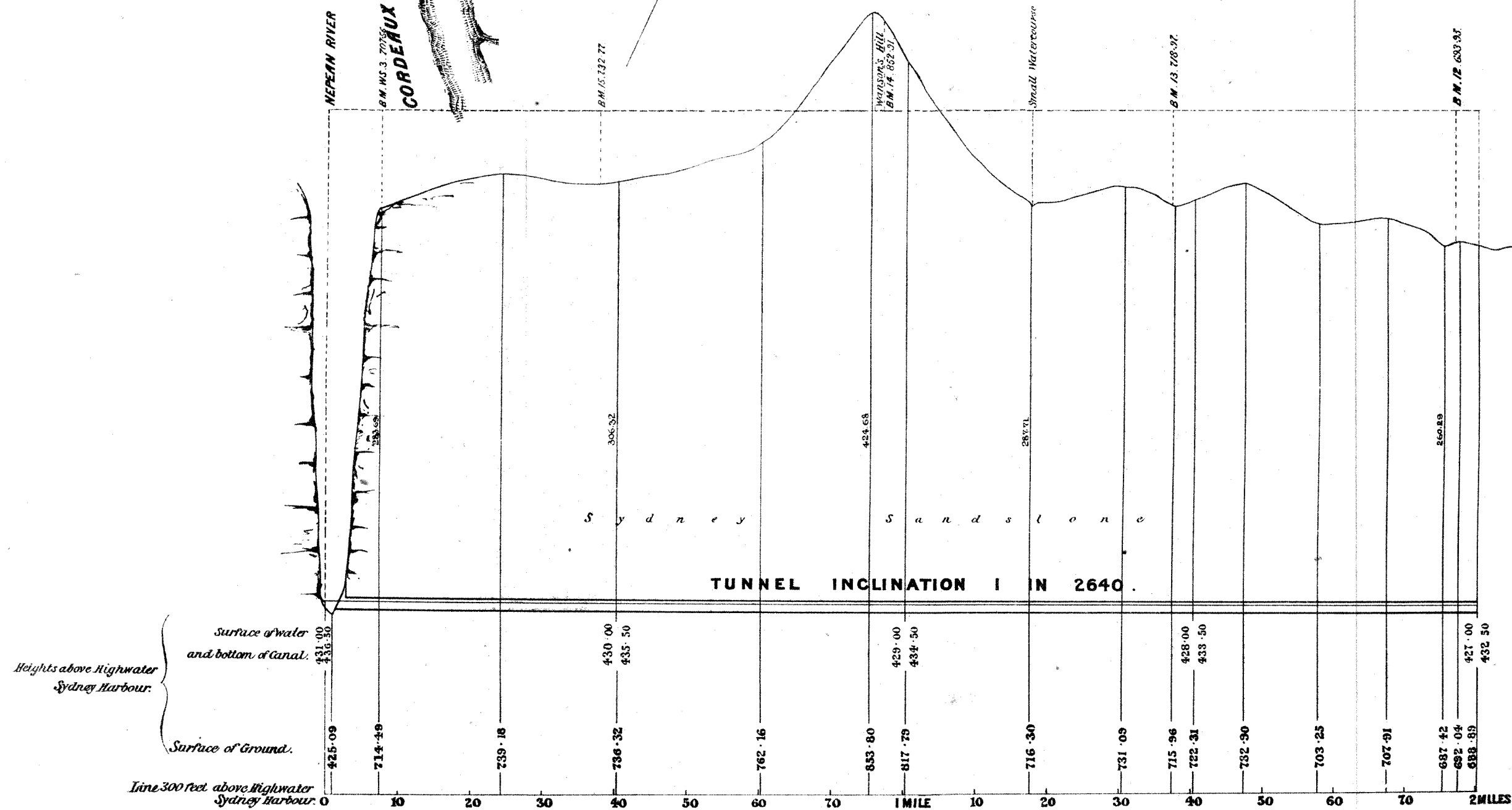
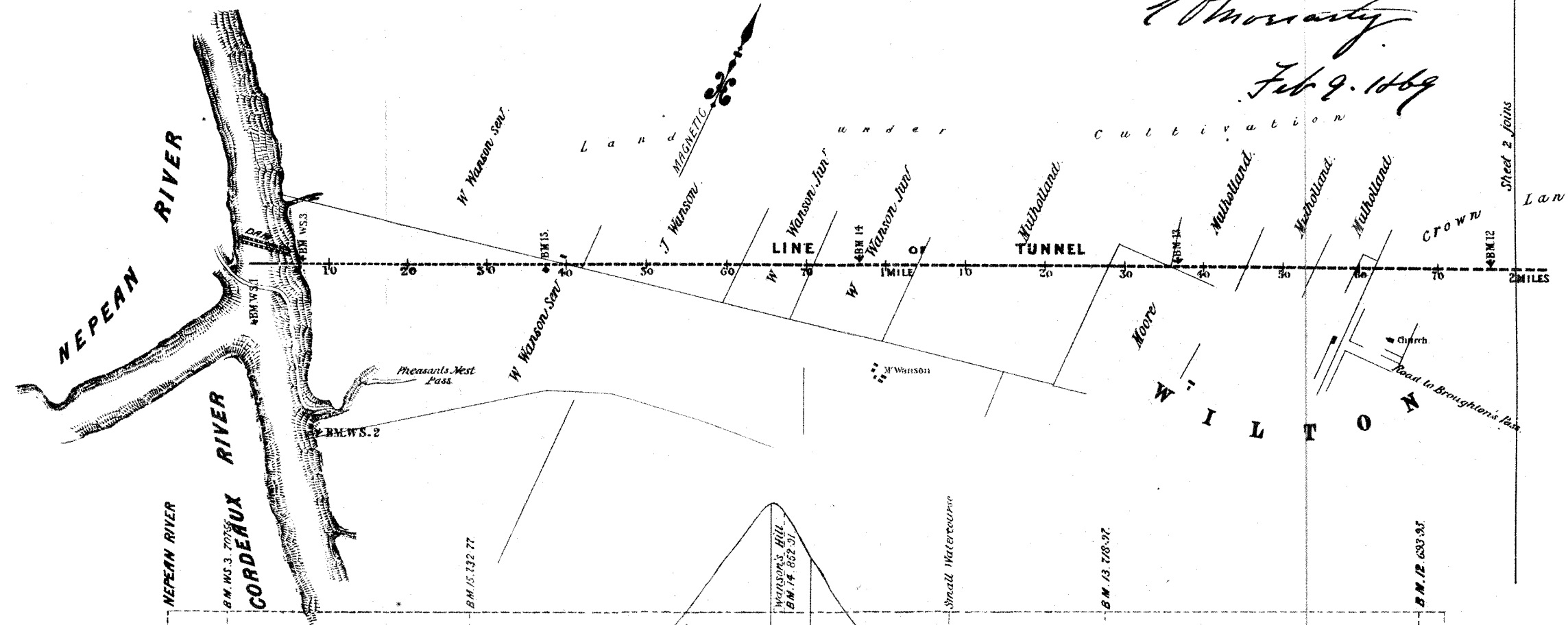
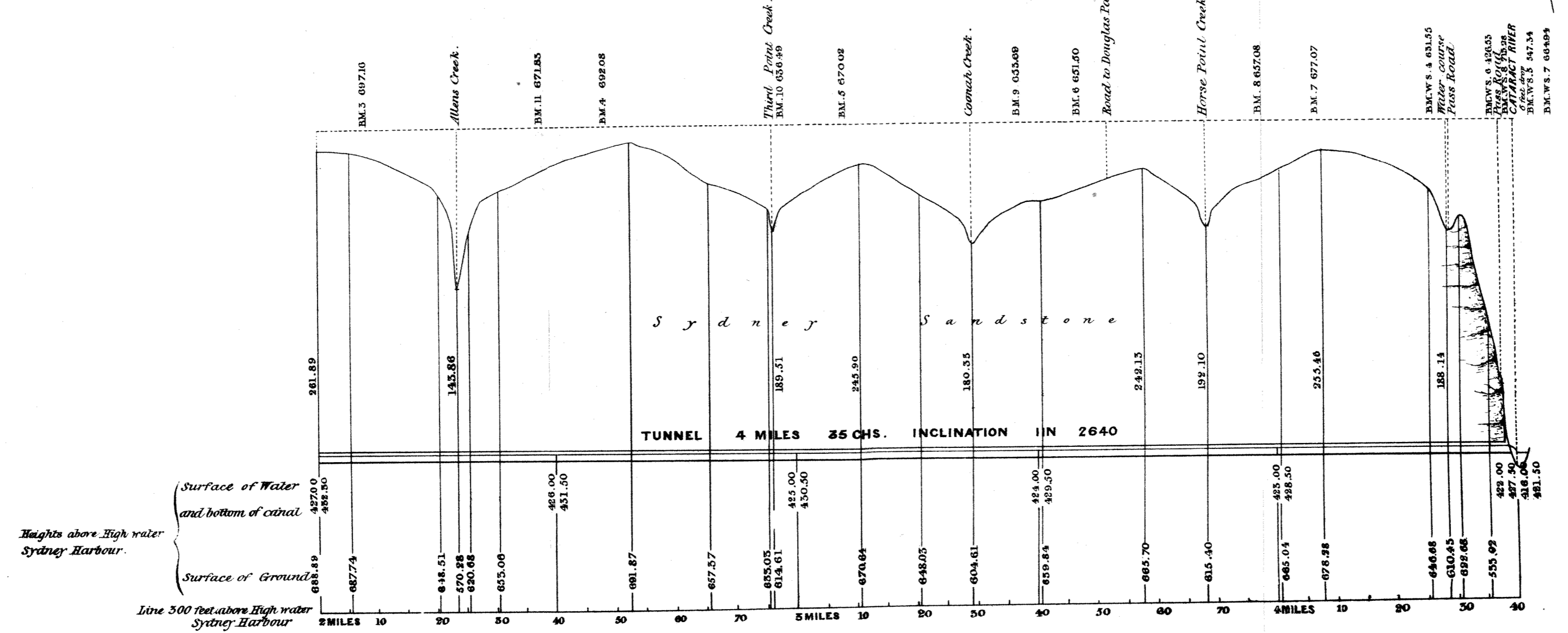
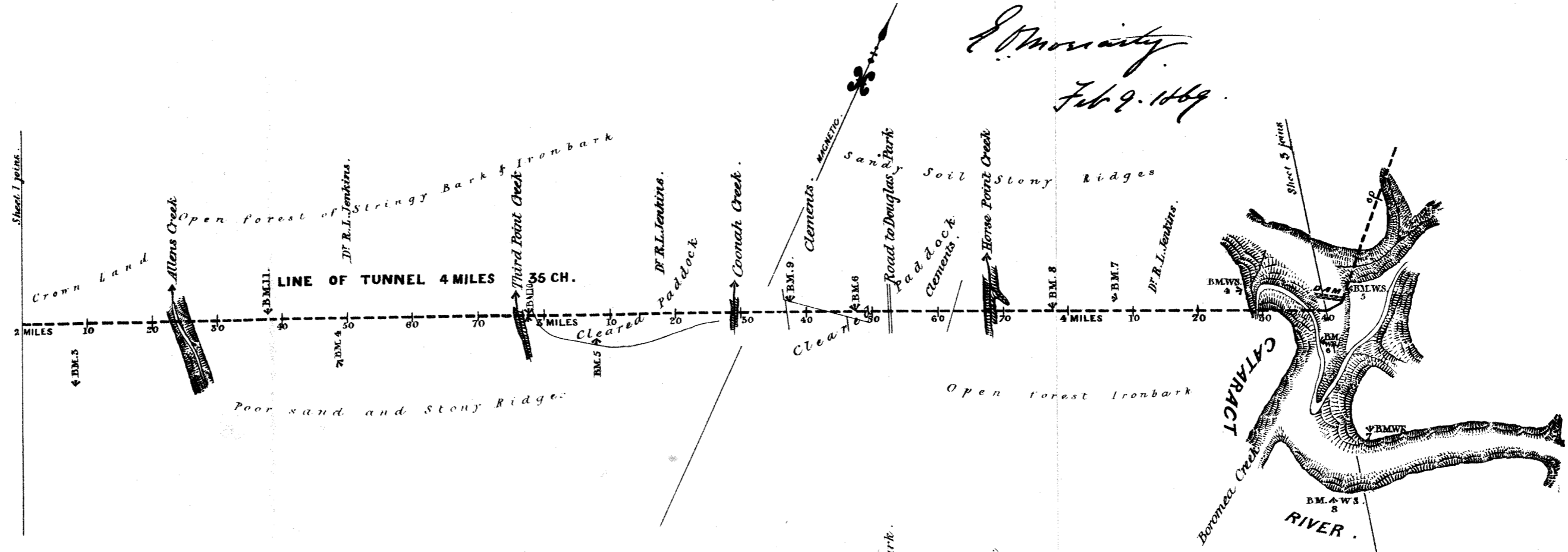


Photo-lithographed at the Govt Printing Office, Sydney, N.S. Wales.

SYDNEY WATER SUPPLY

J. Moriarty
Feb 9. 1869.



Heights above High water Sydney Harbour.

Surface of Water and bottom of canal

Surface of Ground

Line 300 feet above High water Sydney Harbour

VERTICAL SCALE OF FEET.

Photo-lithographed at the Govt Printing Office Sydney, N. S. Wales.

HORIZONTAL SCALE OF CHAINS.

SYDNEY WATER SUPPLY

SHEET N^o 4

J. Moriarty
Feb 9. 1869

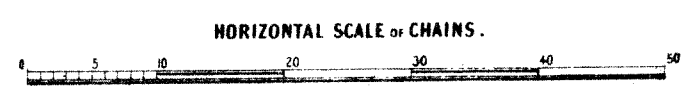
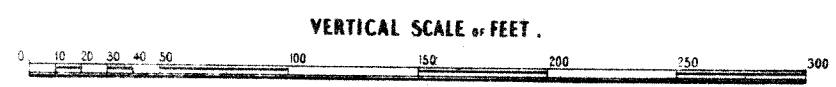
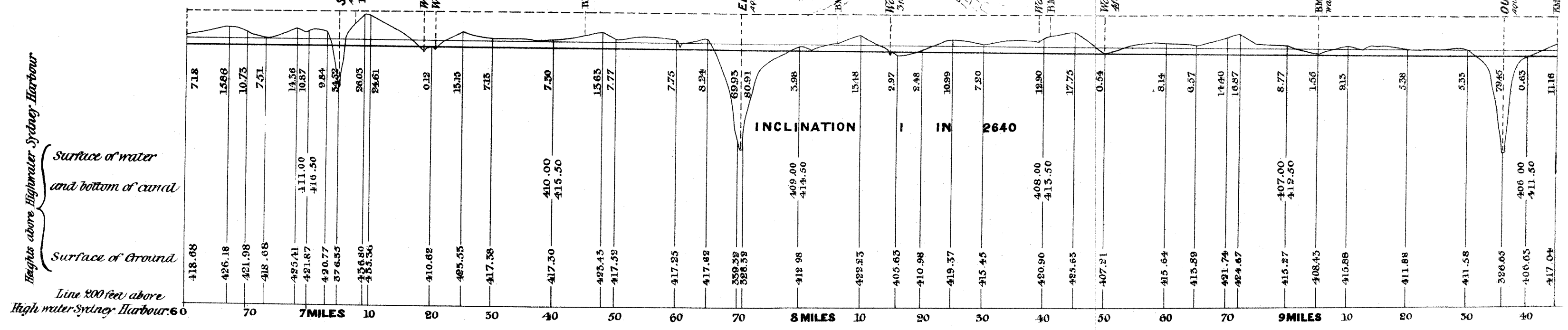
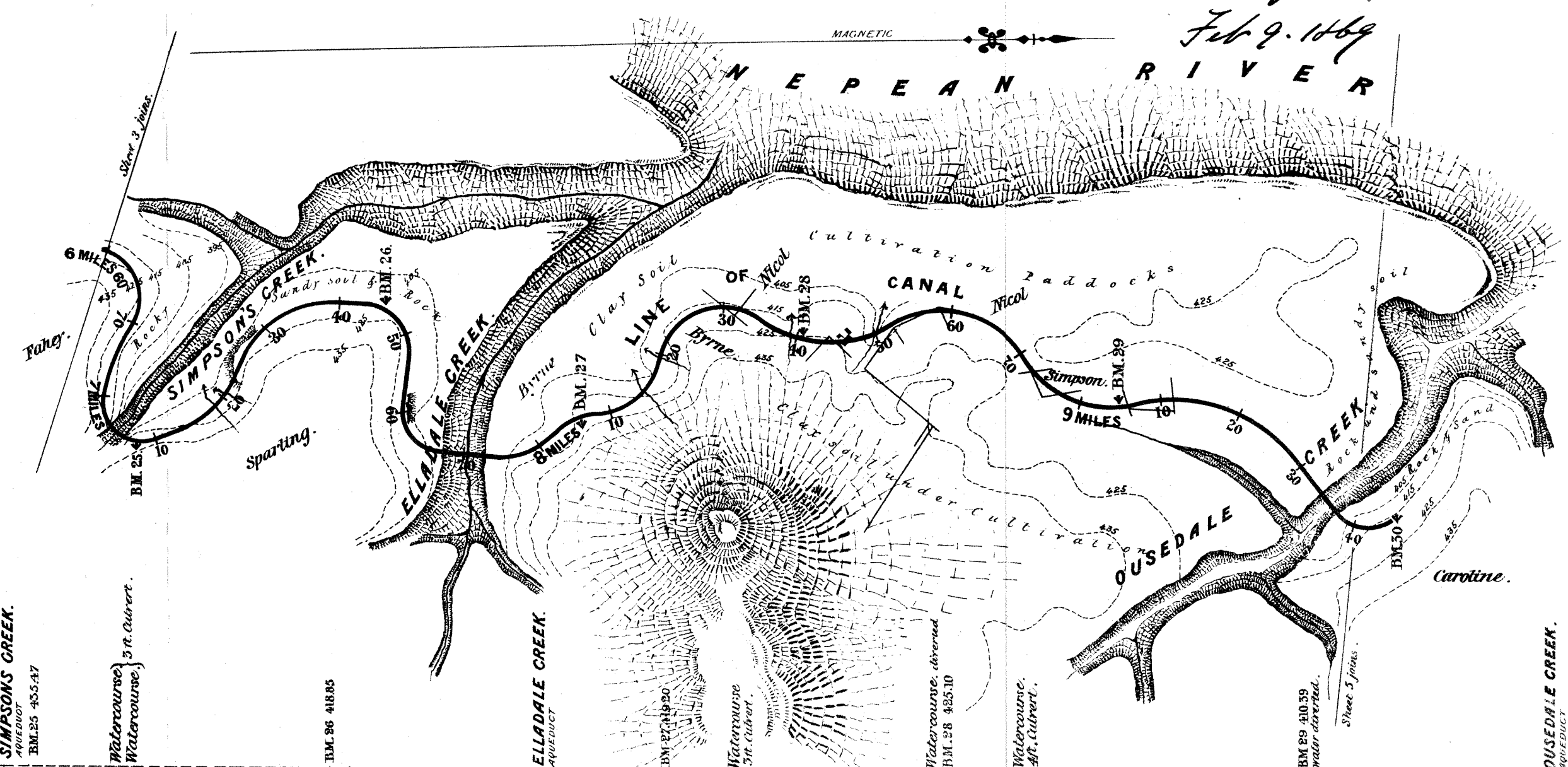
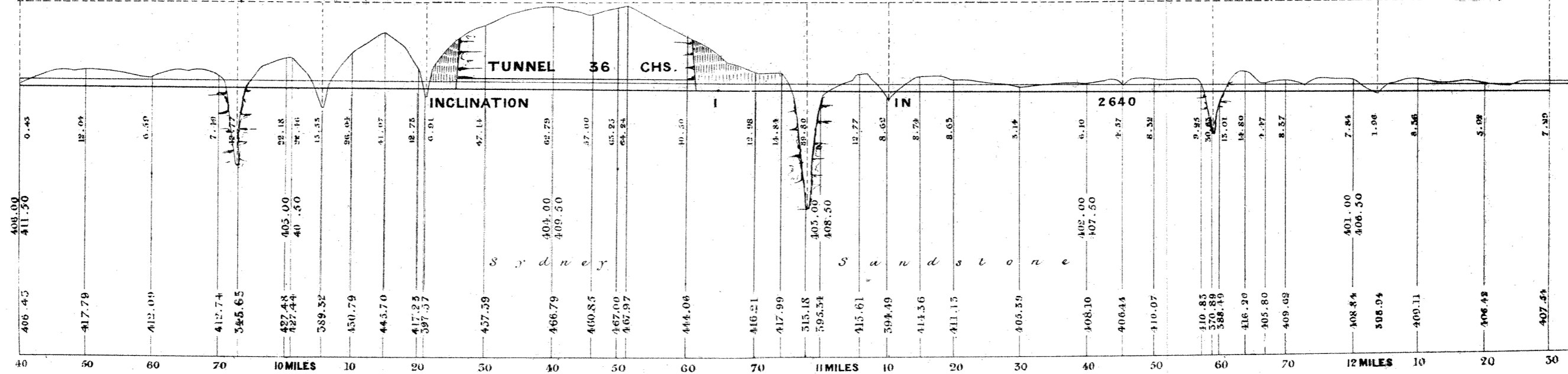
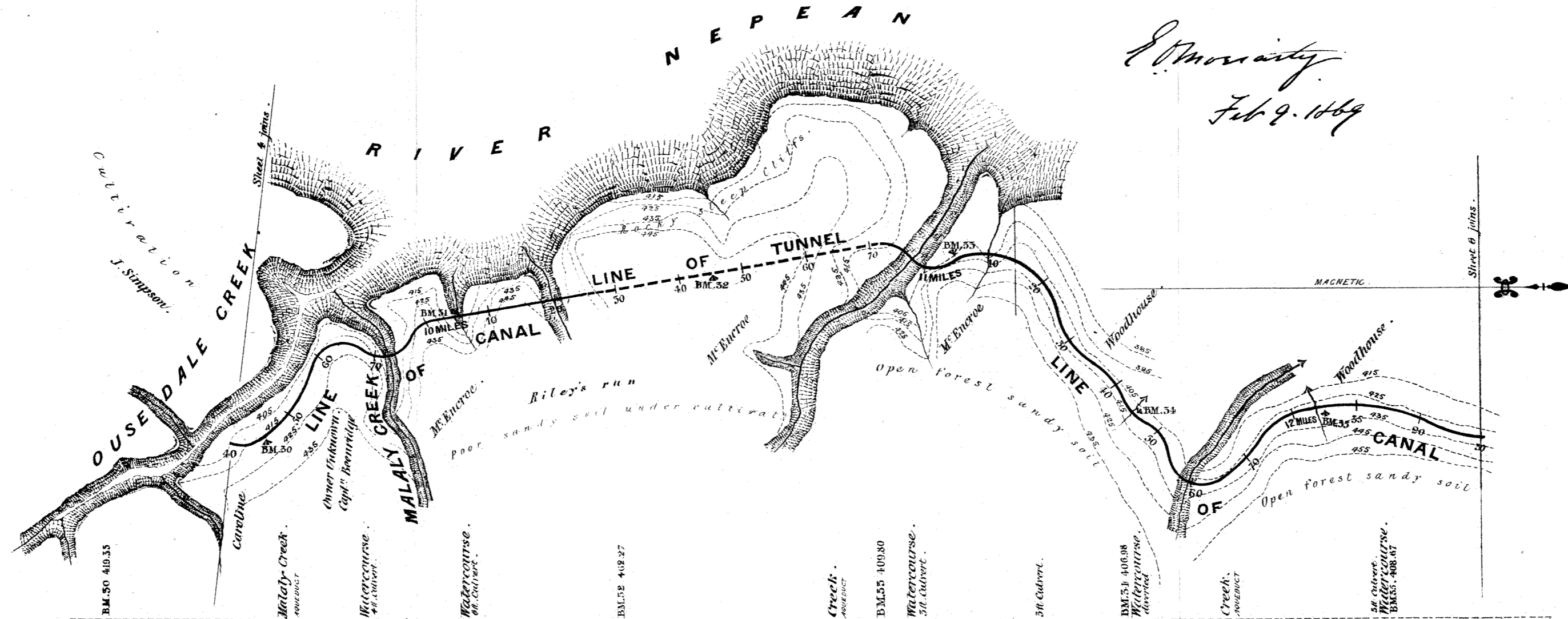


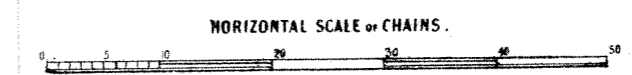
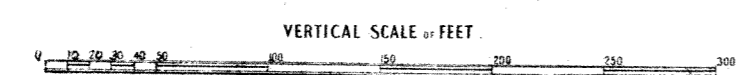
Photo-lithographed at the Govt Printing Office Sydney, N.S. Wales.

SYDNEY WATER SUPPLY

E. Moriarty
Feb 9. 1869



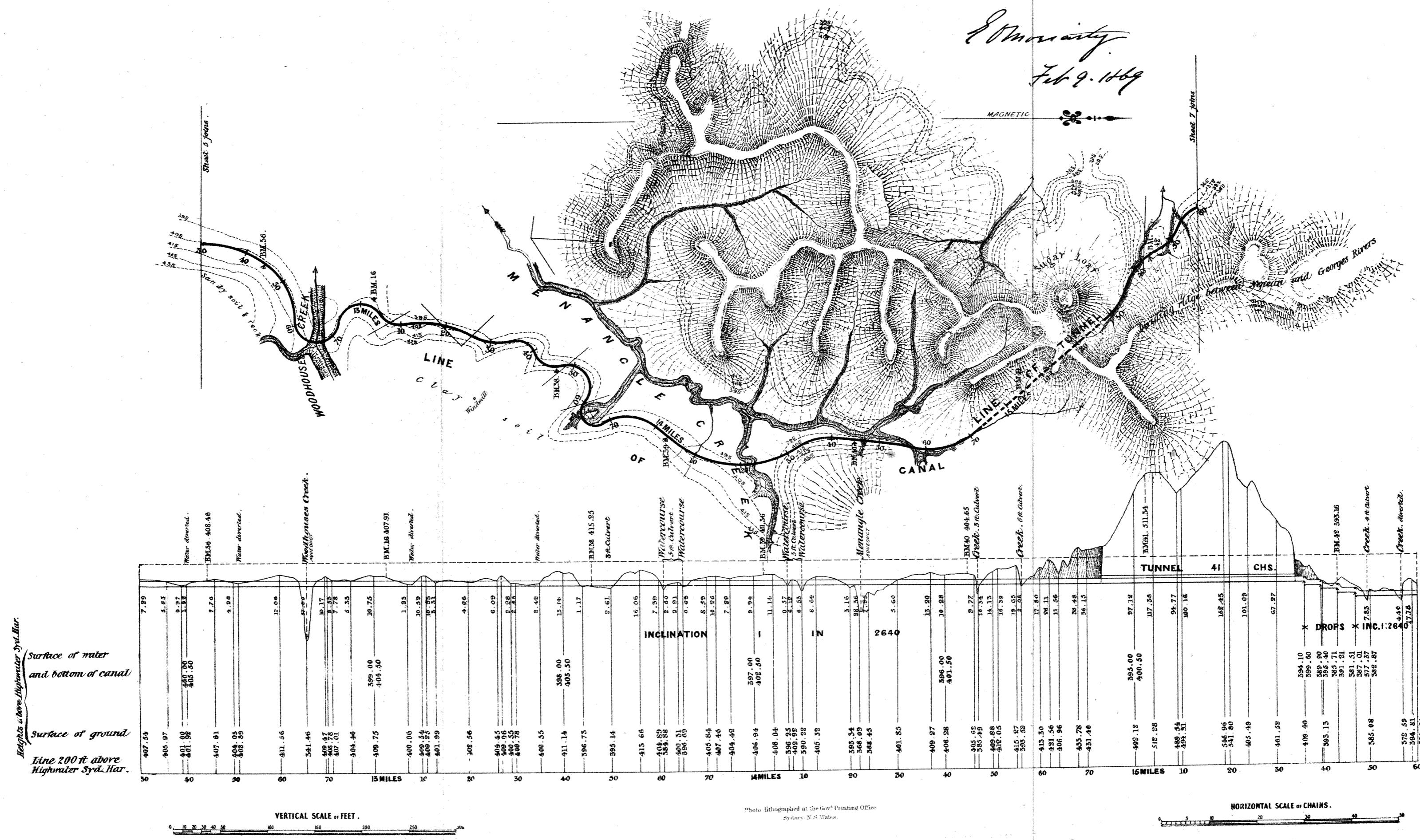
Heights above High Water Syd. Har.
Surface of Water and bottom of Canal
Surface of Ground
Line 200 Feet above High Water Sydney Harbour



Photolithographed at the Govt Printing Office Sydney, N.S. Wales.

SYDNEY WATER SUPPLY

St. Moritz
Feb 9. 1869



Heights above Highwater Syd. Har.
Surface of water and bottom of canal
Surface of ground
Line 200 ft above Highwater Syd. Har.

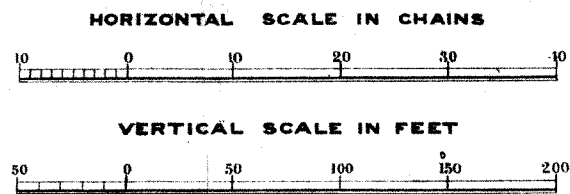
Distance (Miles)	Surface of water and bottom of canal (Feet)	Surface of ground (Feet)	Inclination (in 2640)
0	407.59	407.59	7.89
1	406.07	406.07	5.85
2	405.00	405.00	0.97
3	405.50	405.50	1.88
4	407.81	407.81	7.76
5	408.05	408.05	4.38
6	408.89	408.89	12.08
7	411.56	411.56	10.17
8	431.46	431.46	7.78
9	409.87	409.87	5.35
10	408.76	408.76	10.75
11	407.01	407.01	1.95
12	404.84	404.84	10.59
13	409.75	409.75	8.37
14	404.50	404.50	4.06
15	408.00	408.00	6.09
16	409.54	409.54	2.08
17	408.59	408.59	2.84
18	401.99	401.99	8.48
19	402.54	402.54	12.14
20	404.45	404.45	1.17
21	409.06	409.06	2.61
22	408.06	408.06	16.06
23	400.52	400.52	7.59
24	407.75	407.75	2.60
25	408.55	408.55	2.91
26	411.14	411.14	0.88
27	396.75	396.75	8.69
28	395.14	395.14	10.36
29	415.66	415.66	7.89
30	404.82	404.82	9.94
31	389.88	389.88	402.50
32	384.88	384.88	11.14
33	400.51	400.51	0.57
34	386.65	386.65	8.32
35	405.84	405.84	6.85
36	407.46	407.46	8.64
37	404.42	404.42	3.16
38	406.94	406.94	88.36
39	408.04	408.04	6.75
40	409.54	409.54	5.60
41	408.09	408.09	13.20
42	388.45	388.45	10.88
43	401.85	401.85	596.00
44	409.97	409.97	901.50
45	408.28	408.28	9.77
46	405.62	405.62	18.34
47	385.49	385.49	14.15
48	409.88	409.88	28.48
49	412.05	412.05	54.15
50	415.57	415.57	12.65
51	385.52	385.52	2.84
52	413.50	413.50	17.40
53	421.54	421.54	98.11
54	400.96	400.96	31.65
55	405.78	405.78	28.48
56	431.40	431.40	54.15
57	492.12	492.12	97.18
58	512.28	512.28	117.85
59	489.54	489.54	94.77
60	452.51	452.51	100.16
61	514.05	514.05	158.45
62	541.80	541.80	101.09
63	405.49	405.49	67.87
64	441.59	441.59	594.10
65	409.40	409.40	599.60
66	385.15	385.15	589.90
67	397.01	397.01	585.40
68	387.51	387.51	597.01
69	585.08	585.08	587.01
70	577.57	577.57	585.87
71	572.59	572.59	594.10
72	594.81	594.81	599.60
73	591.04	591.04	617.8

VERTICAL SCALE OF FEET.

HORIZONTAL SCALE OF CHAINS.

Photo-lithographed at the Govt. Printing Office Sydney, N.S.Wales.

SYDNEY WATER SUPPLY



Francis H. Sydney

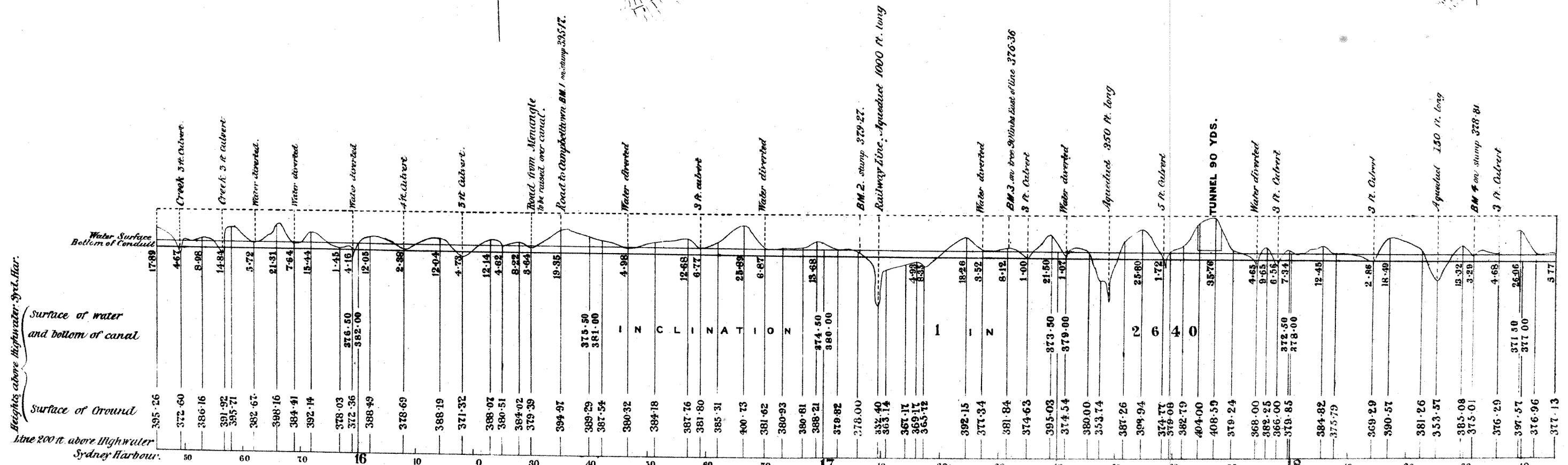
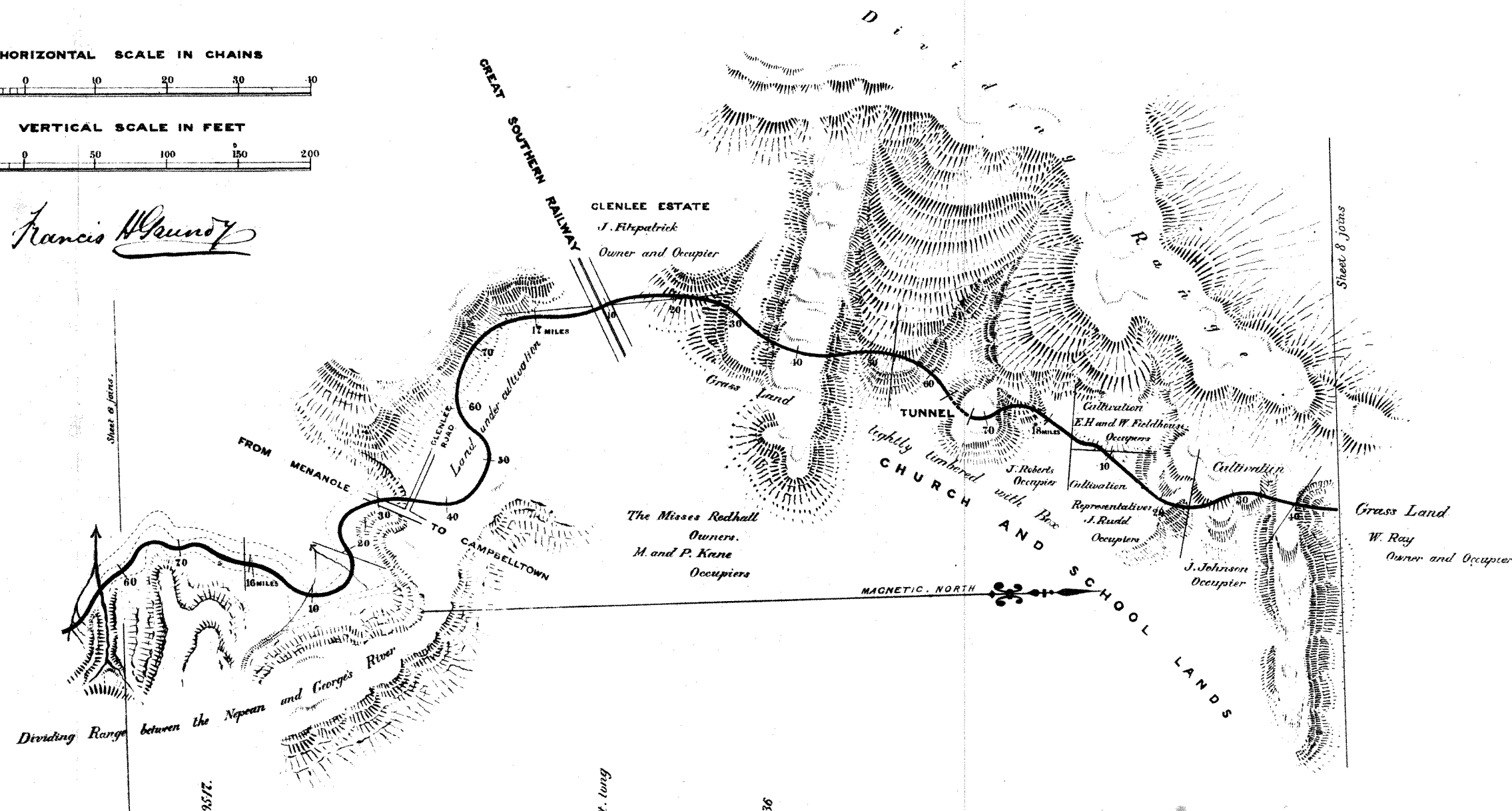
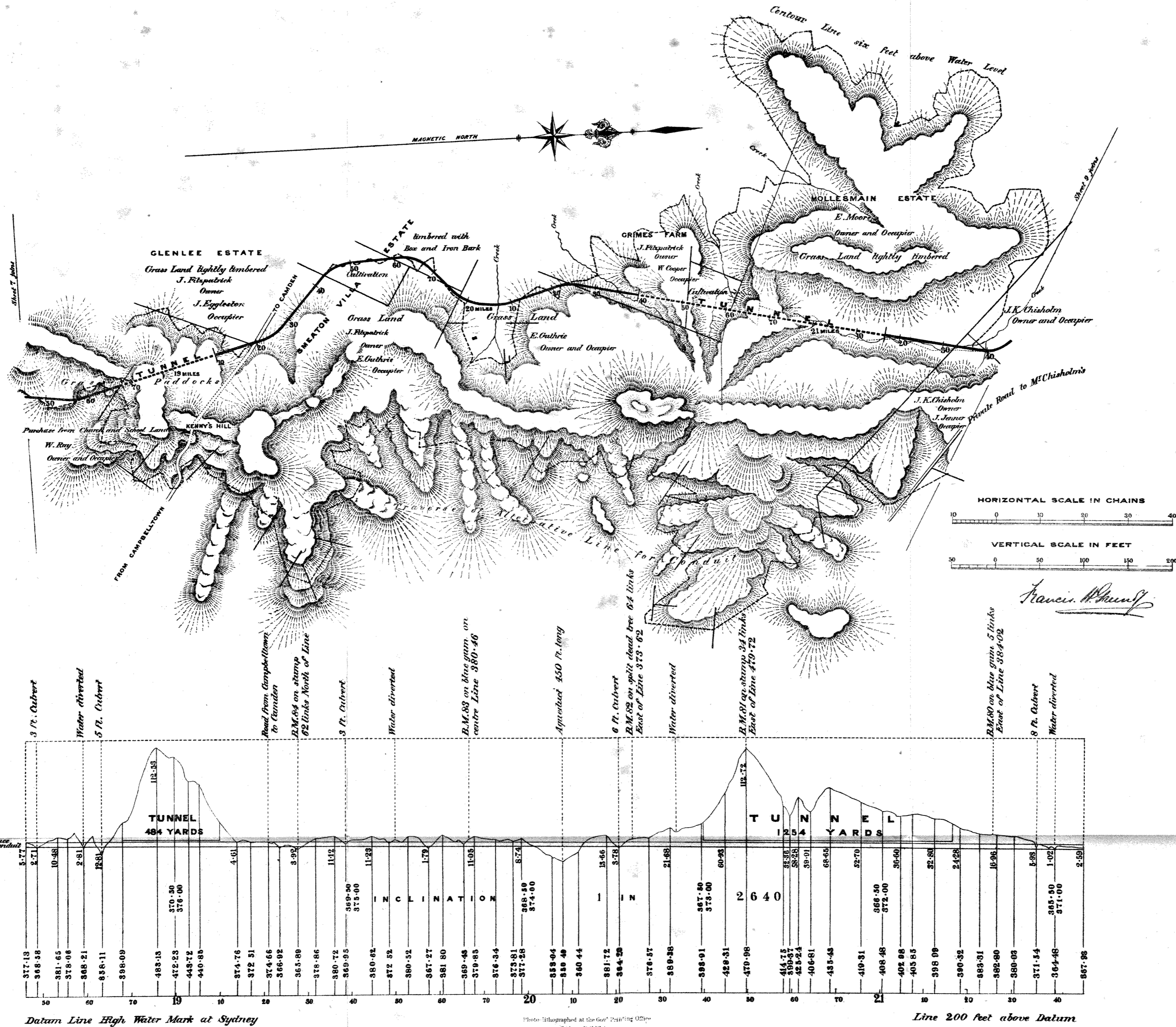


Photo-lithographed at the Govt Printing Office Sydney, N.S. Wales.

SYDNEY WATER SUPPLY

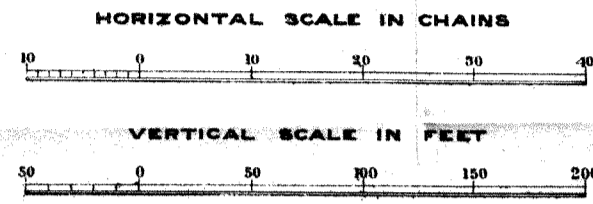
SHEET N^o 8



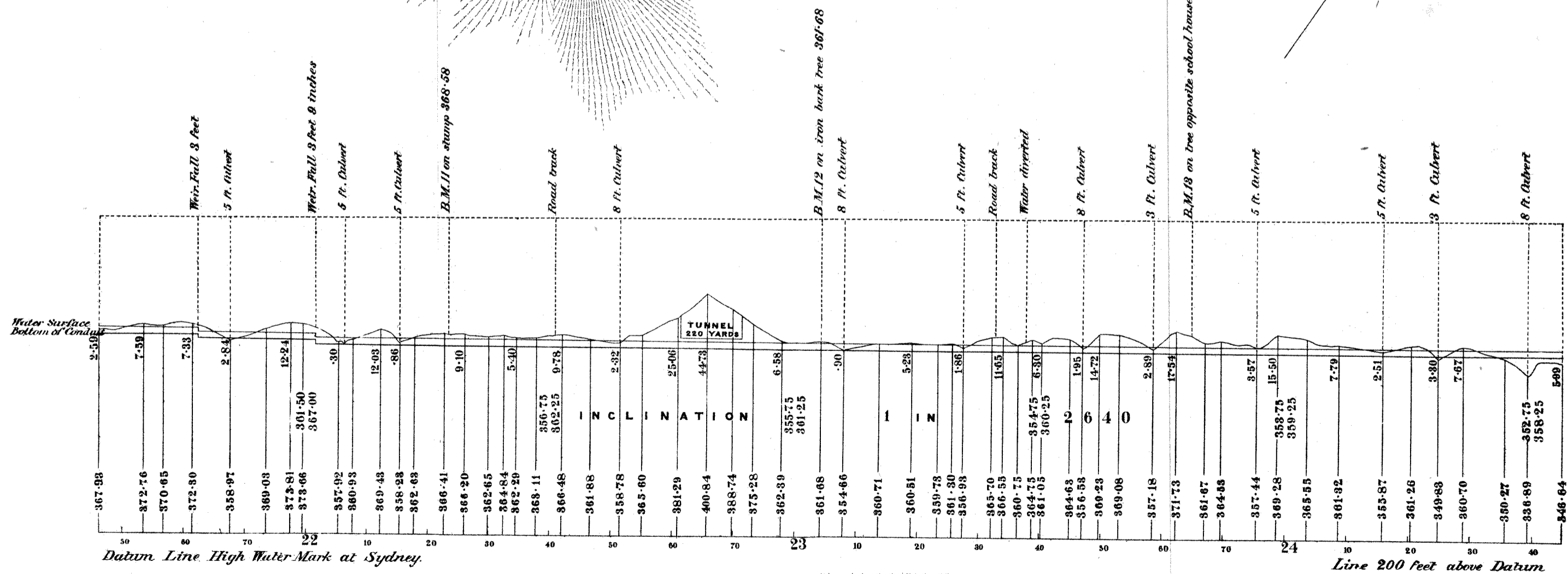
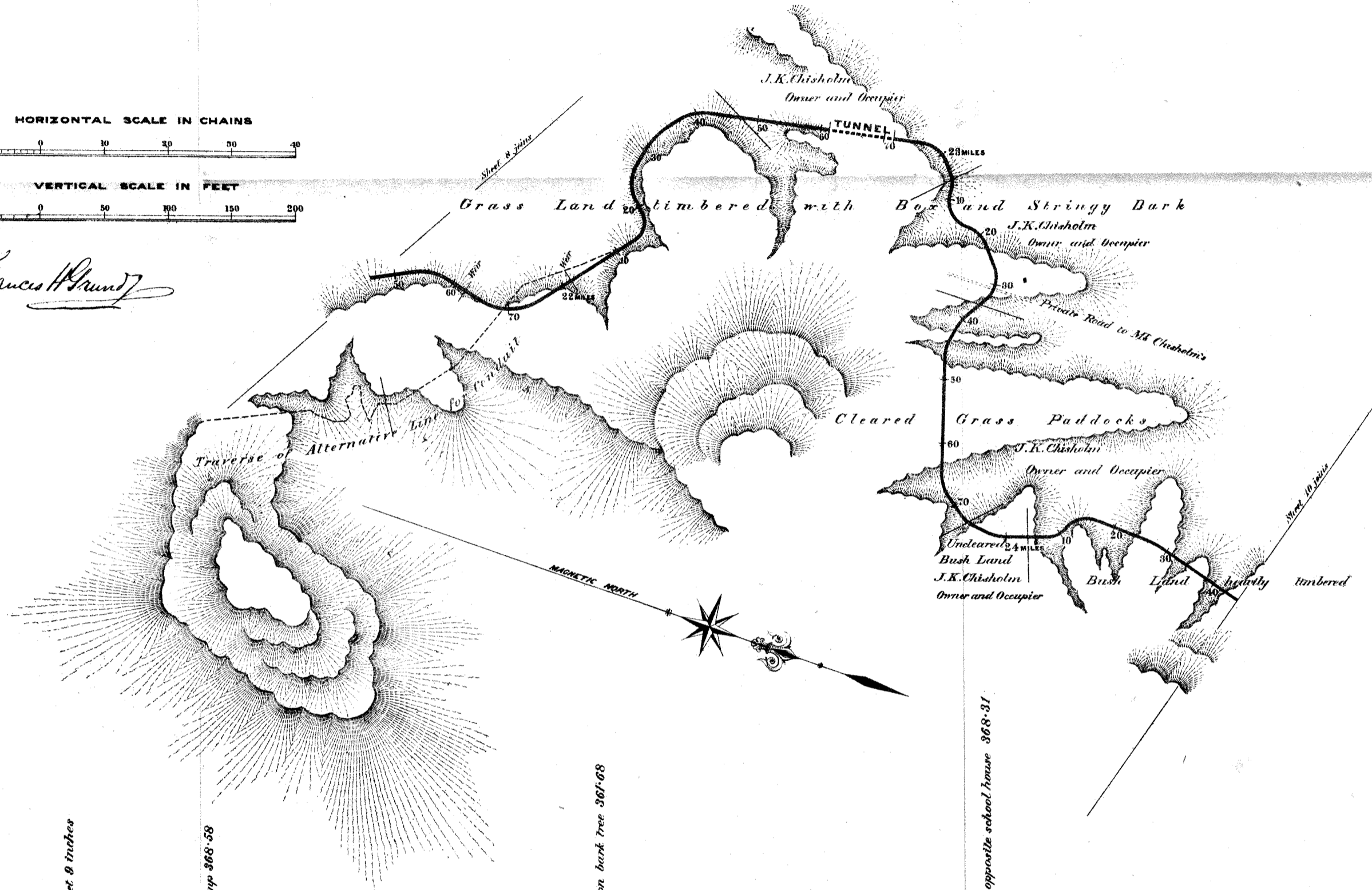
Francis. H. Smith

Photo lithographed at the Govt. Printing Office Sydney, N.S. Wales.

SYDNEY WATER SUPPLY

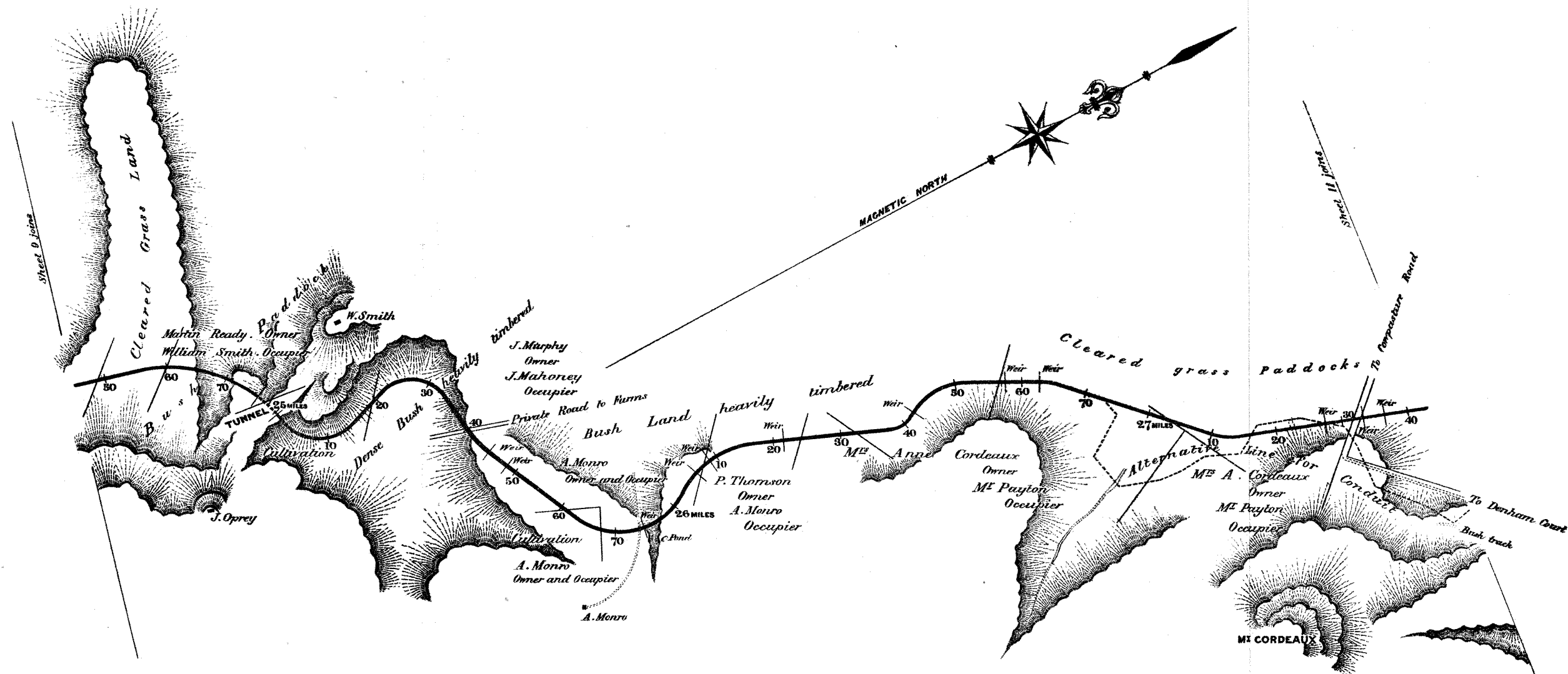


Francis H. Grundy



Drawn & Engraved at the Geol. Dept. Office Sydney, N.S.W.

SYDNEY WATER SUPPLY



HORIZONTAL SCALE IN CHAINS



VERTICAL SCALE IN FEET

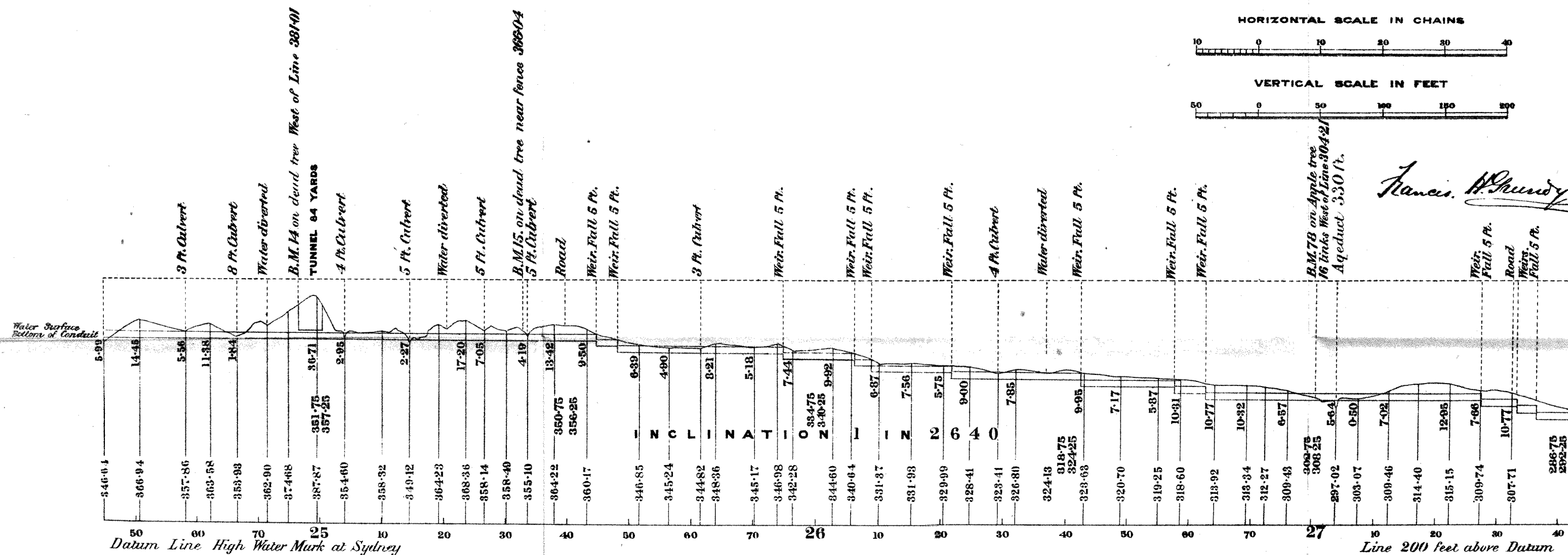
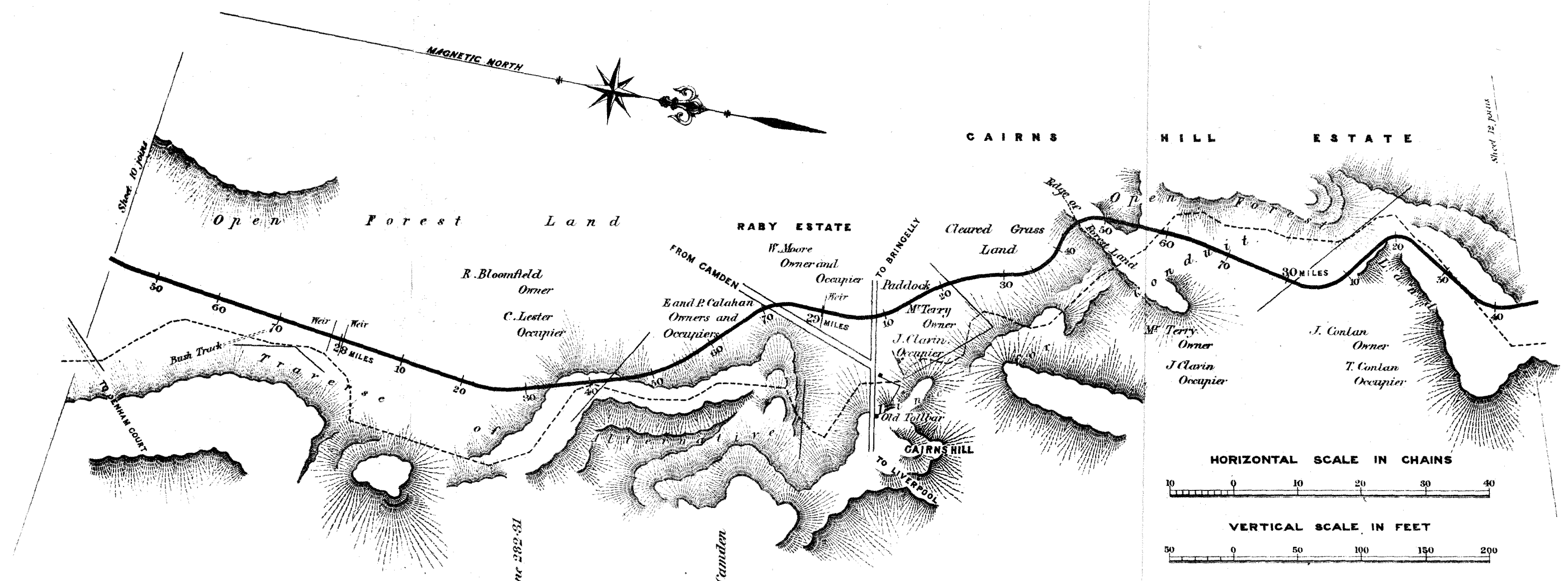


Photo-lithographed at the Govt. Printing Office Sydney, N.S. Wales

SYDNEY WATER SUPPLY



Francis H. Grundy

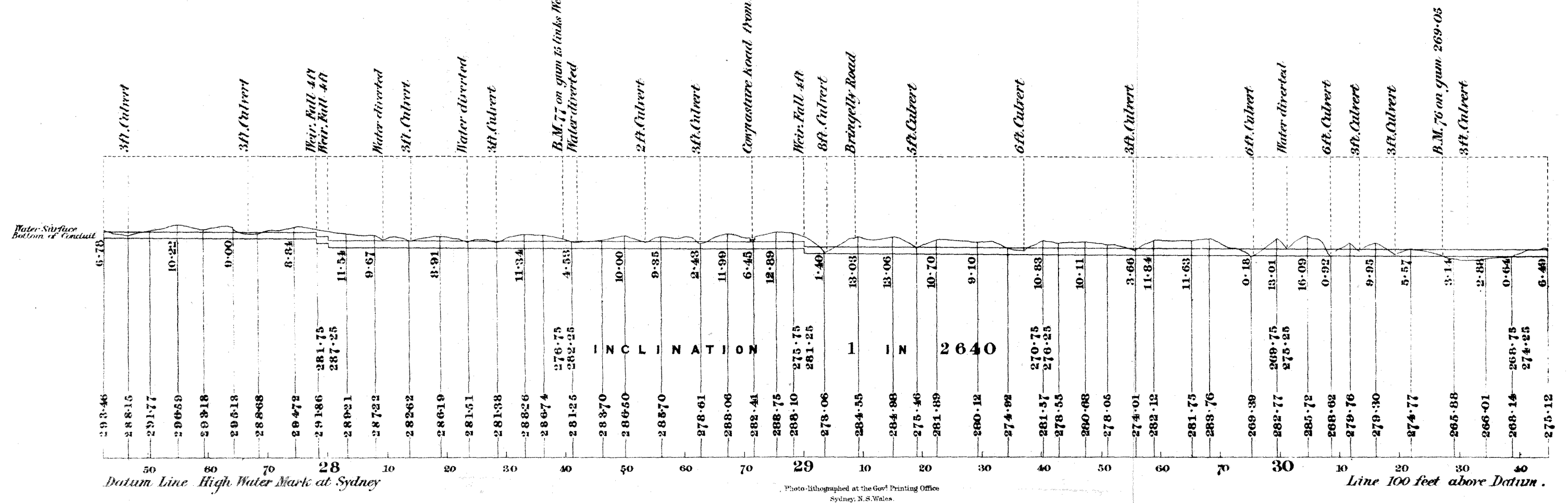
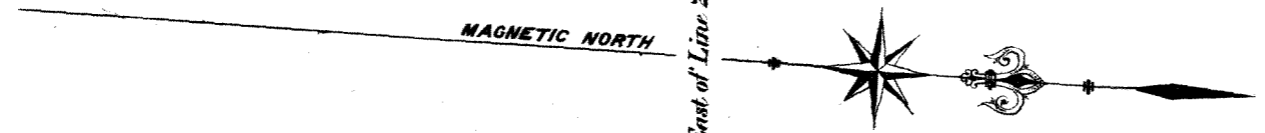
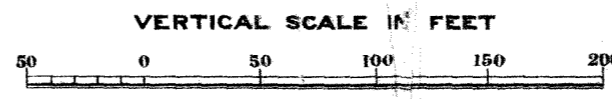
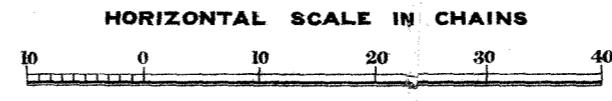
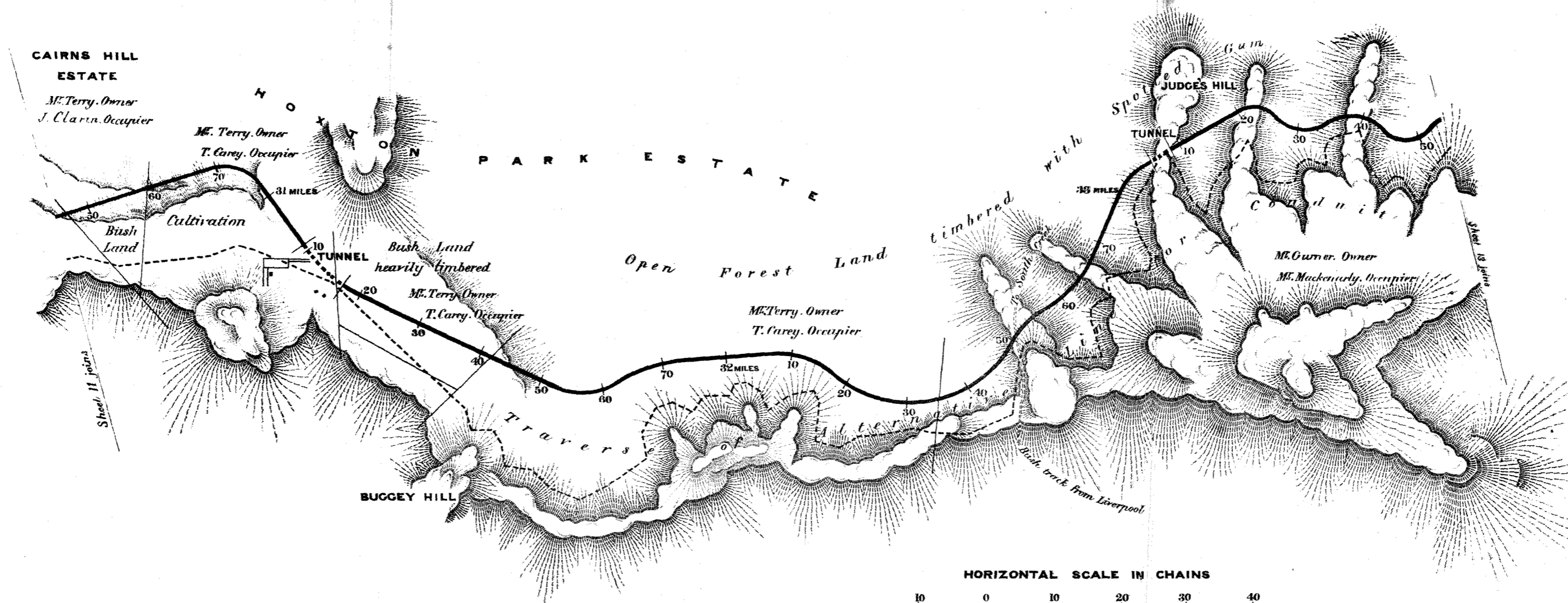


Photo-lithographed at the Govt Printing Office Sydney, N.S.Wales.

SYDNEY WATER SUPPLY

SHEET N° 12



Francis Kennedy

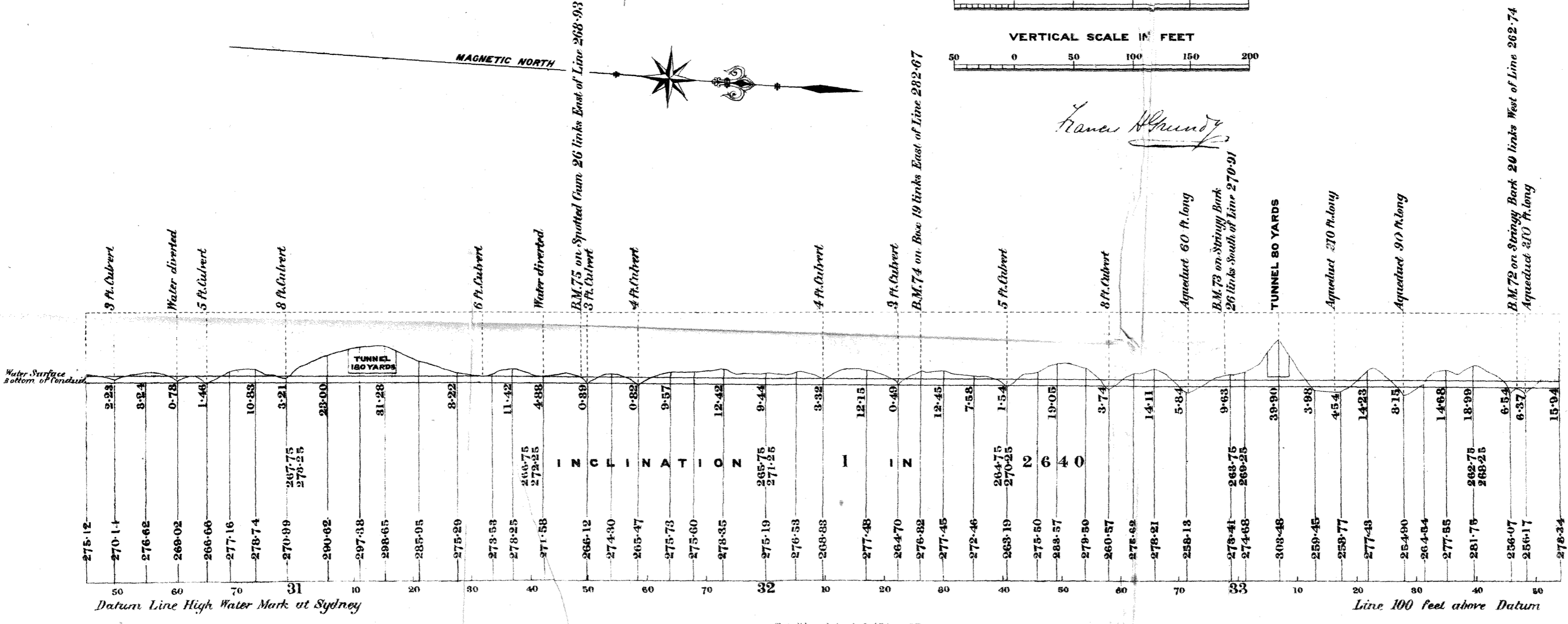
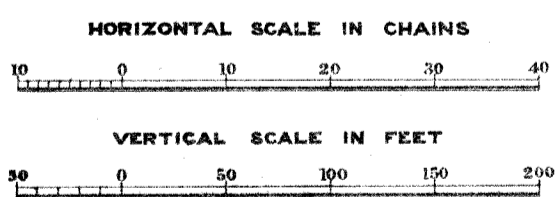
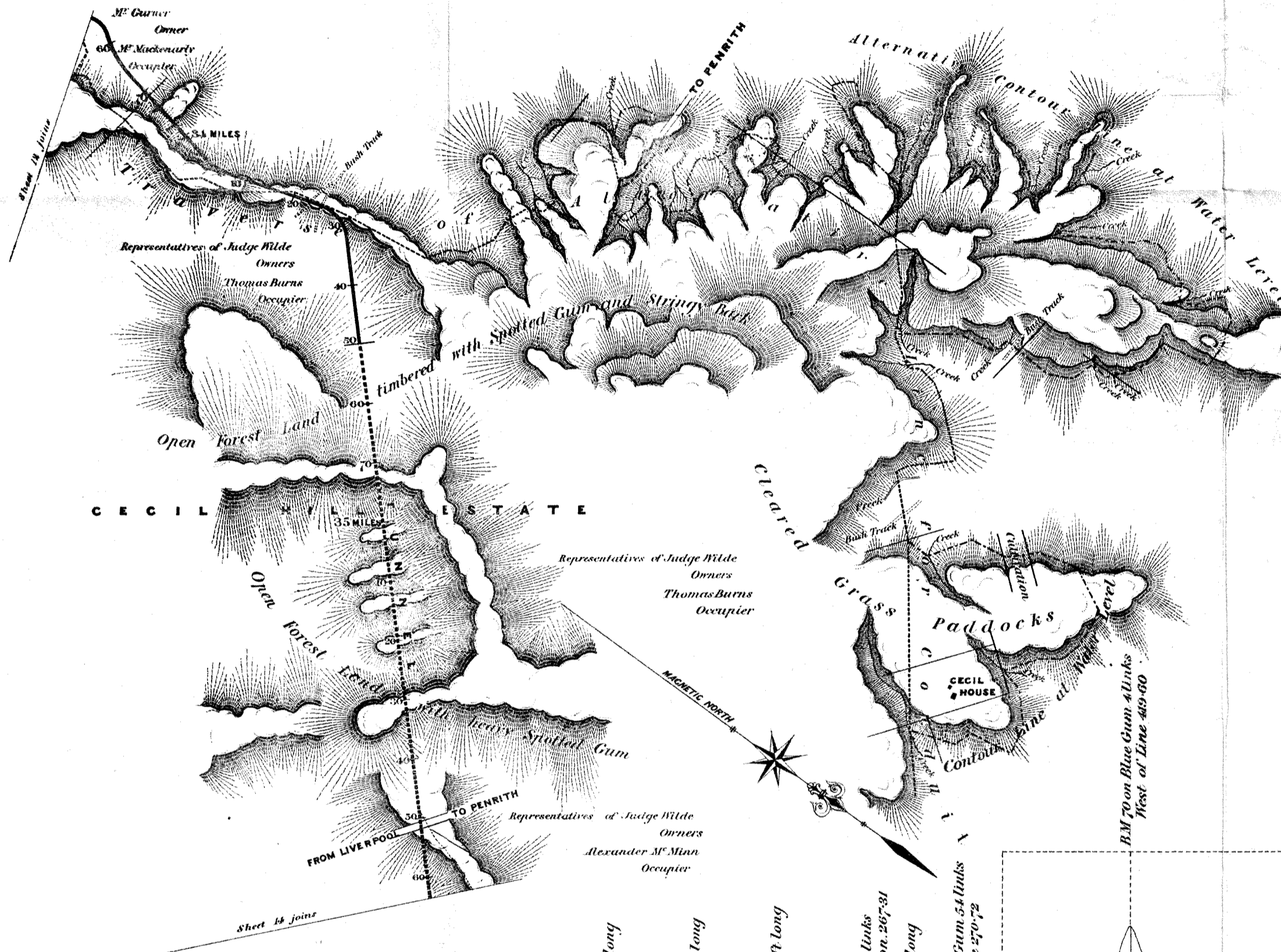


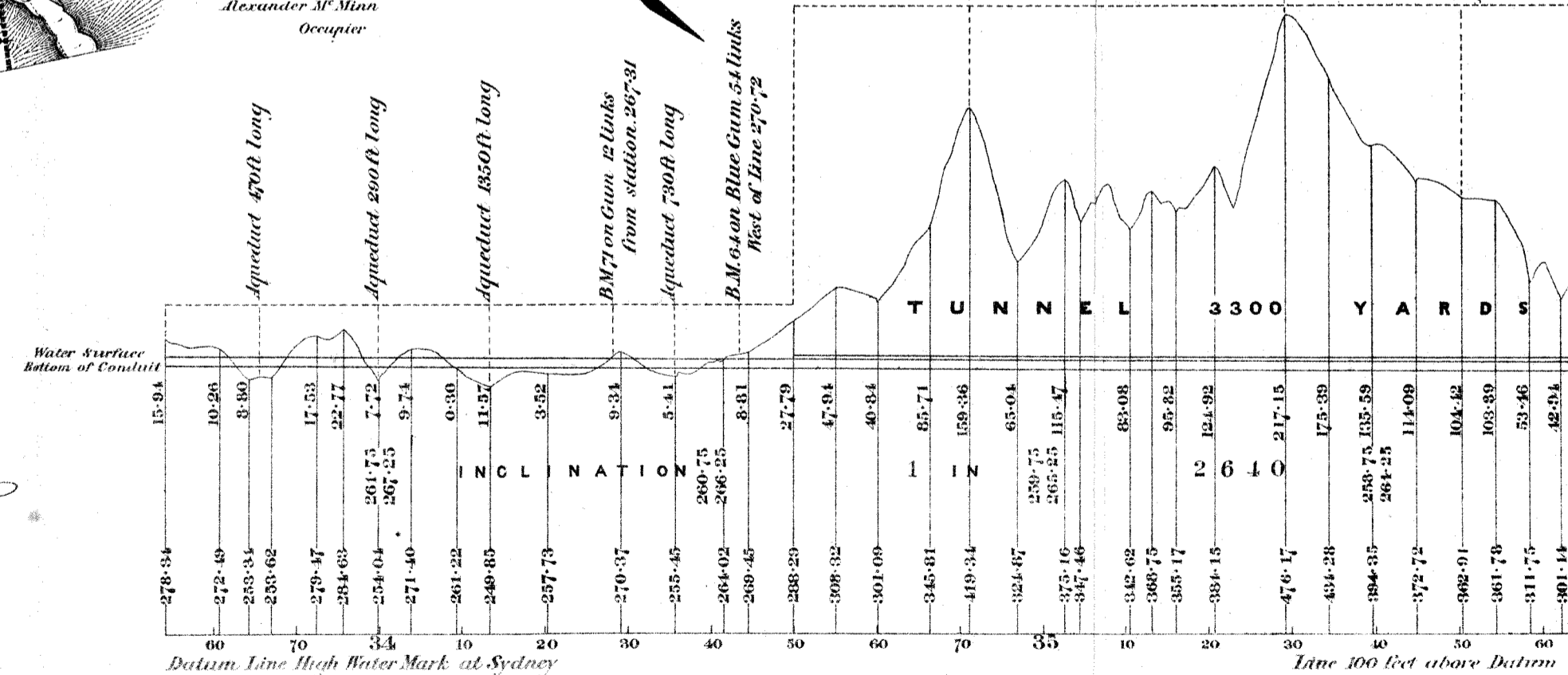
Photo lithographed at the Govt. Printing Office
Sydney: H. S. Wales

SYDNEY WATER SUPPLY



Francis Plundy

Photo-lithographed at the Govt Printing Office Sydney N.S.W.



B.M. 69 on Box 8 Links East of Line 469-84

Road from Liverpool to Penrith
B.M. 68 on Gum 10 Links East of Line 469-72

B.M. 70 on Blue Gum 4 Links West of Line 469-60

B.M. 64 on Blue Gum 5.4 Links West of Line 270-72

B.M. 71 on Gum 12 Links from station 267-31

Aqueduct 730ft long

Aqueduct 1350ft long

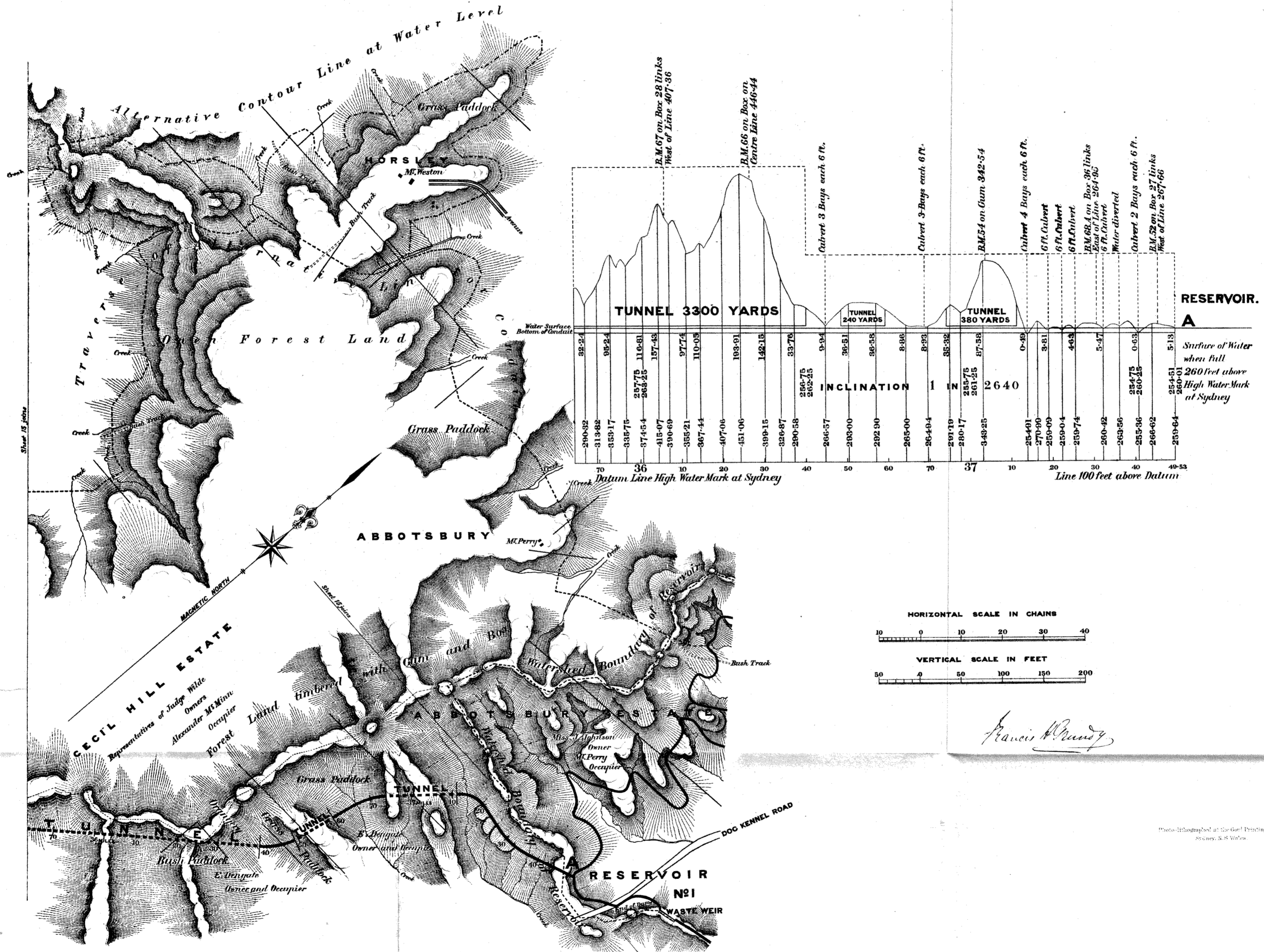
Aqueduct 200ft long

Aqueduct 470ft long

Datum Line High Water Mark at Sydney

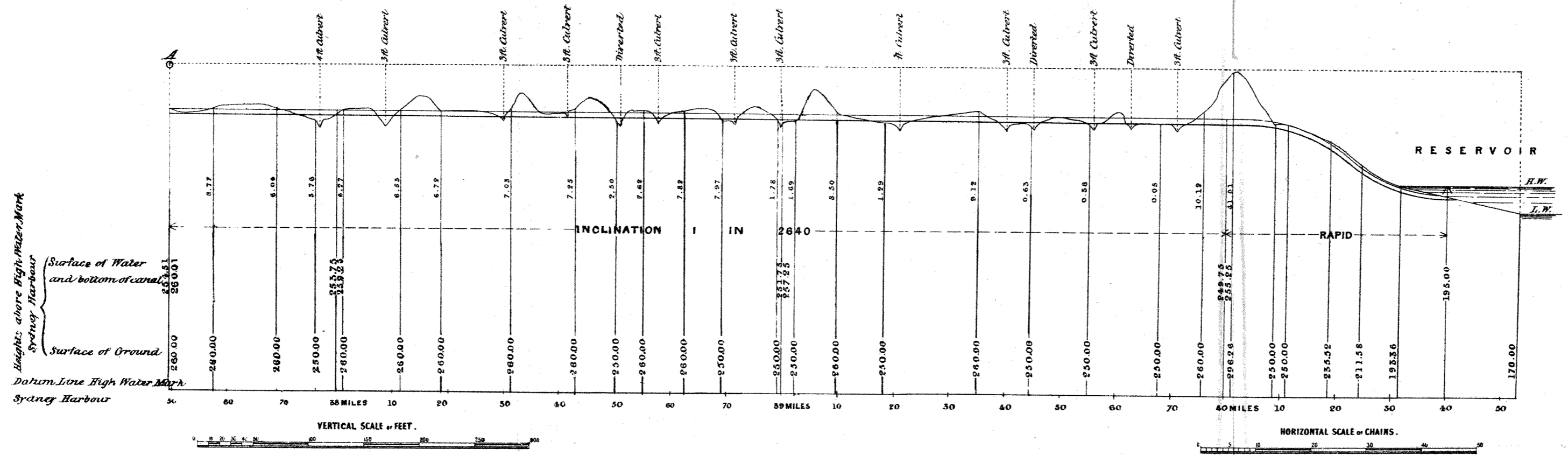
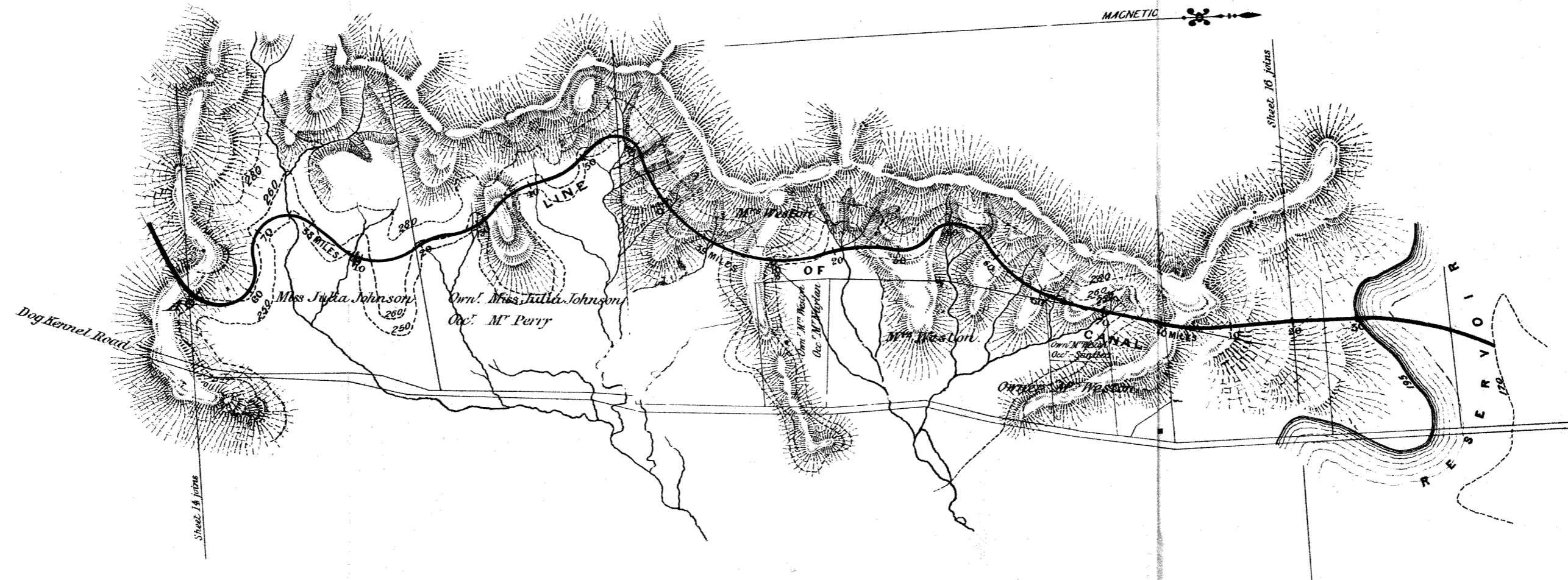
Line 100 ft above Datum

SYDNEY WATER SUPPLY



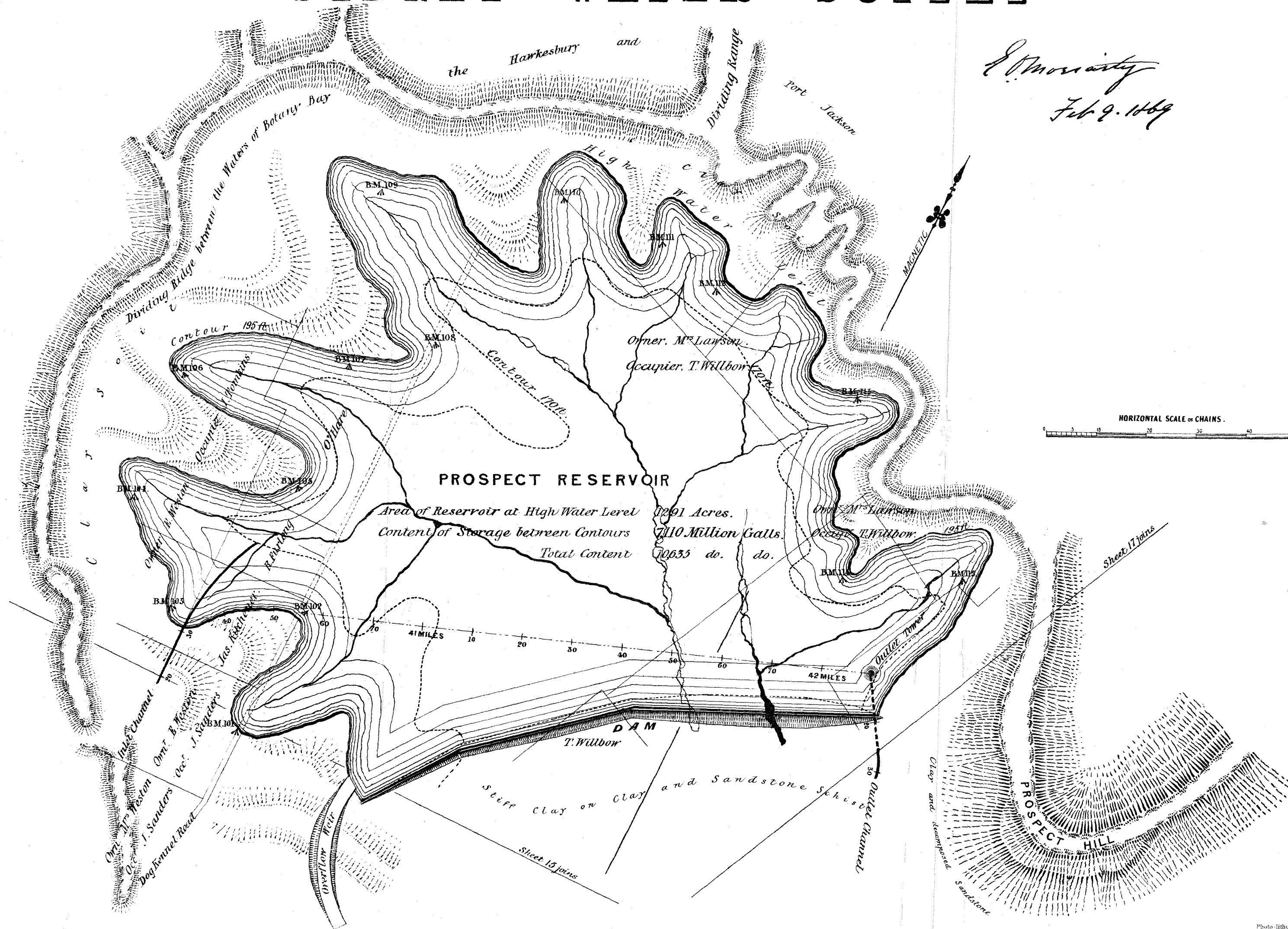
SYDNEY WATER SUPPLY

J. O. Moriarty
Feb 9. 1869



SYDNEY WATER SUPPLY

J. Moriarty
Feb 9. 1869



PROSPECT RESERVOIR
 Area of Reservoir at High Water Level 1291 Acres.
 Content of Storage between Contours 710 Million Galls.
 Total Content 70635 do. do.

steep clay on clay and sandstone schist

PROSPECT HILL

SYDNEY WATER SUPPLY

E. Moriarty
Feb 9. 1869

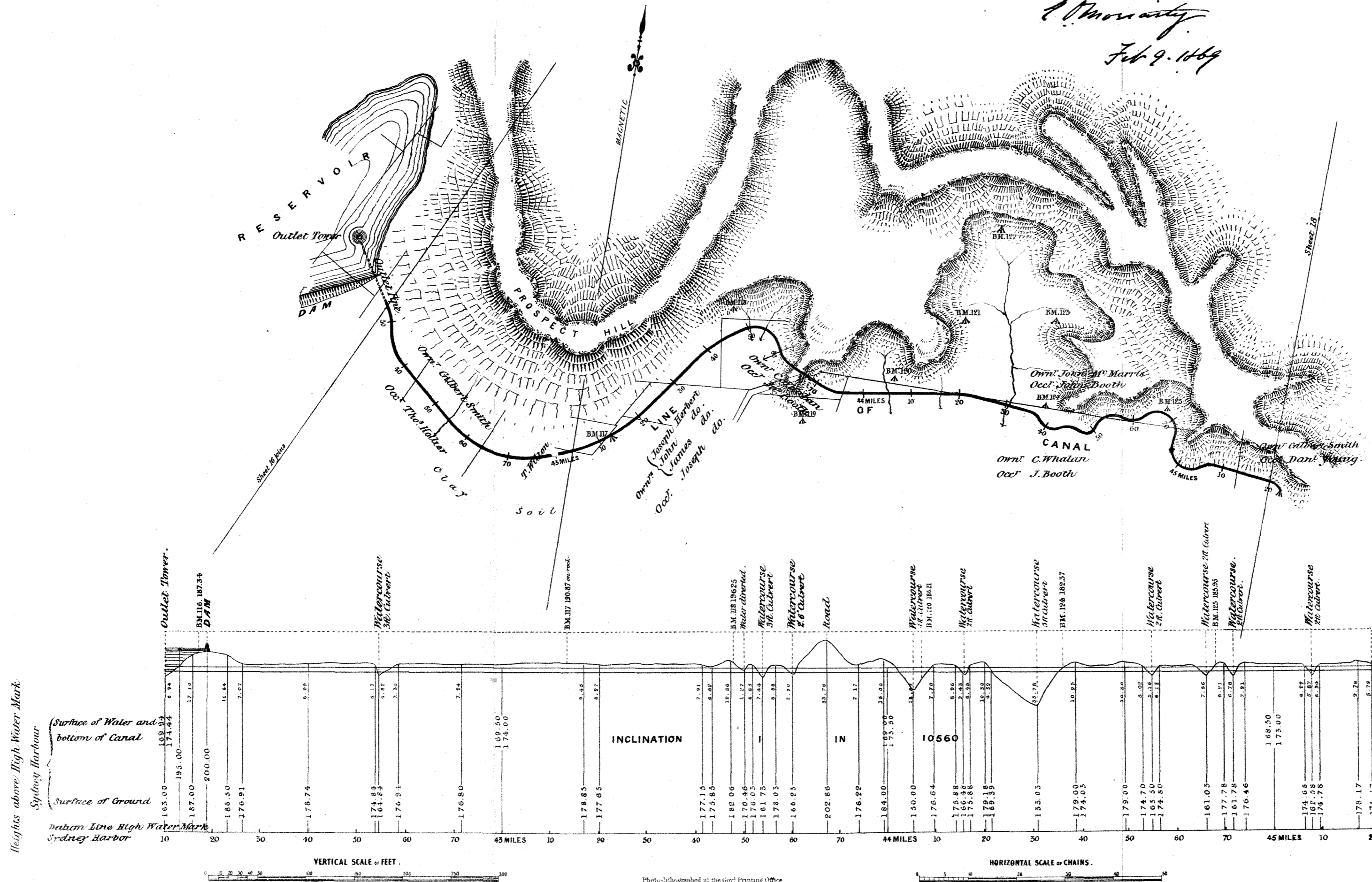
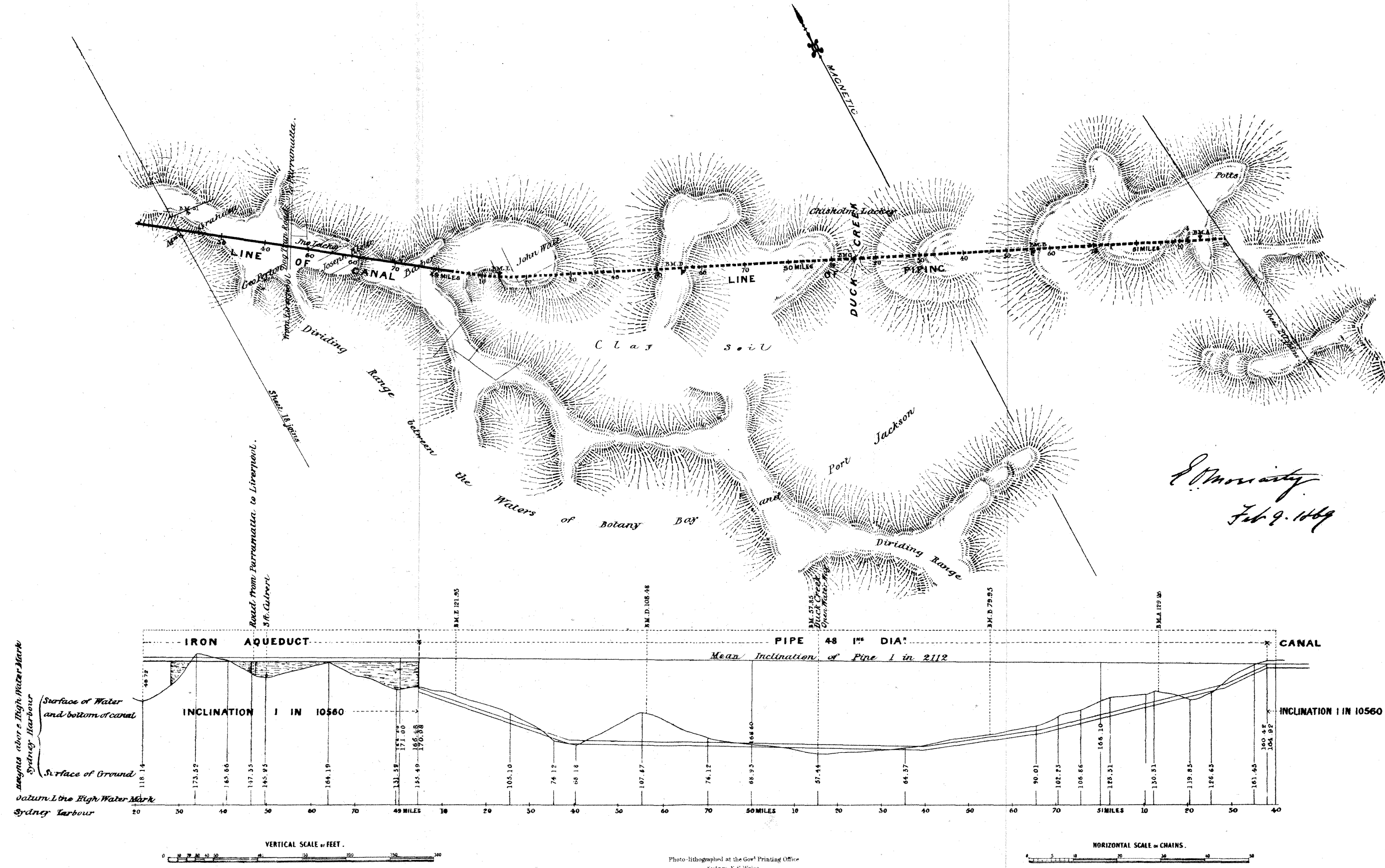


Photo-lithographed at the Govt Printing Office Sydney, N.S. Wales.

SYDNEY WATER SUPPLY



SYDNEY WATER SUPPLY

J. Moriarty
Feb 9. 1864

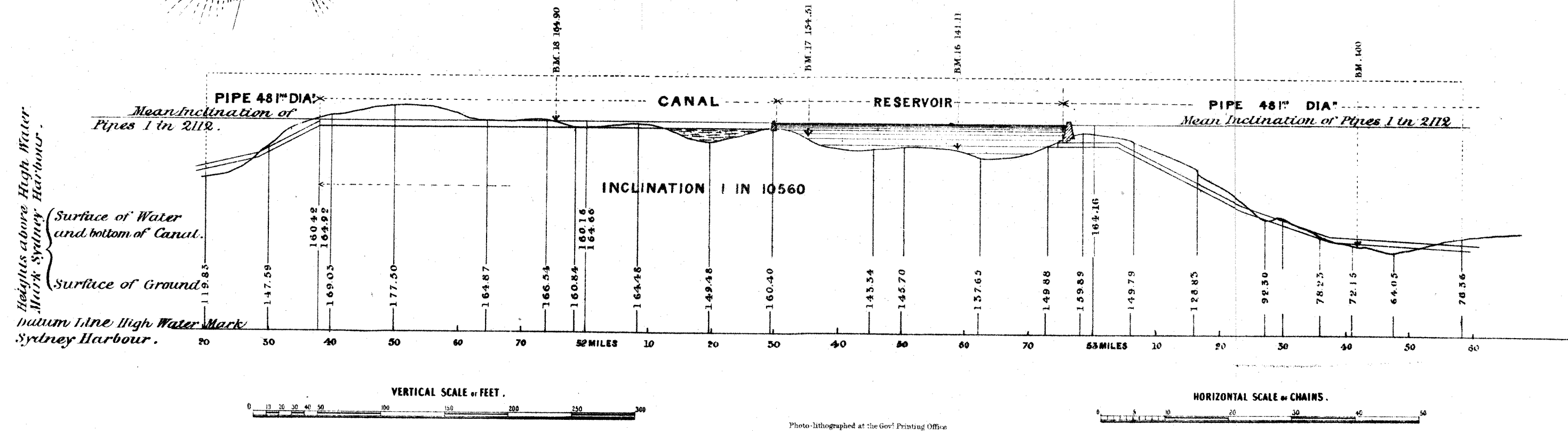
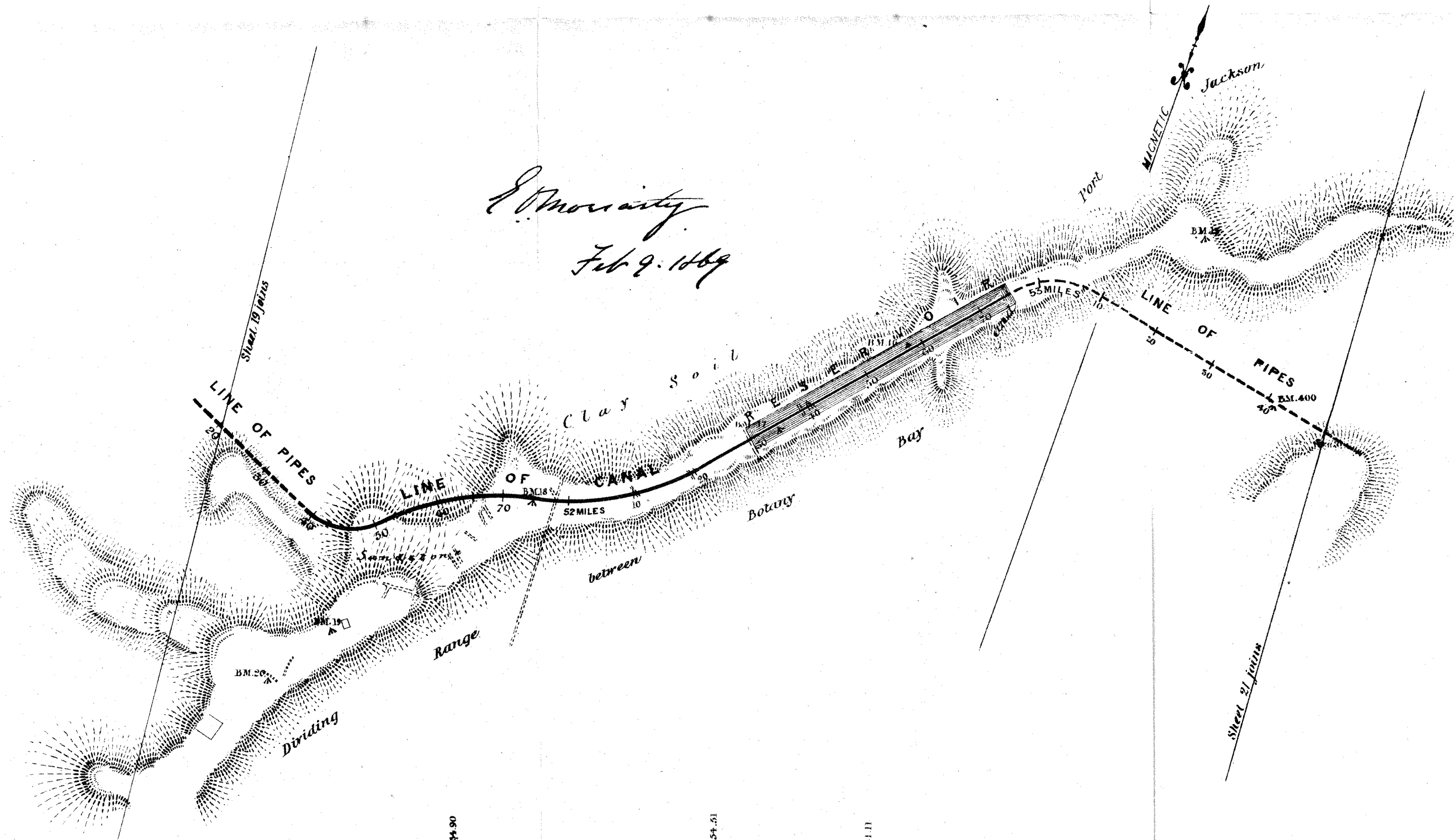
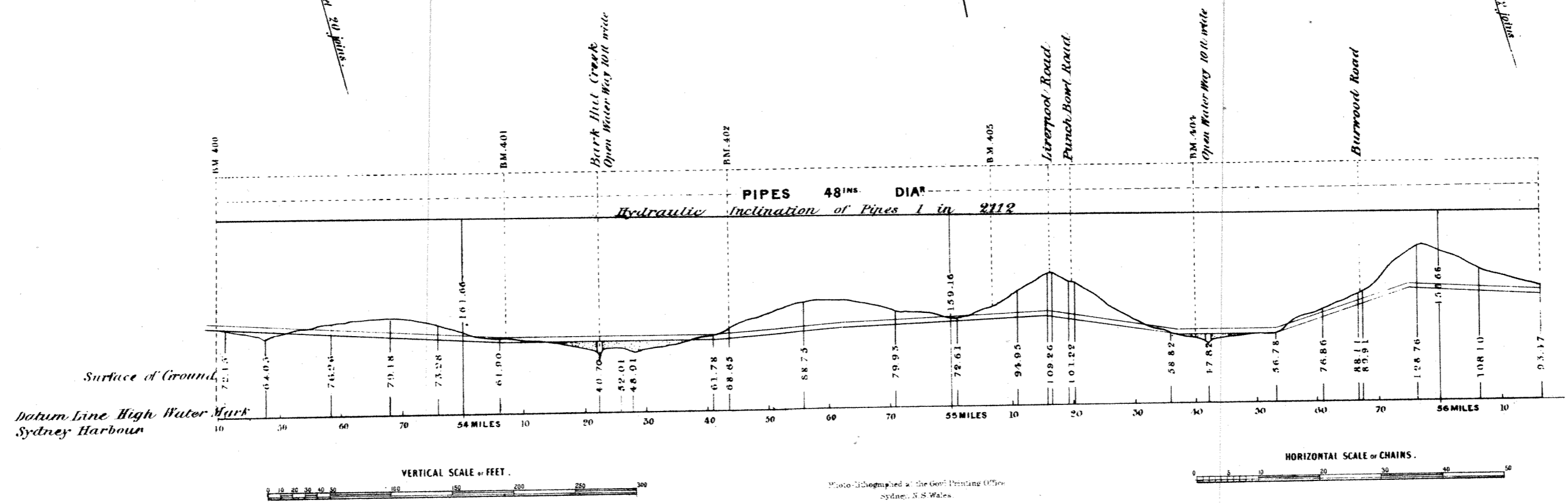
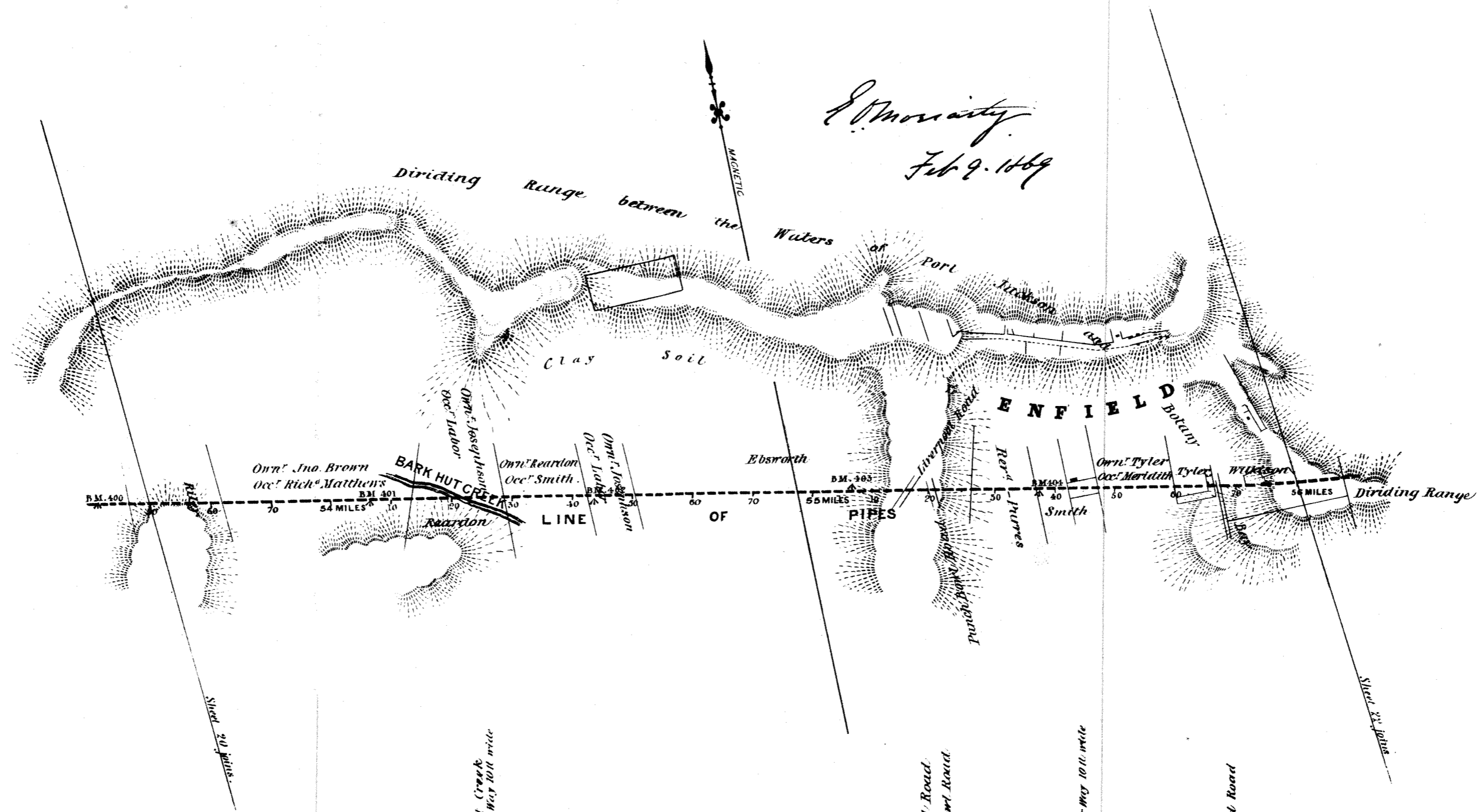


Photo-lithographed at the Govt Printing Office
 Sydney, N.S. Wales.

SYDNEY WATER SUPPLY

J. Moriarty
 Feb 9. 1869



SYDNEY WATER SUPPLY

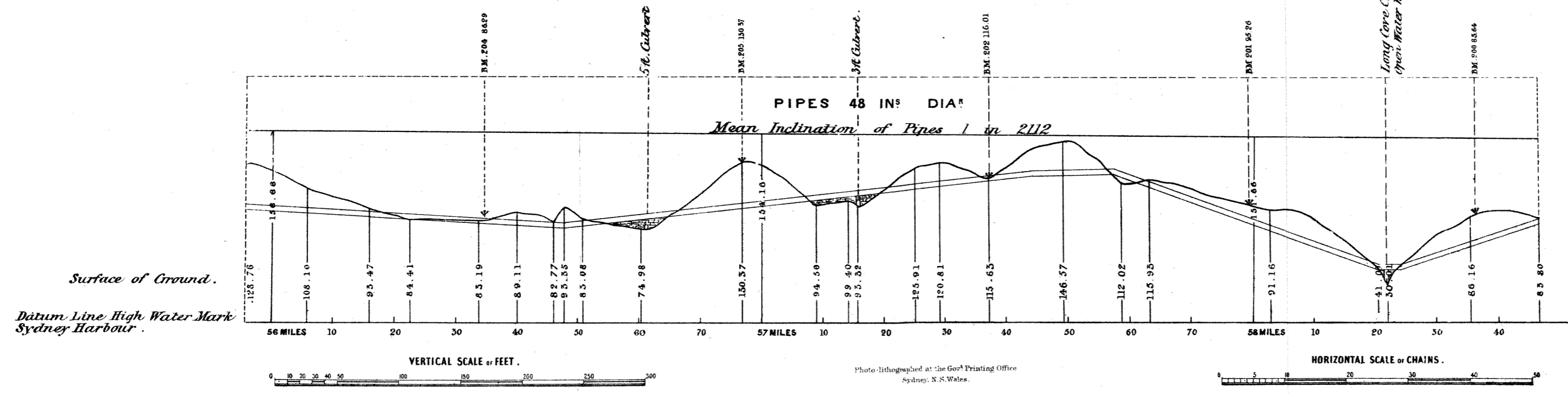
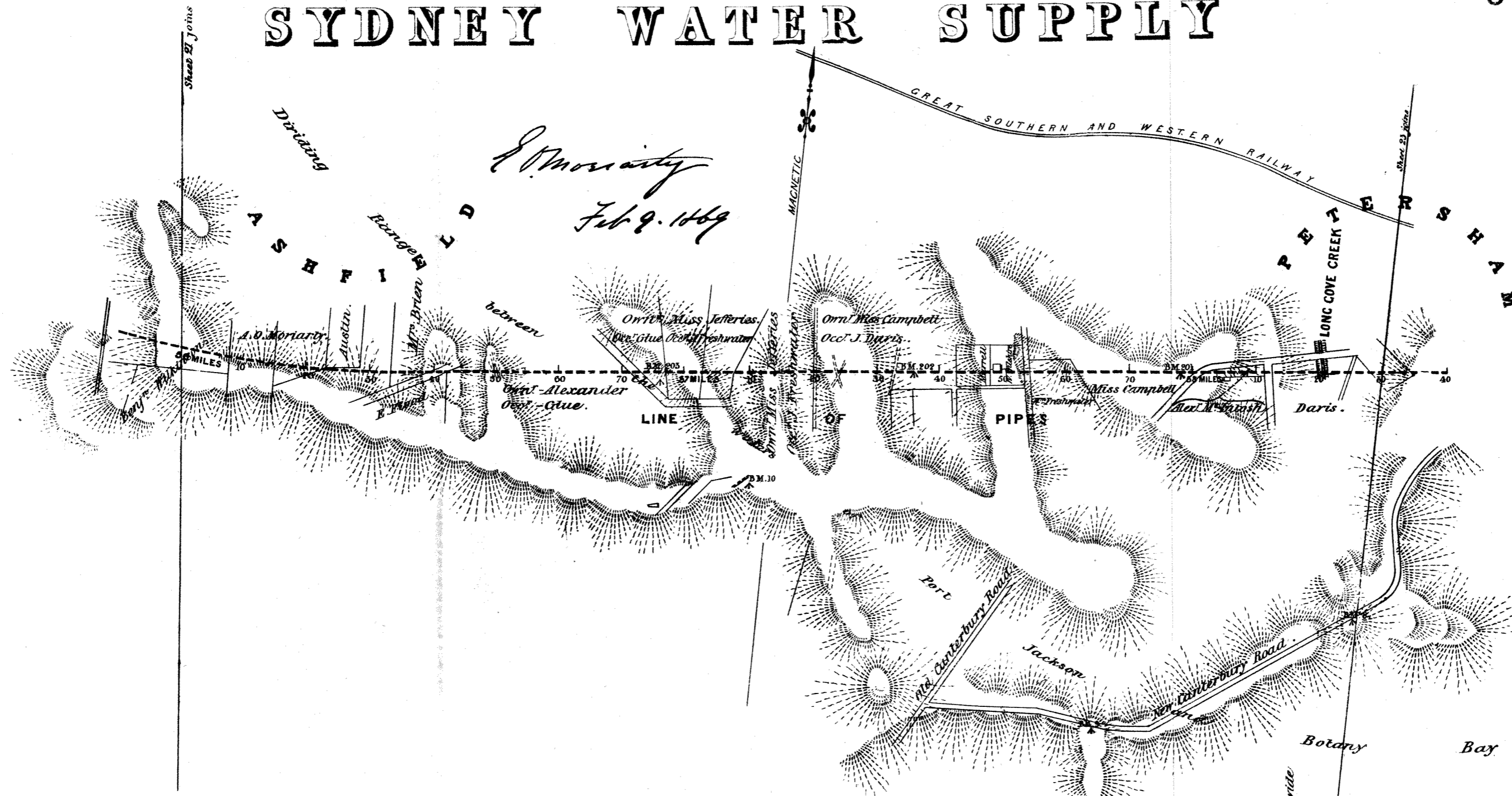
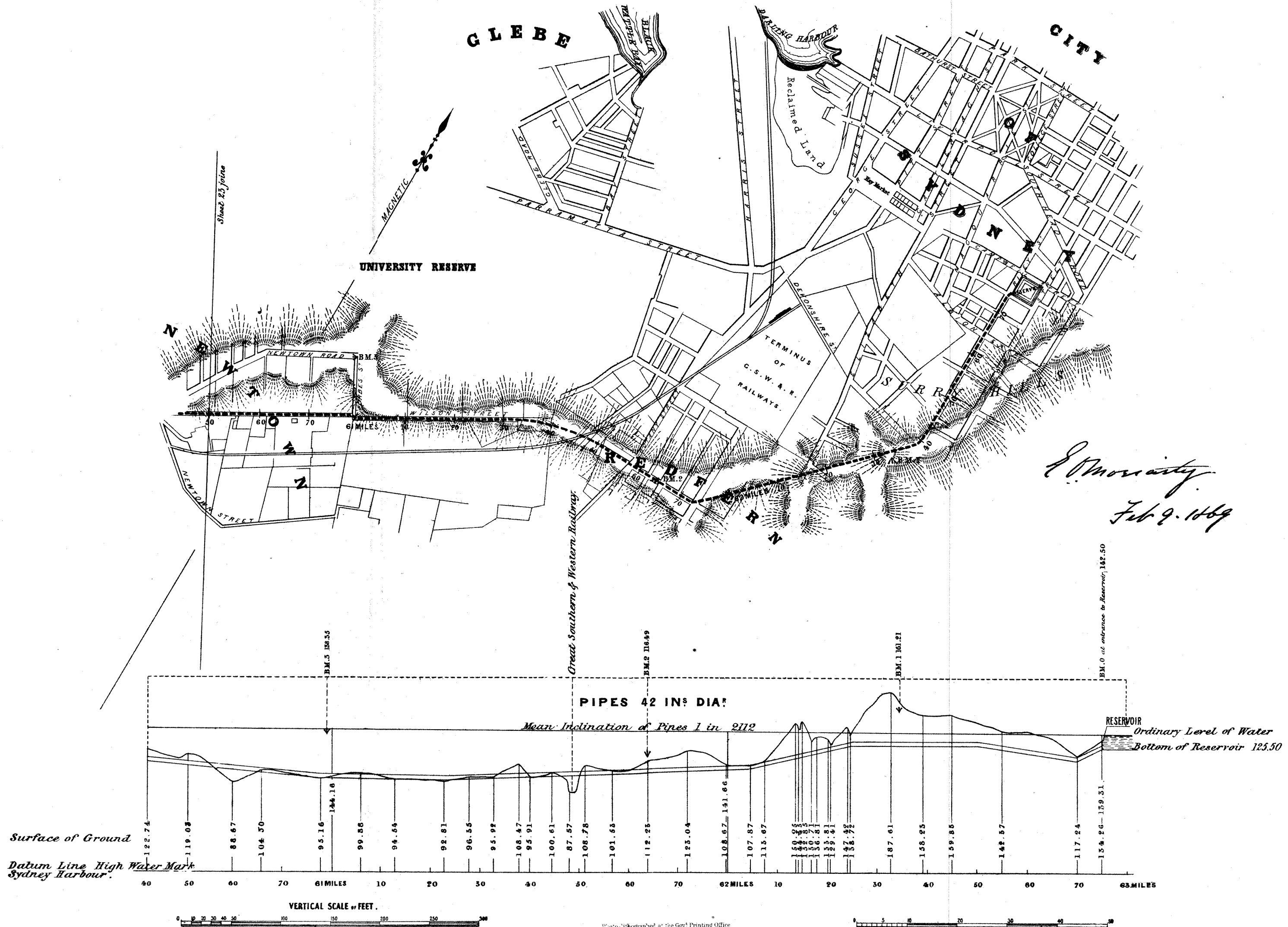


Photo-lithographed at the Gov^t Printing Office Sydney, N.S. Wales.

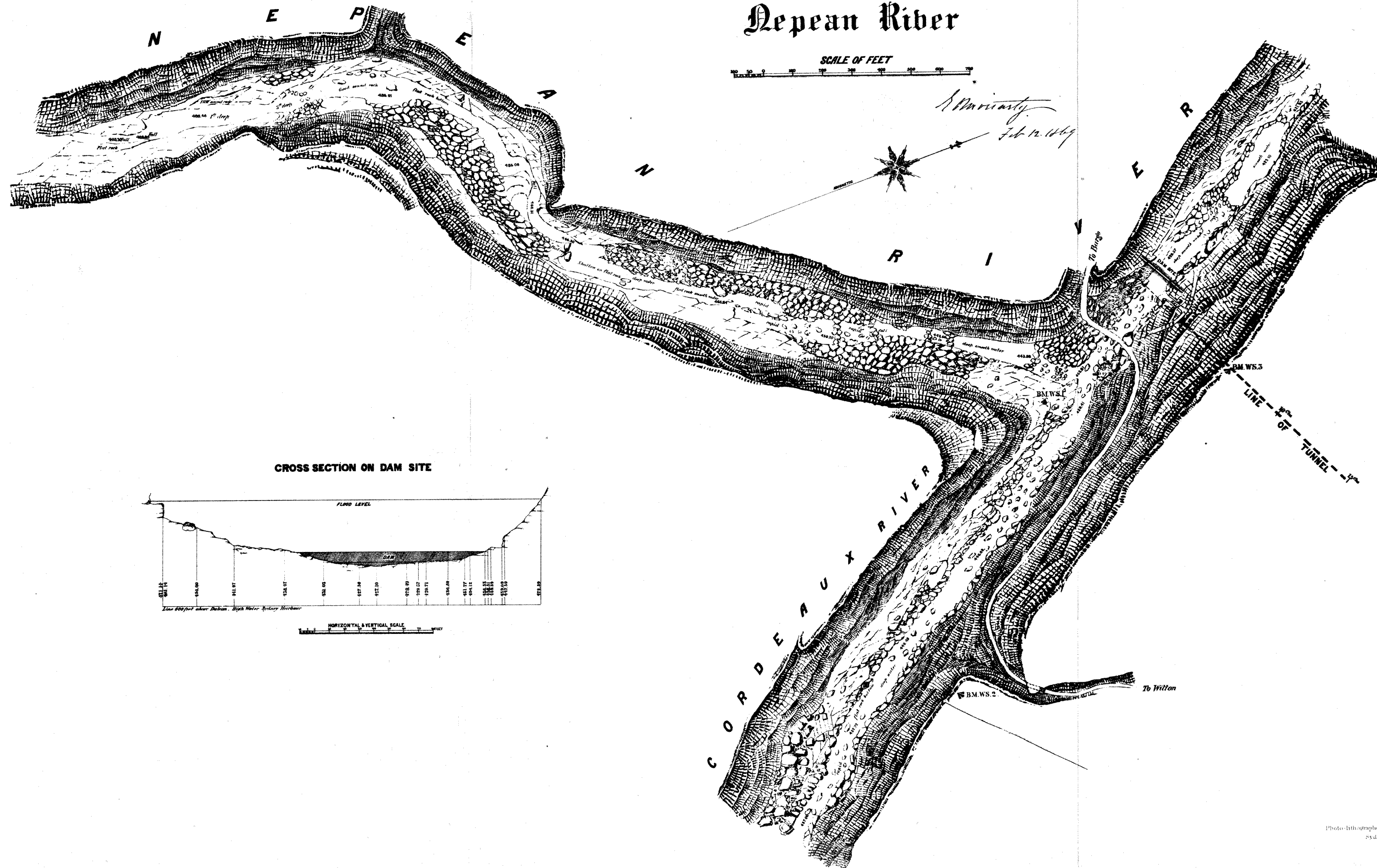
SYDNEY WATER SUPPLY



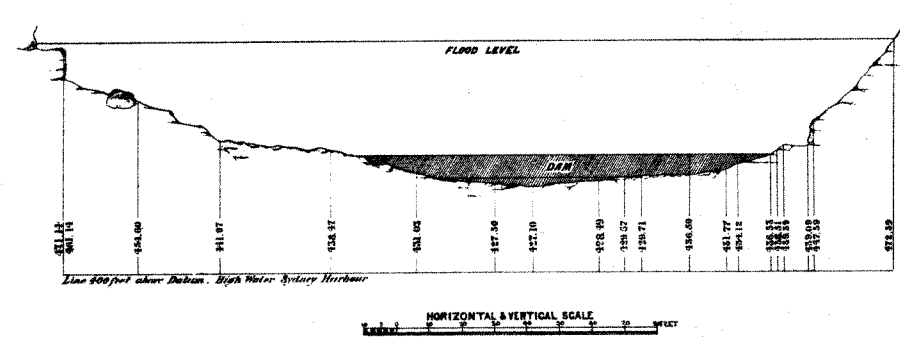
SYDNEY WATER SUPPLY

SHEET N° 25

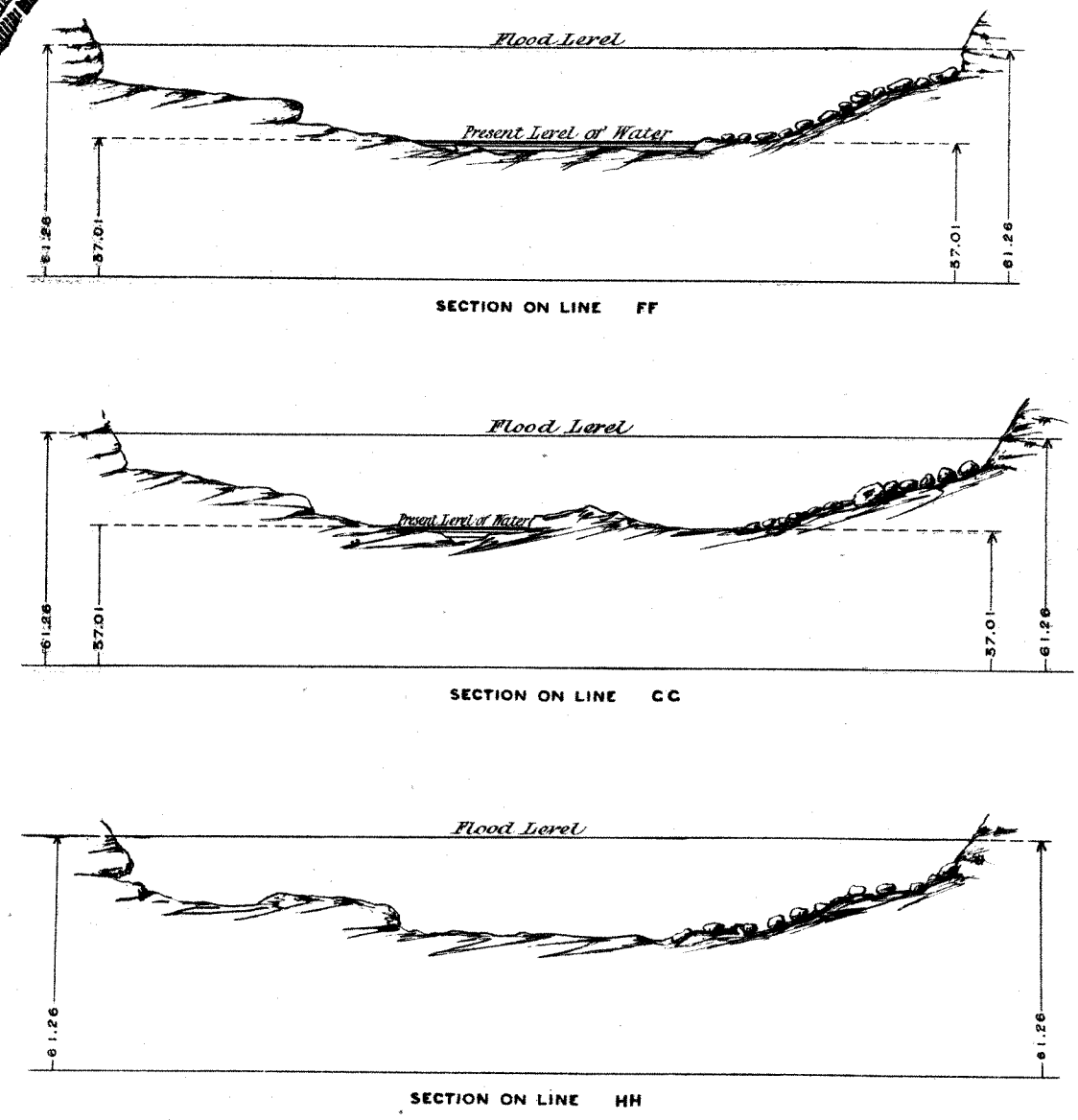
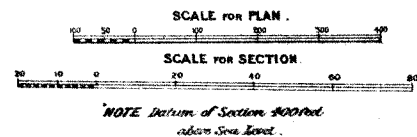
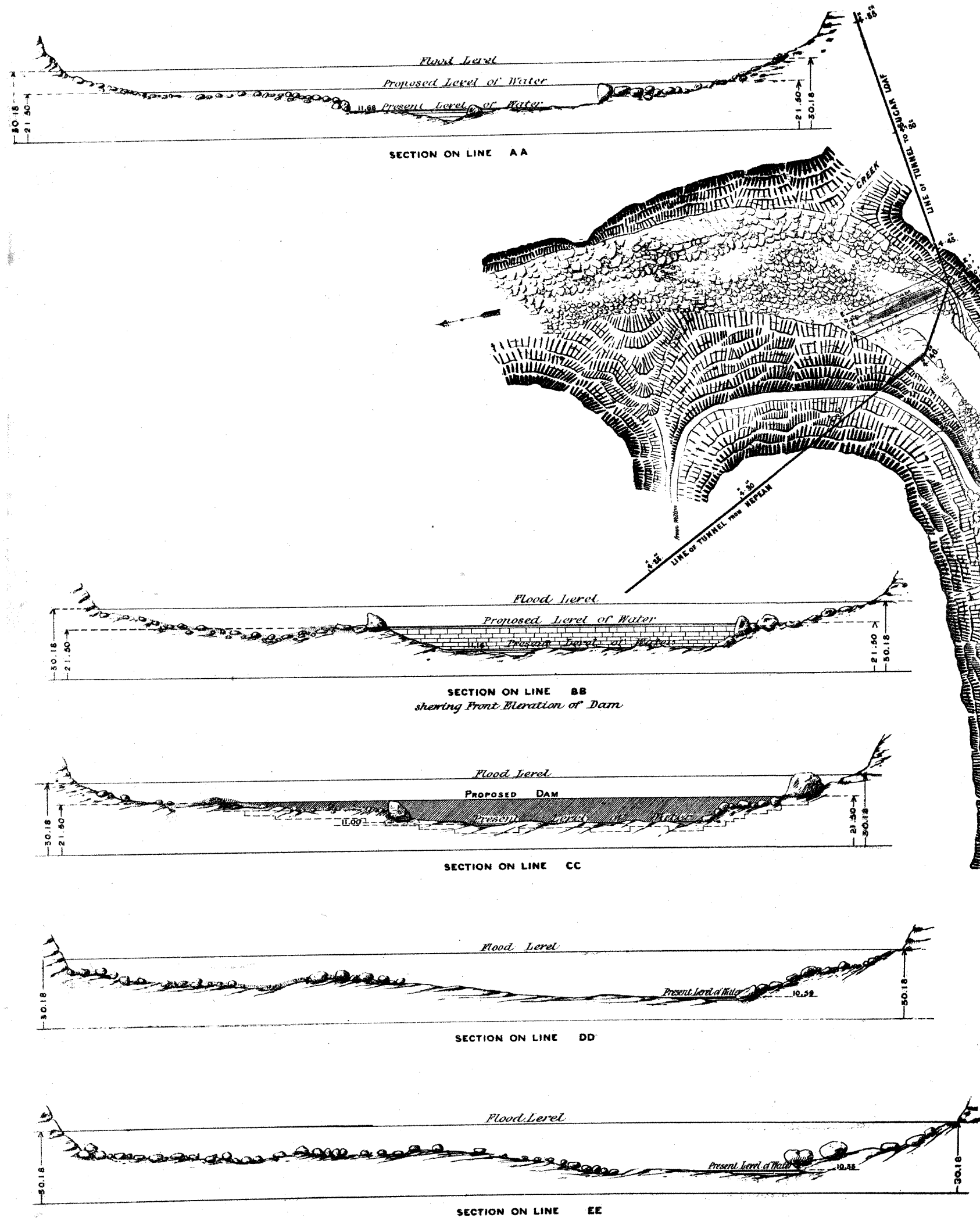
PLAN OF PHEASANTS NEST Depean River



CROSS SECTION ON DAM SITE



PLAN OF BROUGHTON'S PASS Cataract River



J. J. Morristy
Feb. 9. 1869

Photo lithographed at the Govt Printing Office
Sydney, N.S. Wales.

SYDNEY WATER SUPPLY

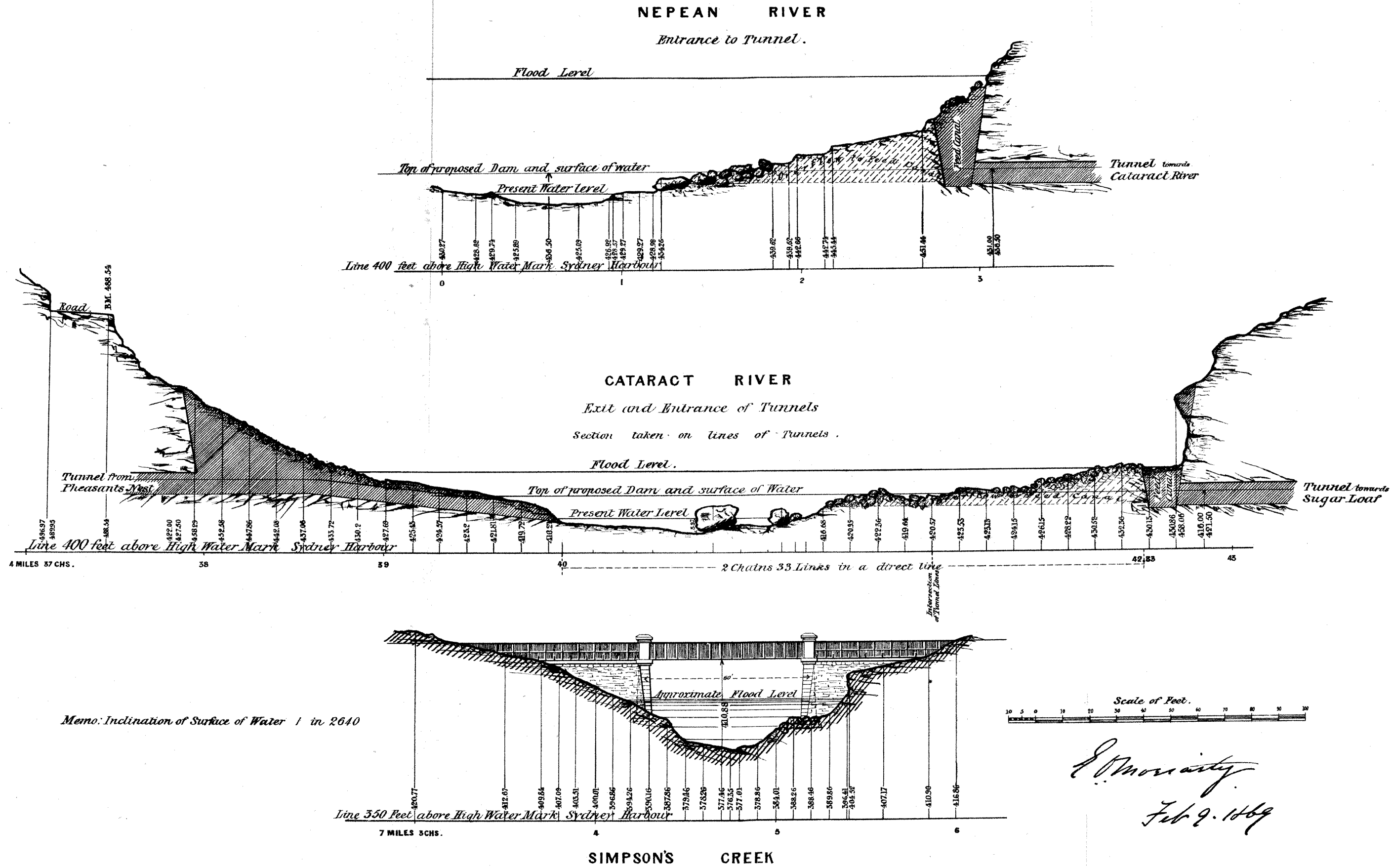
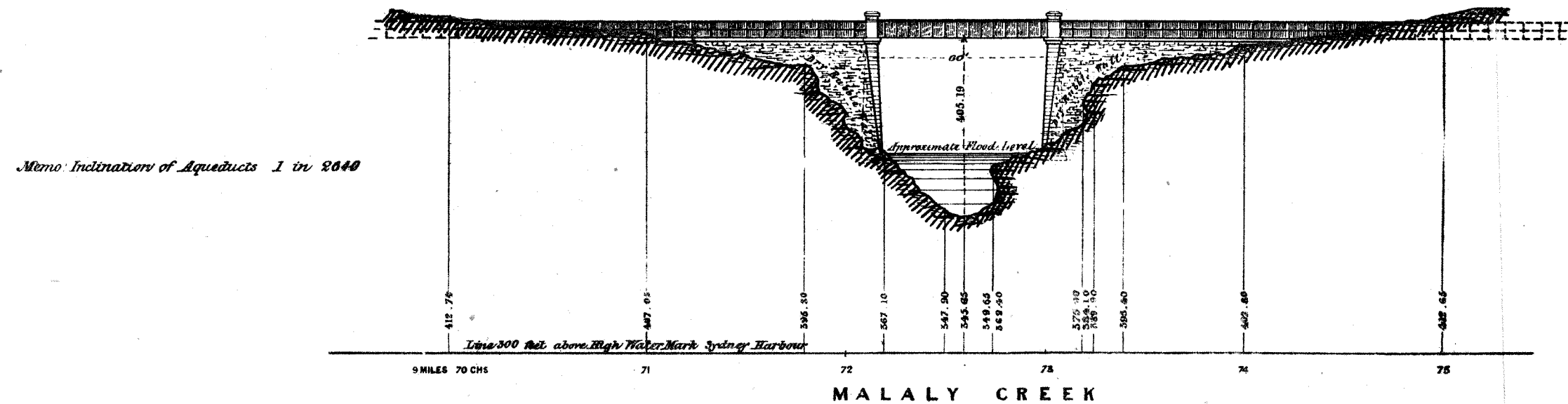
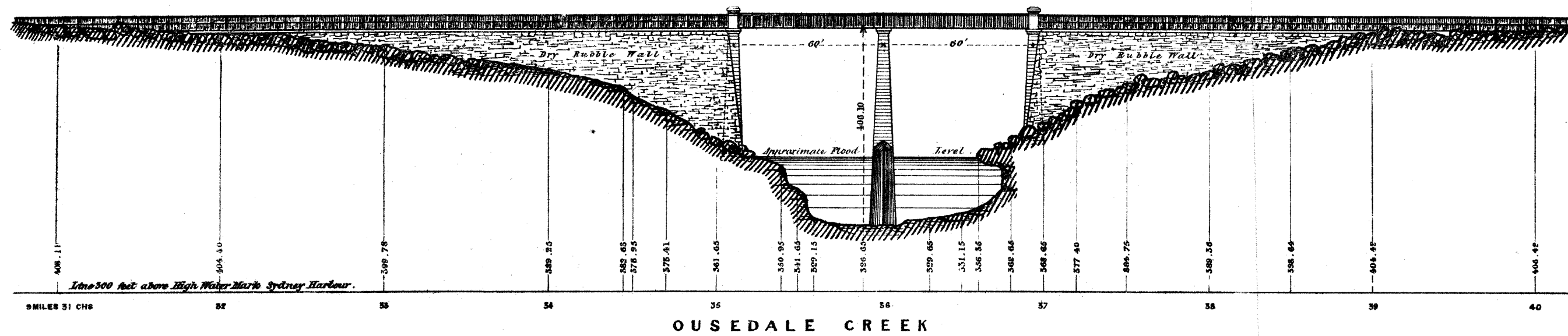
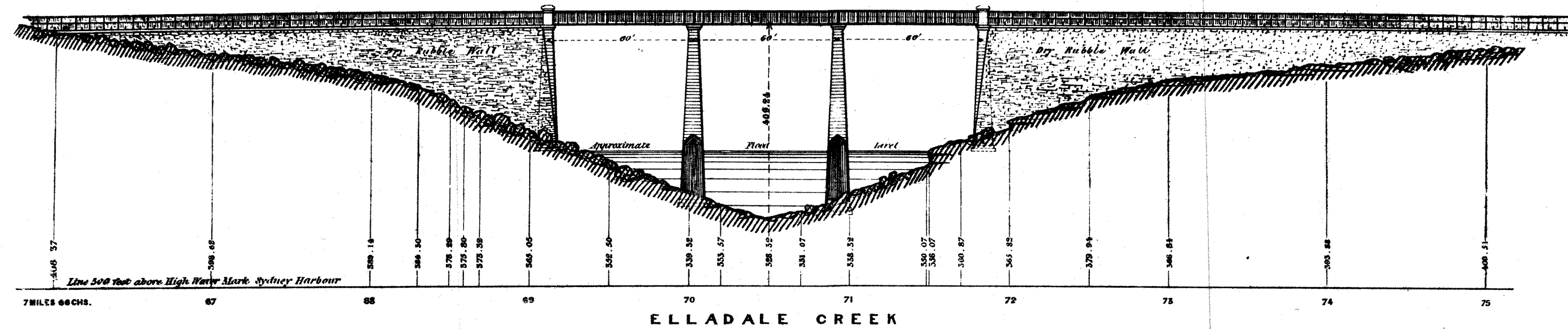


Photo lithographed at the Govt Printing Office Sydney, N.S. Wales.

SYDNEY WATER SUPPLY

SHEET N^o 28



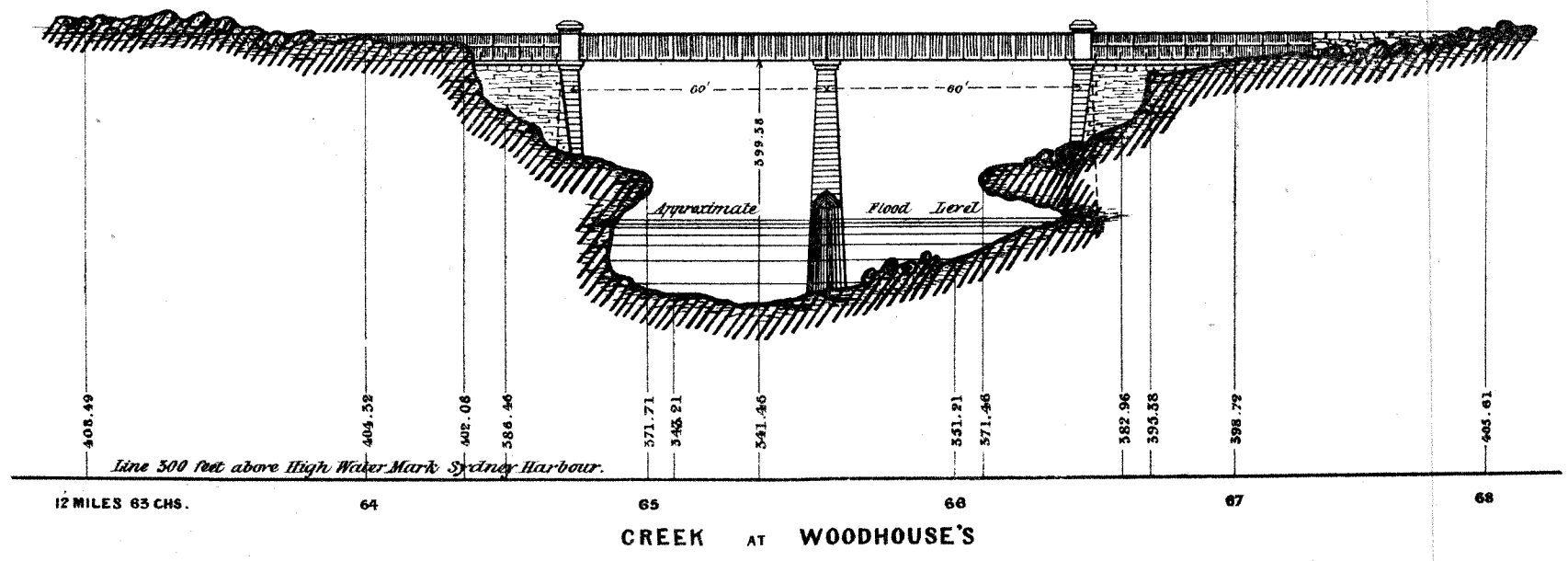
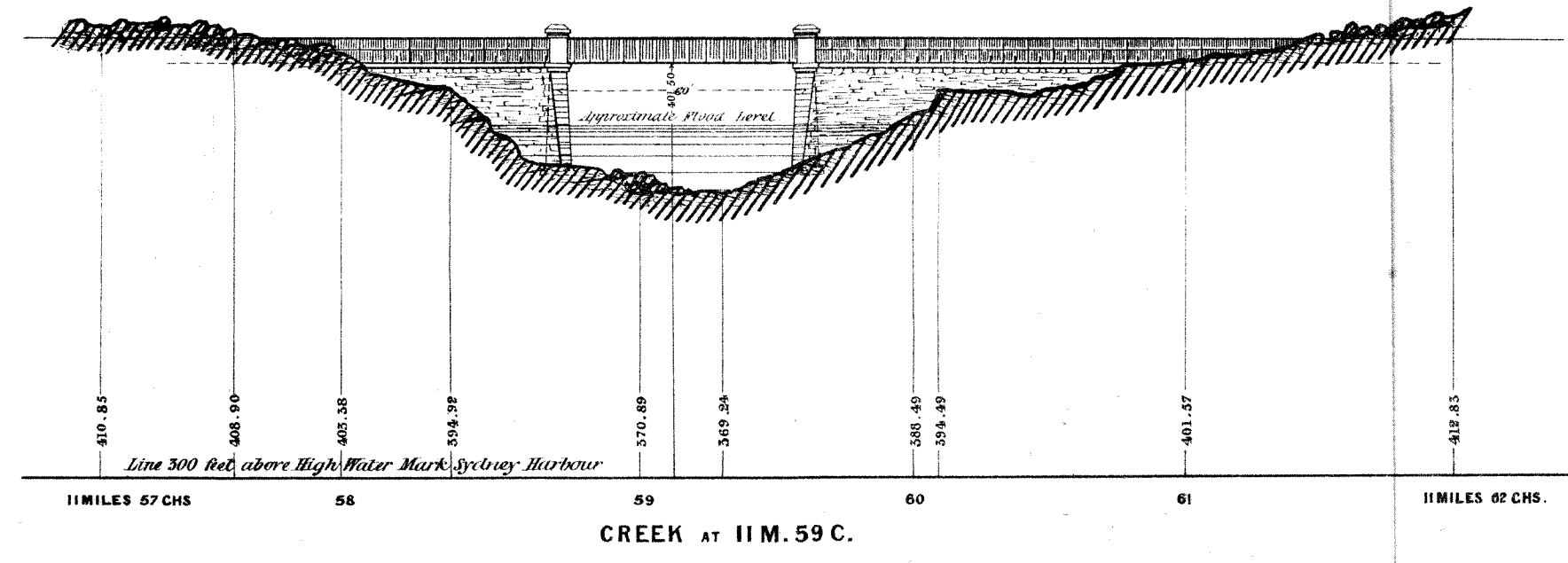
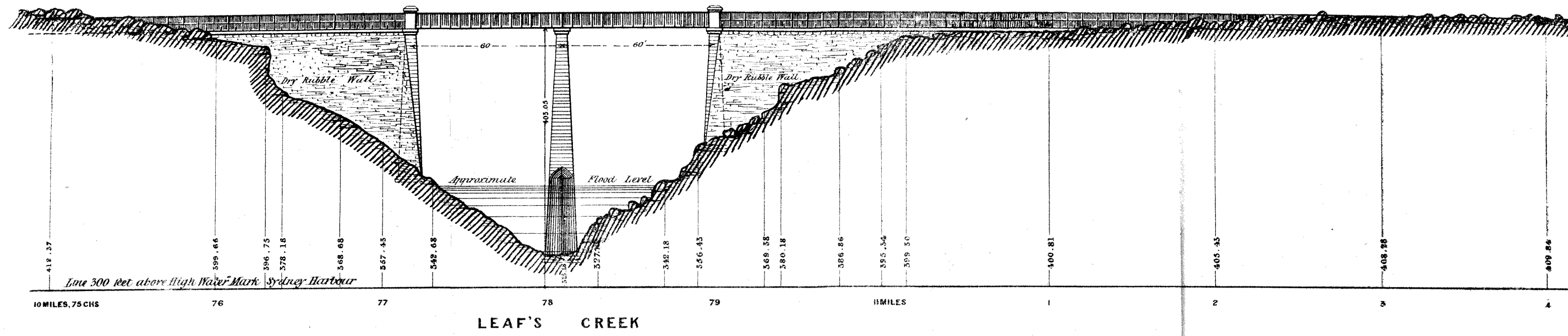
Memo: Inclinations of Aqueducts 1 in 2040



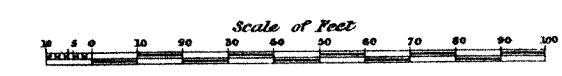
J. Moriarty
Feb 9. 1869

SYDNEY WATER SUPPLY

SHEET N^o 29



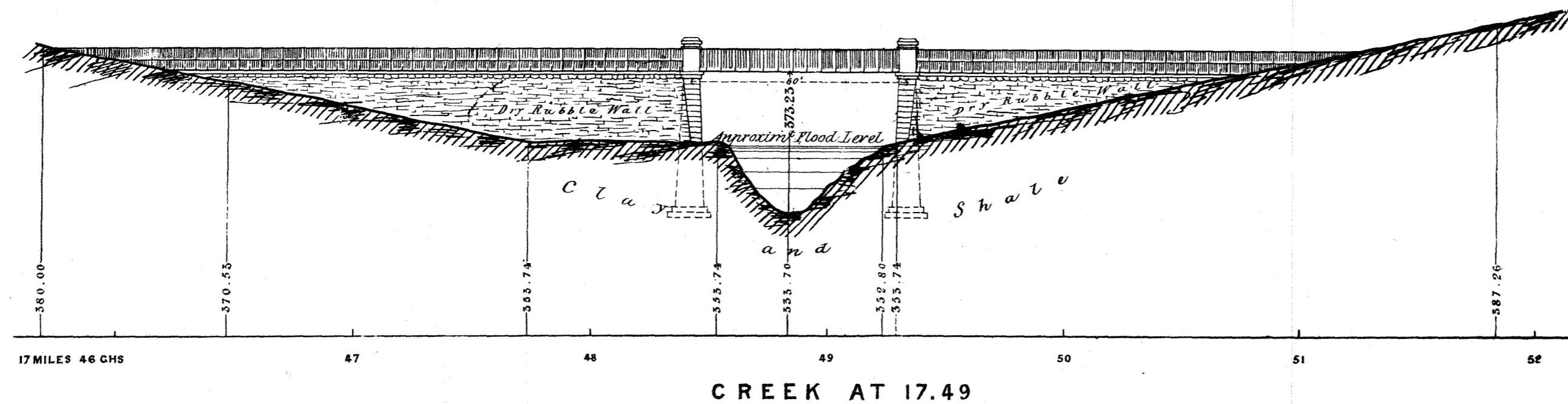
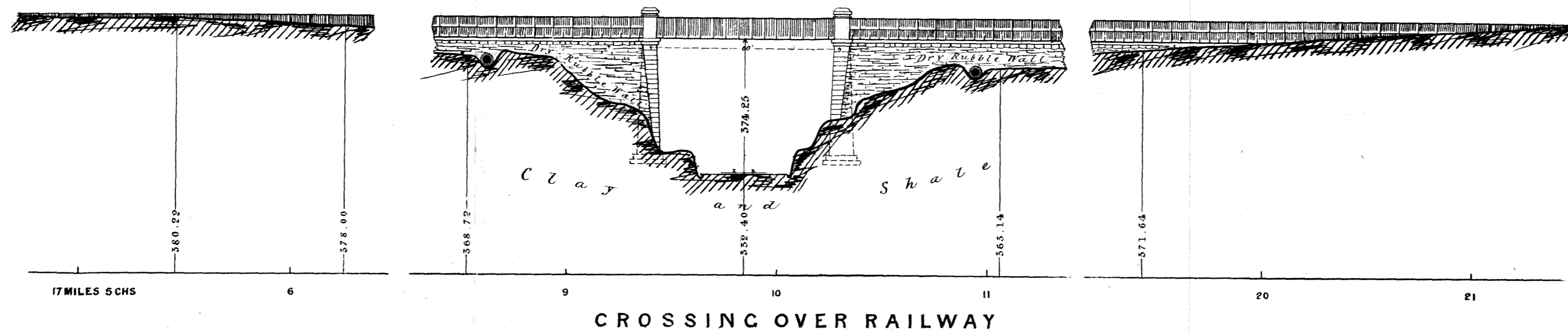
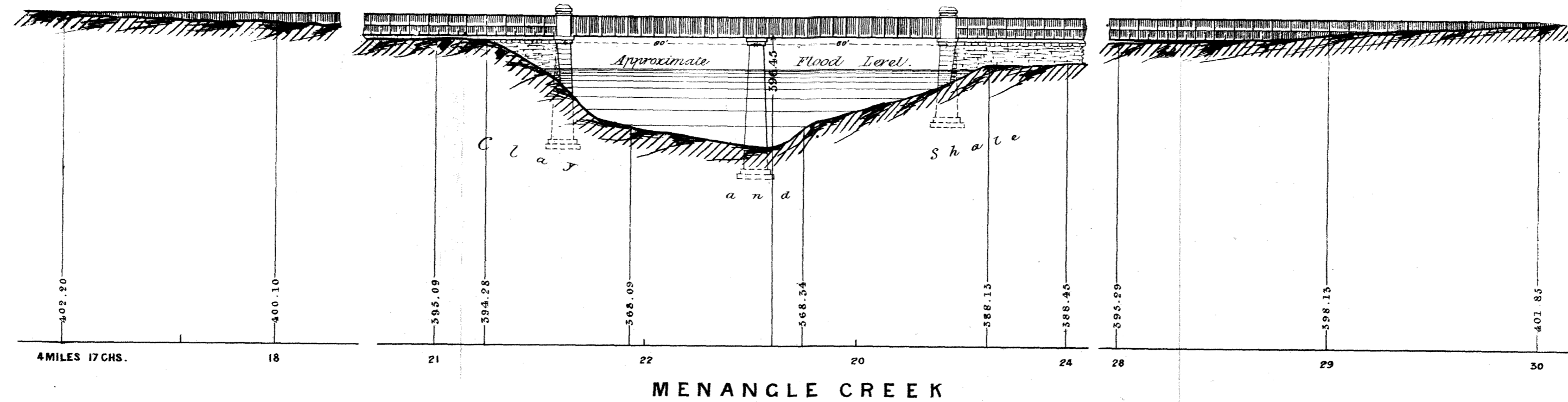
Memo: Inclination of Aqueducts 1 in 2640



E. Moriarty
Feb 9. 1889

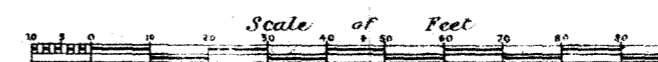
SYDNEY WATER SUPPLY

SHEET N^o. 30.



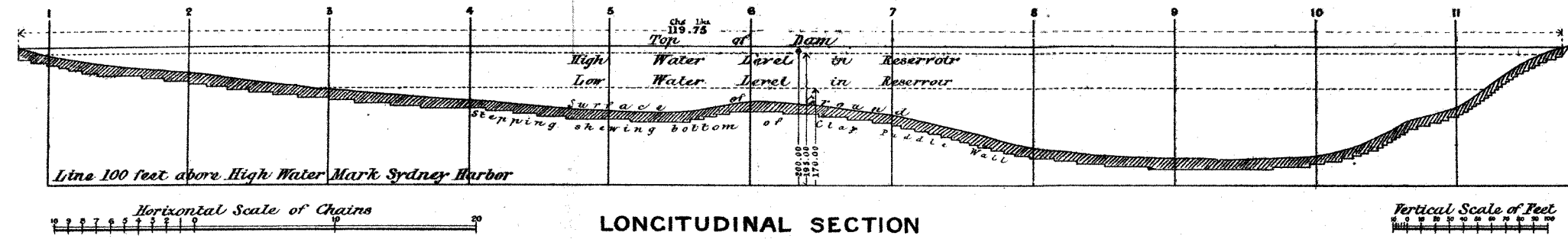
J. O'Meara
Feb 9. 1869

Note: Inclination of Aqueducts 1 in 2640

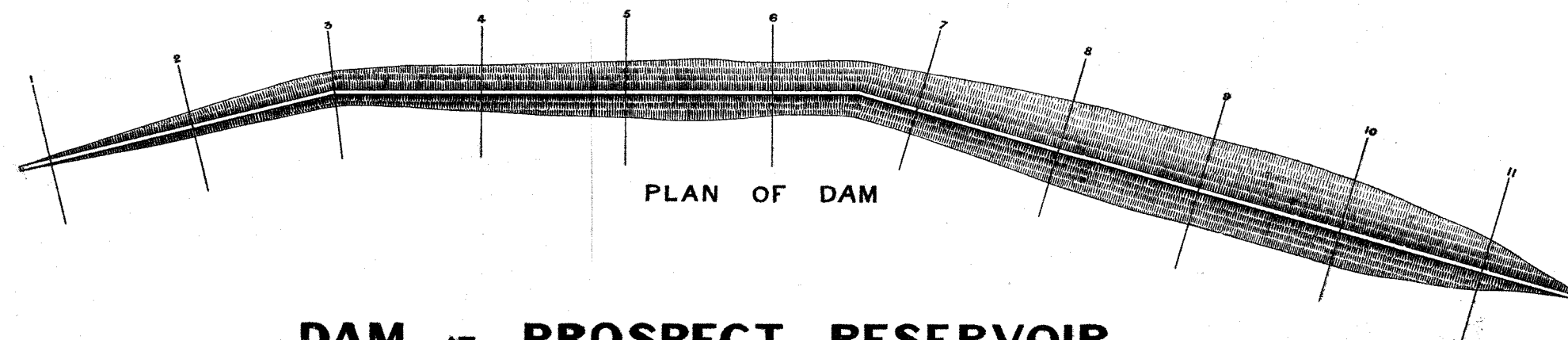


Printed and Lithographed at the Govt. Printing Office, Sydney, N.S. Wales.

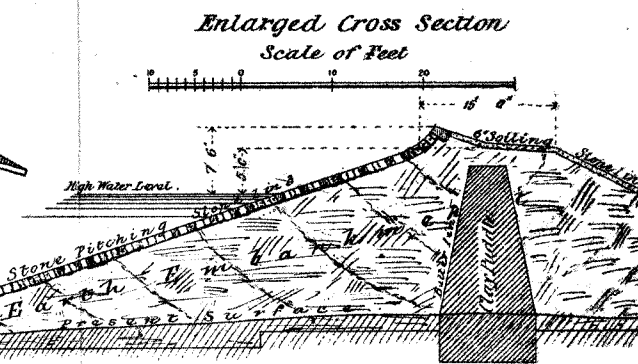
SYDNEY WATER SUPPLY



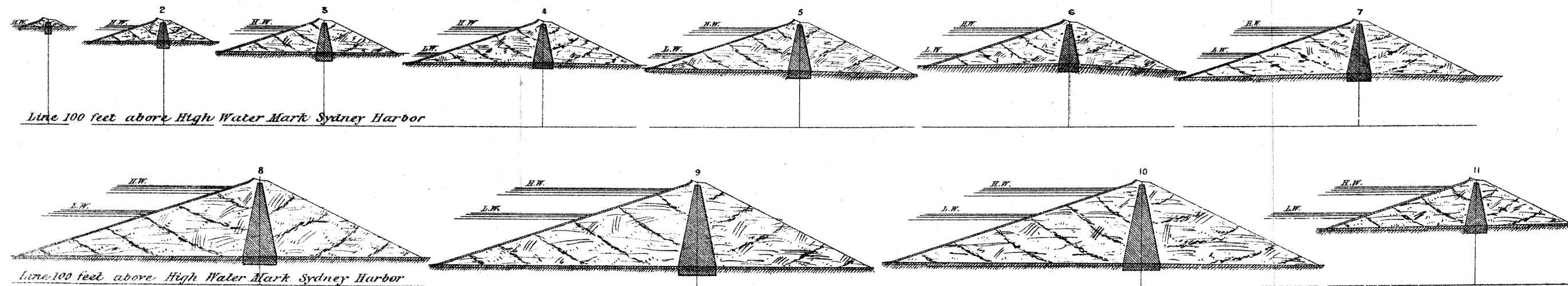
J. Morison
Feb 9. 1869



DAM AT PROSPECT RESERVOIR



CROSS SECTIONS

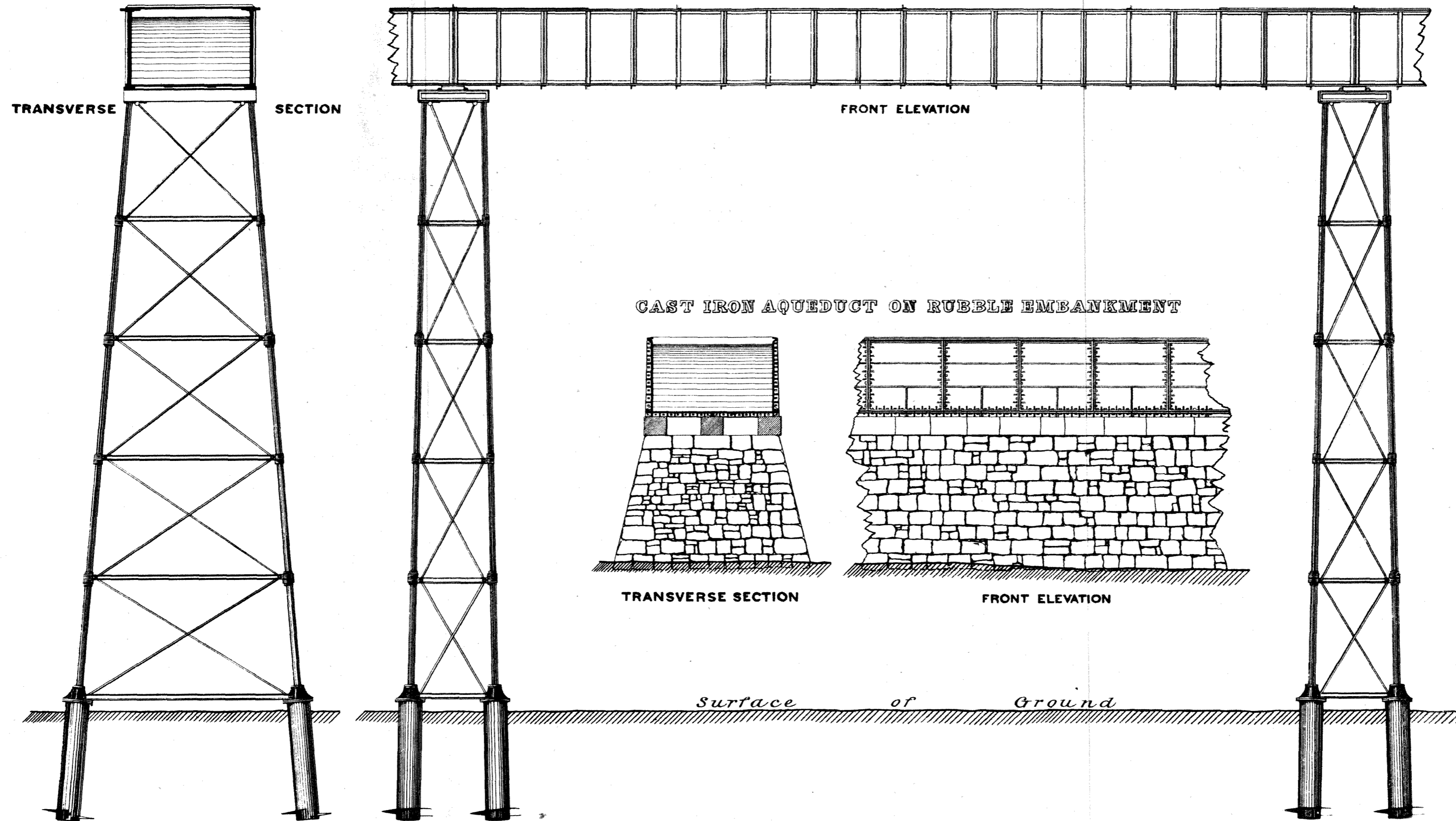


Scale of Feet for Cross Sections

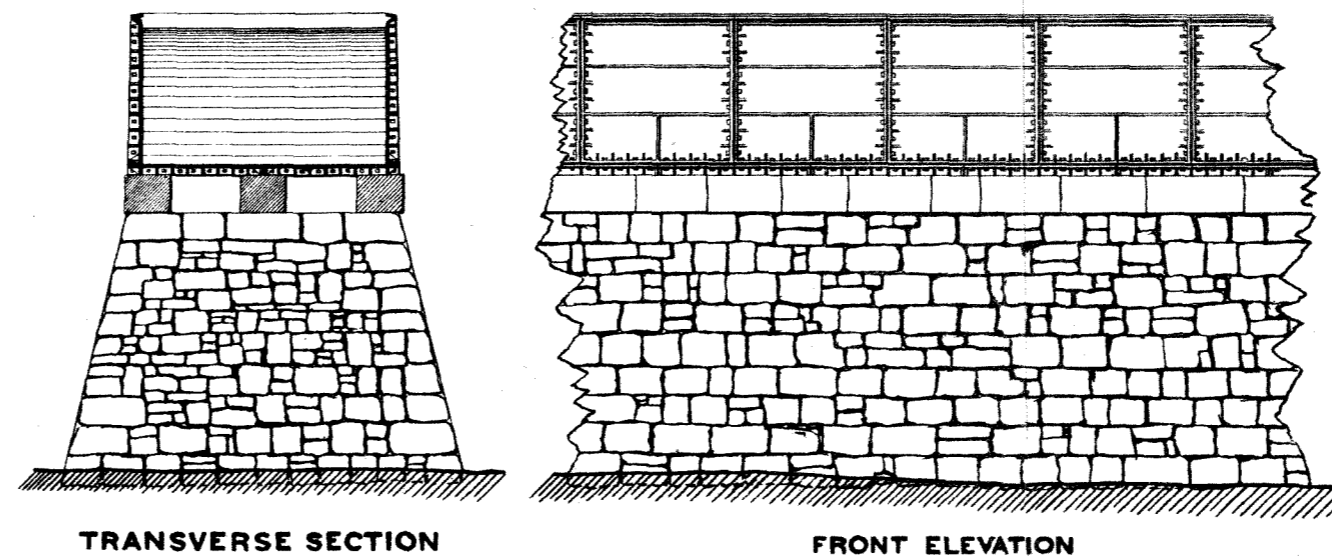
SYDNEY WATER SUPPLY

DETAILS OF IRON AQUEDUCTS

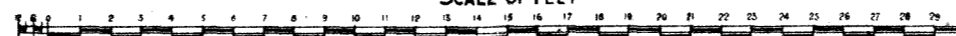
WROUGHT IRON AQUEDUCTS ON WROUGHT IRON PIERS



CAST IRON AQUEDUCT ON RUBBLE EMBANKMENT



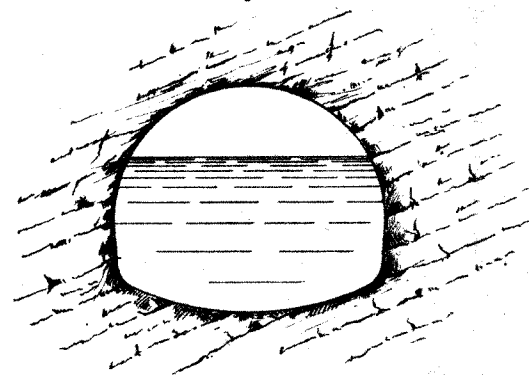
SCALE OF FEET



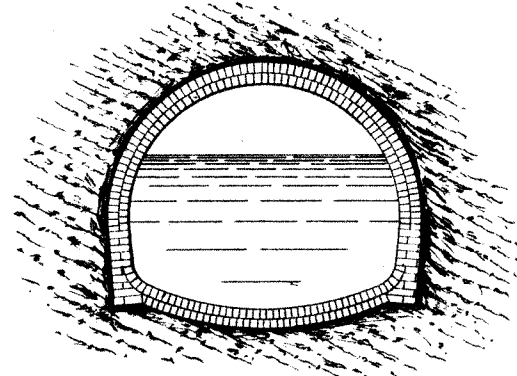
SYDNEY WATER SUPPLY

CROSS SECTIONS OF CONDUIT

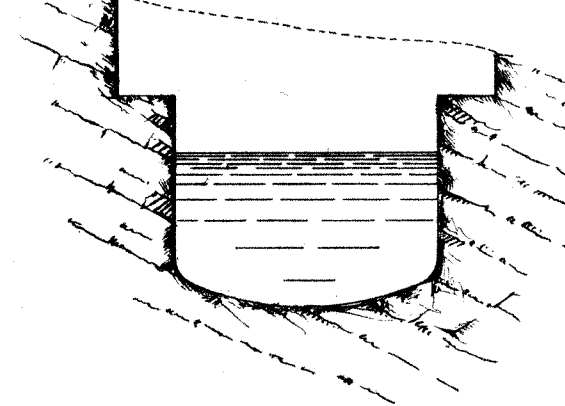
TUNNEL
SOUND WATERTIGHT SANDSTONE
1



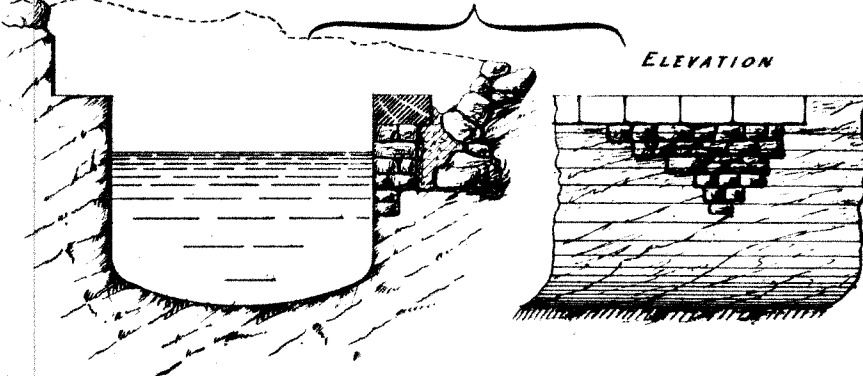
N°s 1 to 6 ABOVE RESERVOIR
TUNNEL
CLAY and SHALE
2



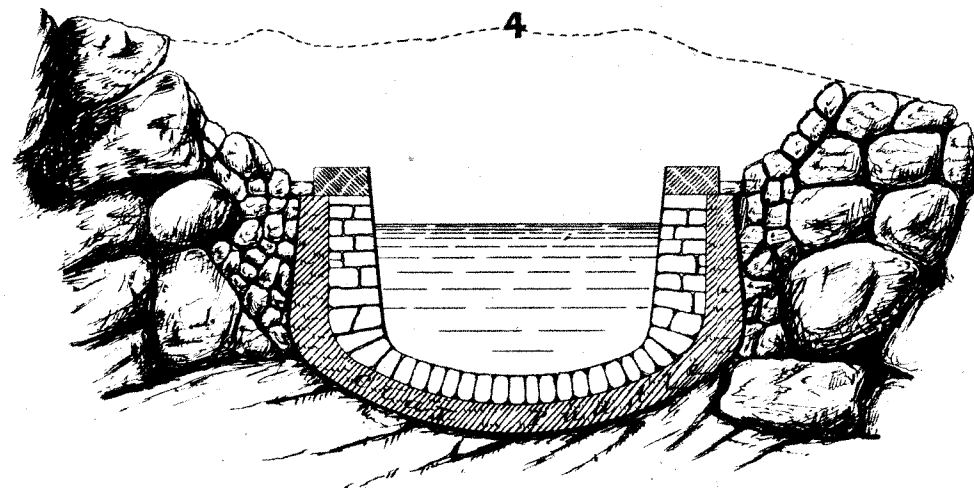
N°s 7 and 8 BELOW RESERVOIR
OPEN CUTTING
SOUND SANDSTONE
3



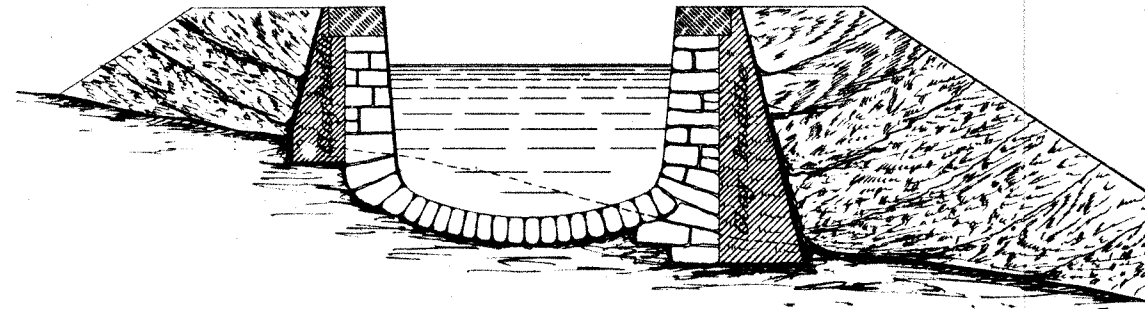
OPEN CUTTING
ROCK with FAULTS
3a



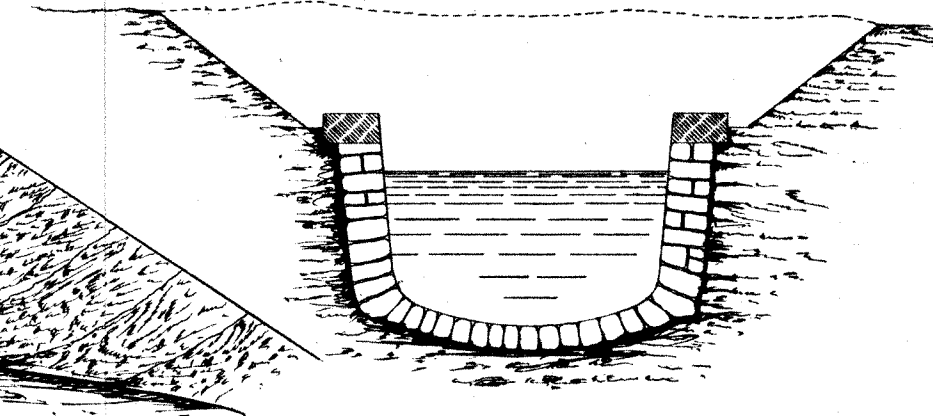
OPEN CUTTING
UN SOUND LEAKY ROCK and BOULDERS
4



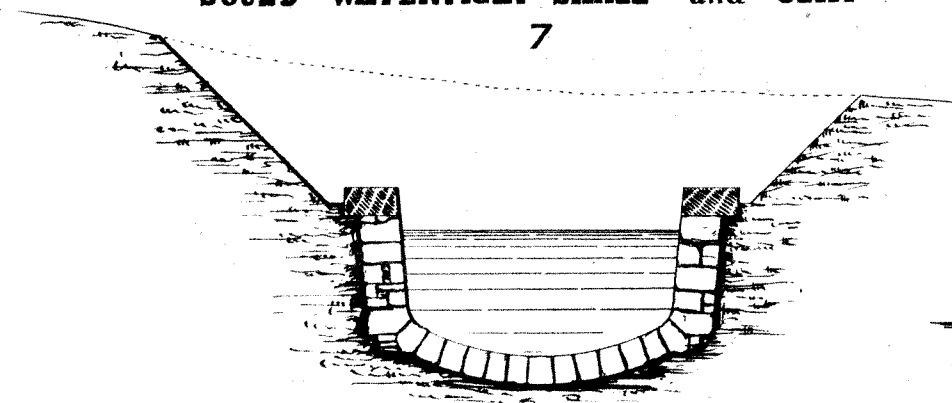
OPEN CANAL
IN EMBANKMENT
5



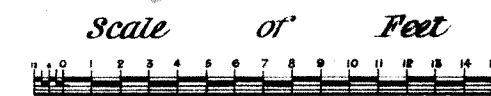
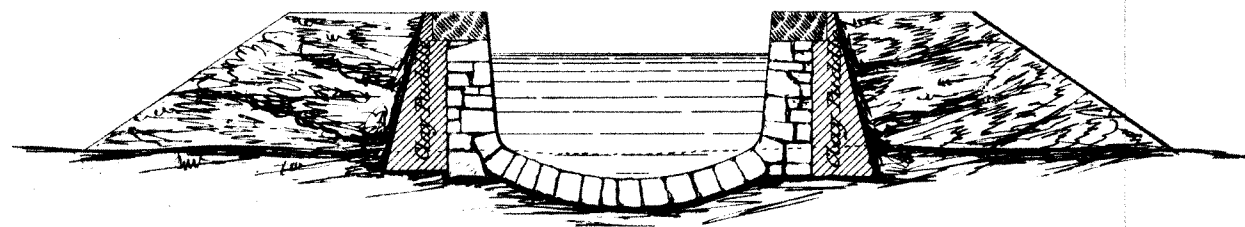
OPEN CUTTING
SOUND WATERTIGHT SHALE and CLAY
6



OPEN CUTTING
SOUND WATERTIGHT SHALE and CLAY
7



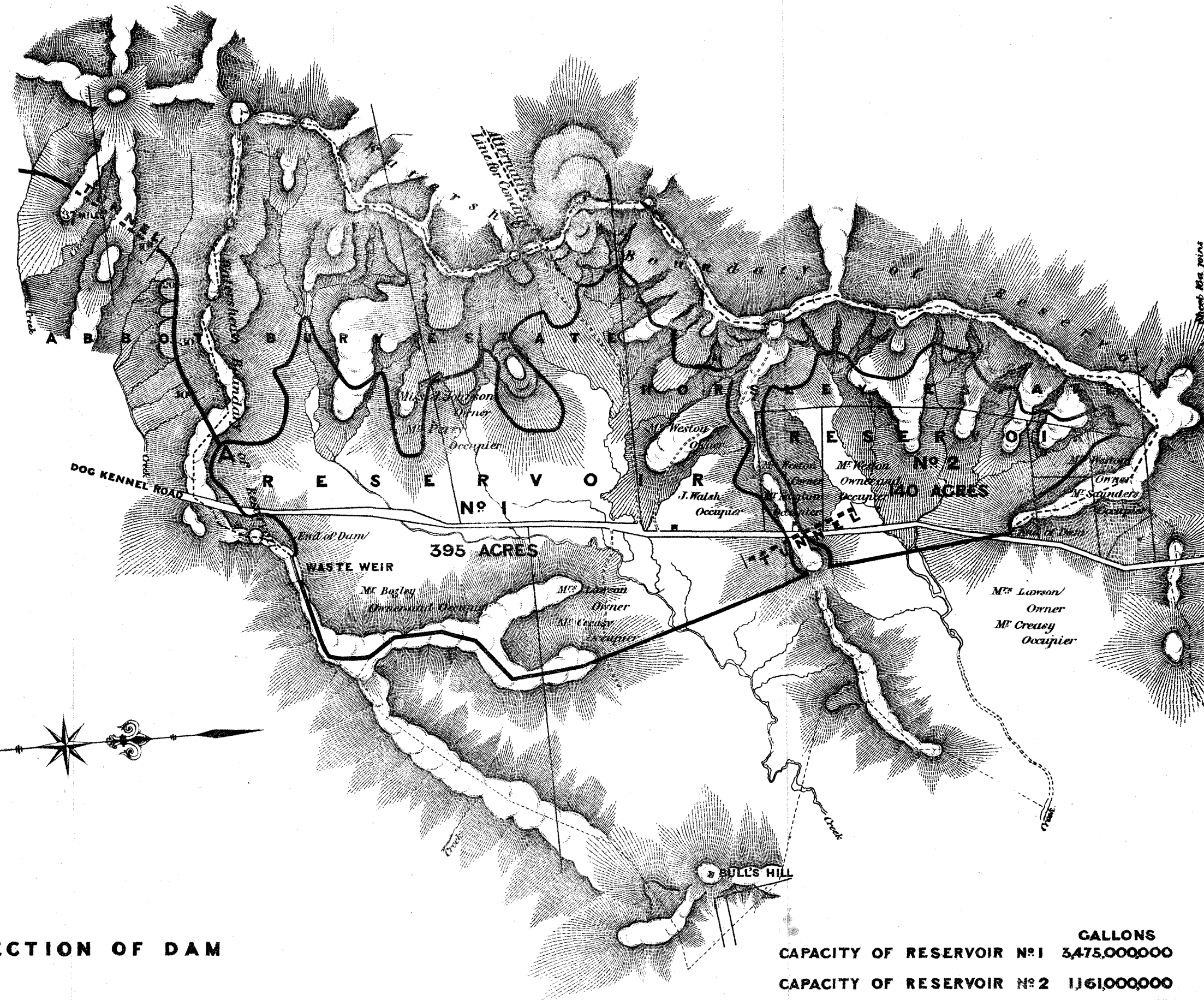
OPEN CANAL
IN EMBANKMENT
8



SYDNEY WATER SUPPLY

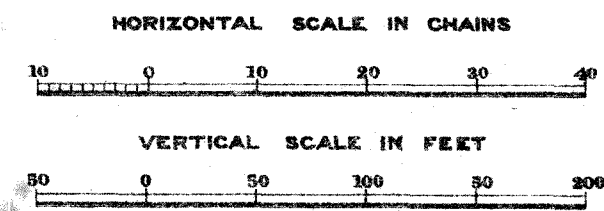
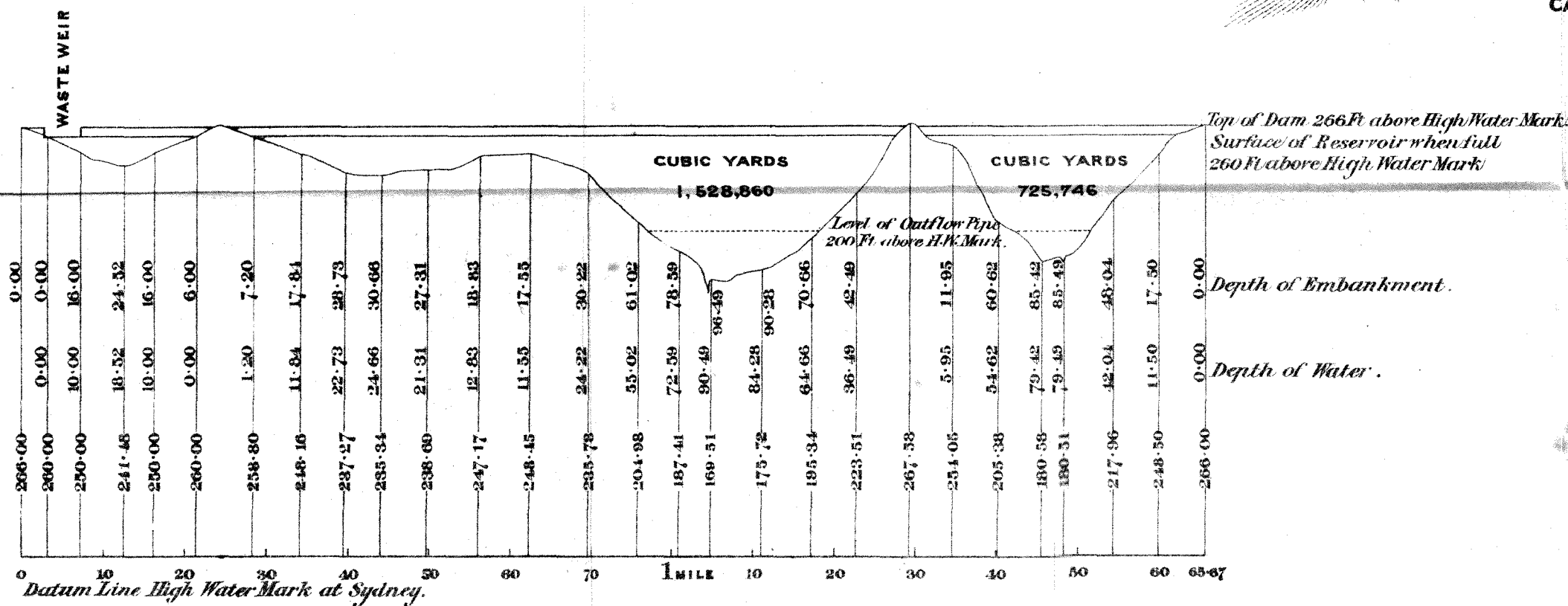
SHEET N^o 15A

PLAN OF RESERVOIRS, AT BULL'S HILL



SECTION OF DAM

	GALLONS
CAPACITY OF RESERVOIR N ^o 1	3,475,000,000
CAPACITY OF RESERVOIR N ^o 2	1,161,000,000
TOTAL CAPACITY	4,636,000,000



Francis H. Gaundy

Photo lithographed at the Govt. Printing Office
Sydney, N. S. Wales.

SYDNEY WATER SUPPLY

SHEET N° 16^A

PRELIMINARY SURVEY

OF A

BASIN NEAR M^r PROSPECT

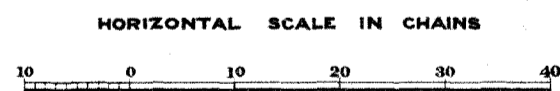
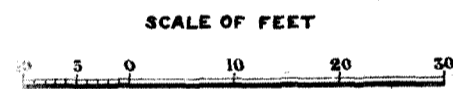
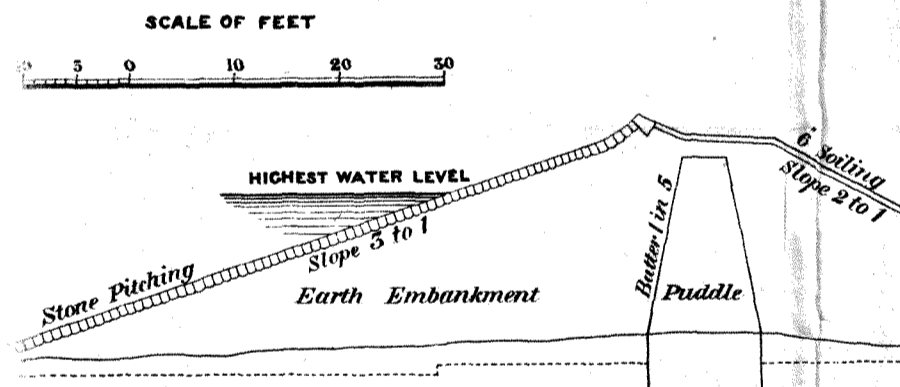
AVAILABLE AS A SITE FOR A RESERVOIR

SHOWING THE HEIGHTS OF VARIOUS POINTS

ABOVE HIGH WATER MARK AT SYDNEY

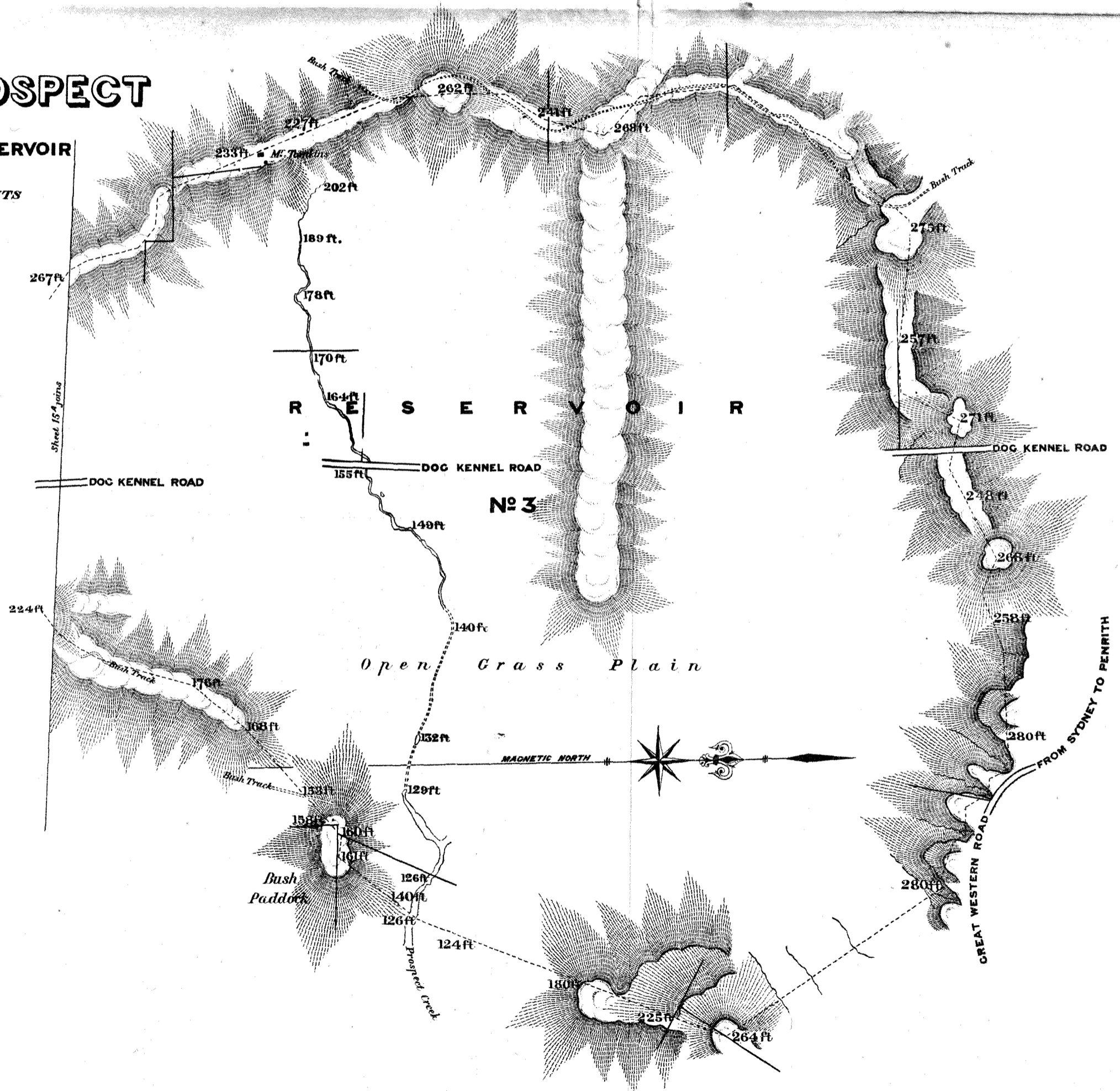
CROSS SECTION OF DAM OF RESERVOIRS

SHOWN ON SHEET 15^A



Rancis H. Hume

Photo lithographed at the Govt. Printing Office
Sydney, N. S. Wales.



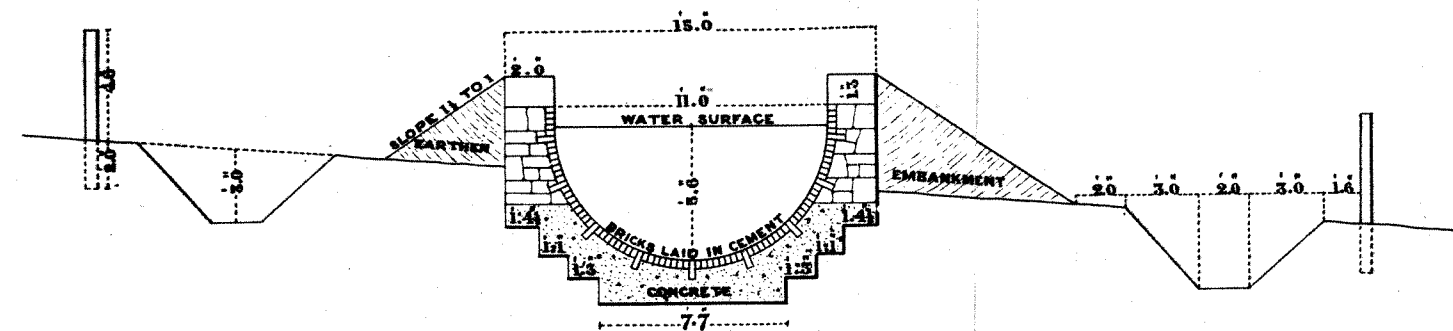
SYDNEY WATER SUPPLY

SHEET N° 2^A

CROSS SECTIONS OF CONDUIT

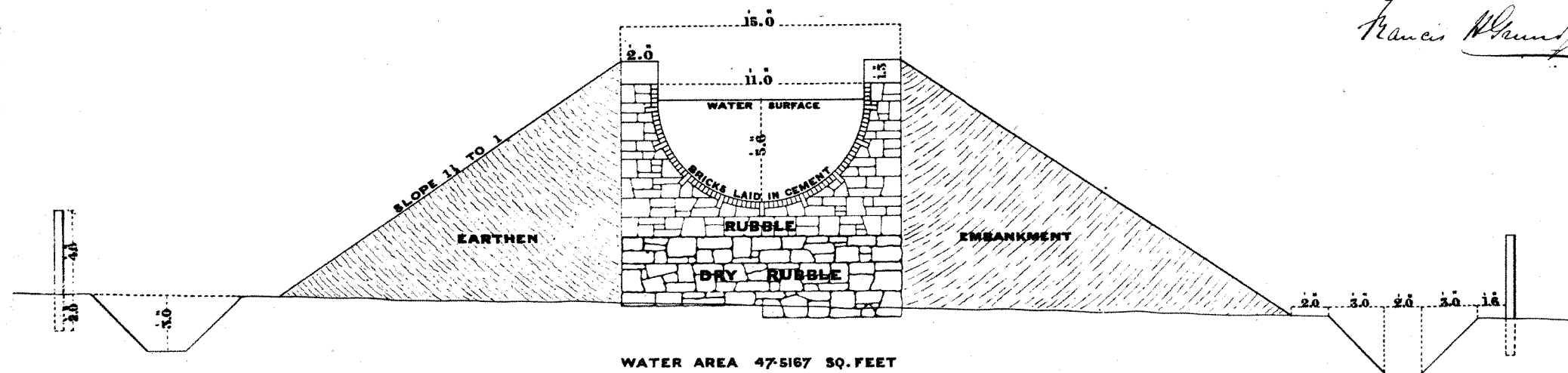
Delivery 53,767 gallons per minute

IN CUTTING AND EMBANKMENT



WATER AREA 47,5167 SQ. FEET

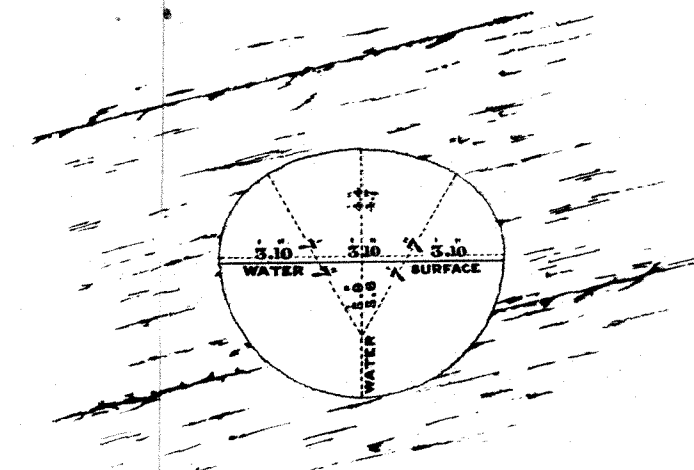
IN EMBANKMENT



WATER AREA 47,5167 SQ. FEET

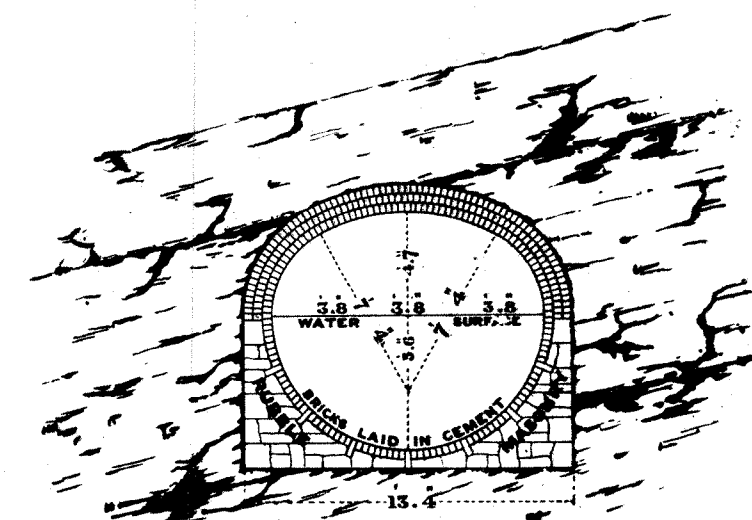
Francis Skinn

TUNNEL IN SOUND ROCK



AREA OF TUNNEL 92,892 SQ. FEET
WATER AREA 49,06 SQ. FEET

TUNNEL IN UNSOUND ROCK OR CLAY



AREA OF TUNNEL 86,2974 SQ. FEET
WATER AREA 47,5167 SQ. FEET

SCALE OF FEET

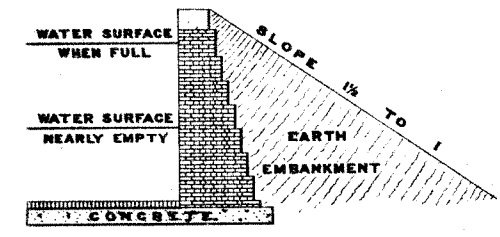


SYDNEY WATER SUPPLY

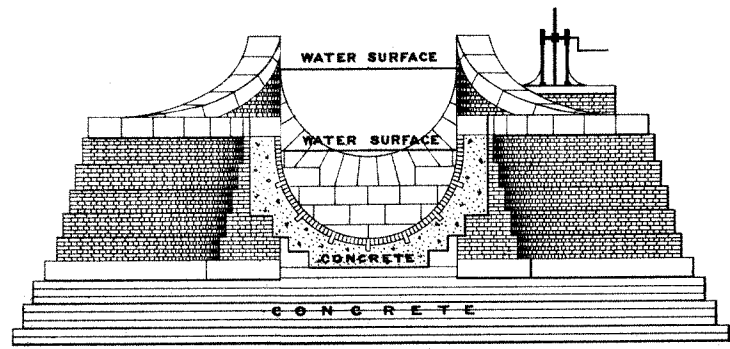
WEIRS AND ROAD BRIDGES

WEIR

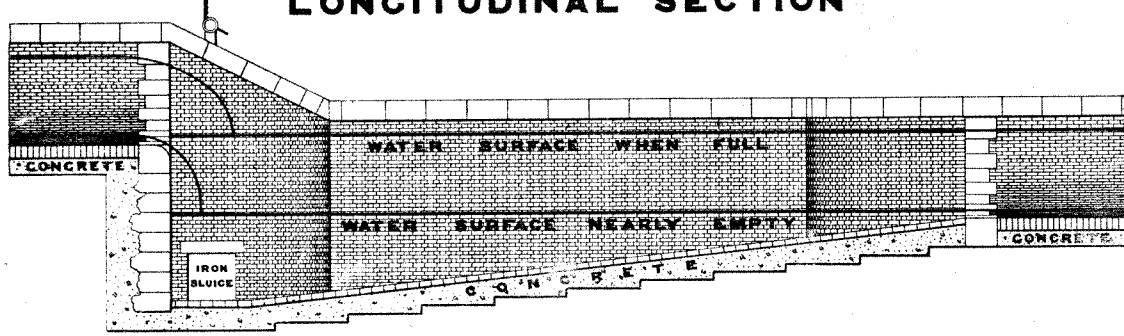
CROSS SECTION
ON LINE A.B.



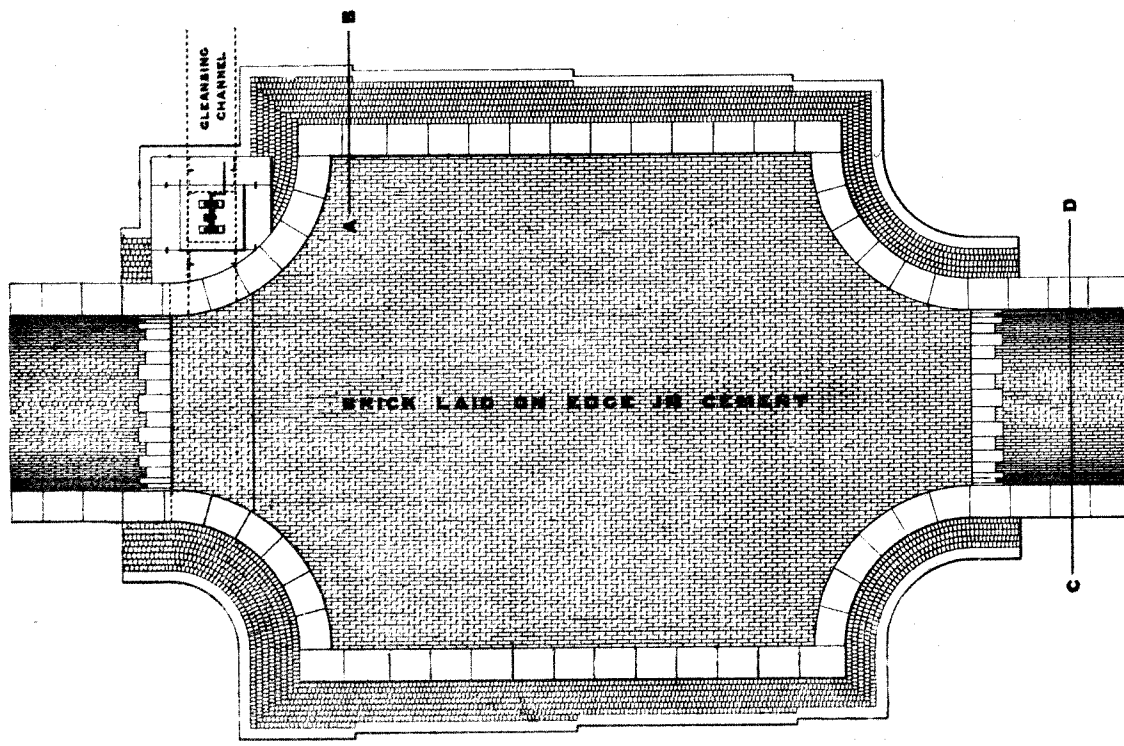
CROSS SECTION
ON LINE C.D.



LONGITUDINAL SECTION

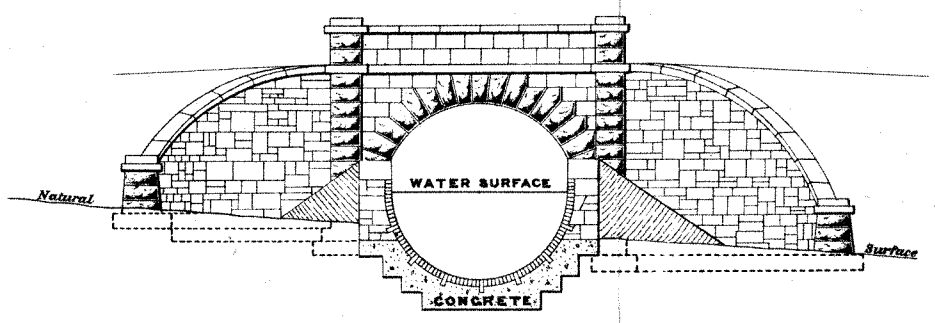


PLAN

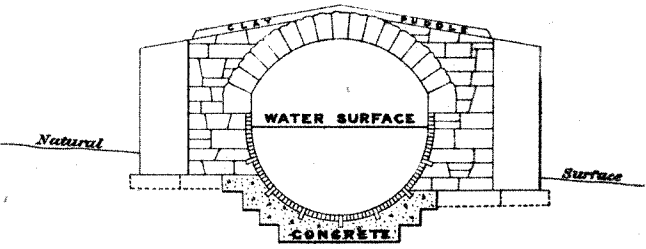


ROAD BRIDGE

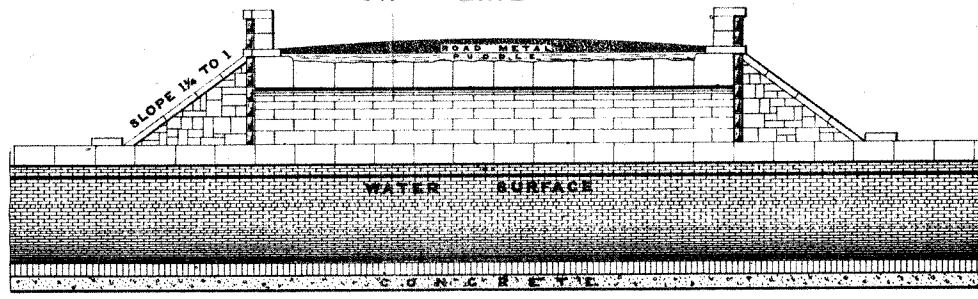
ELEVATION



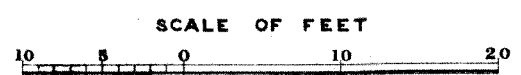
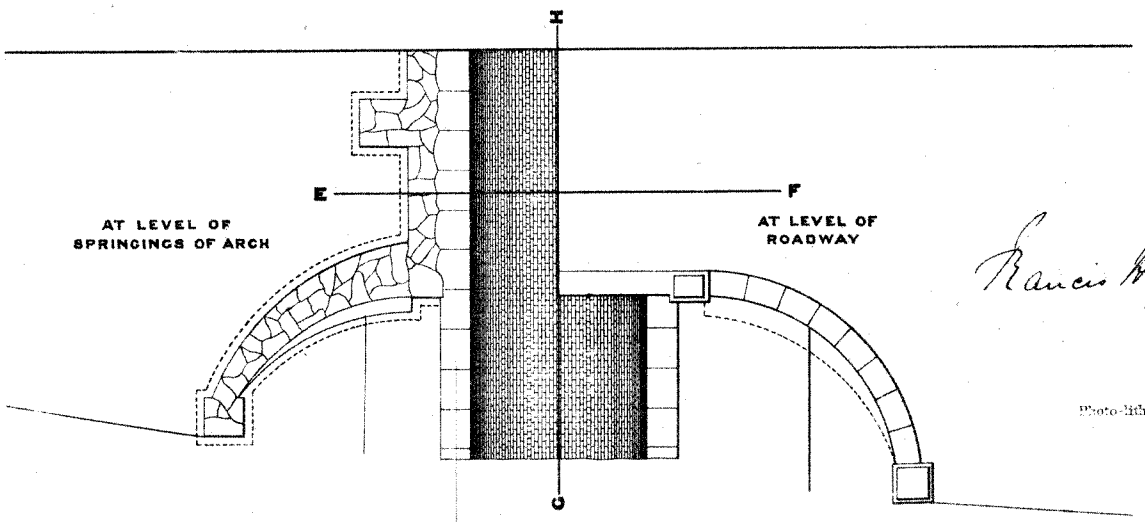
SECTION
ON LINE E.F.



CROSS SECTION
ON LINE G.H.



HALF PLAN



Rancis H. ...

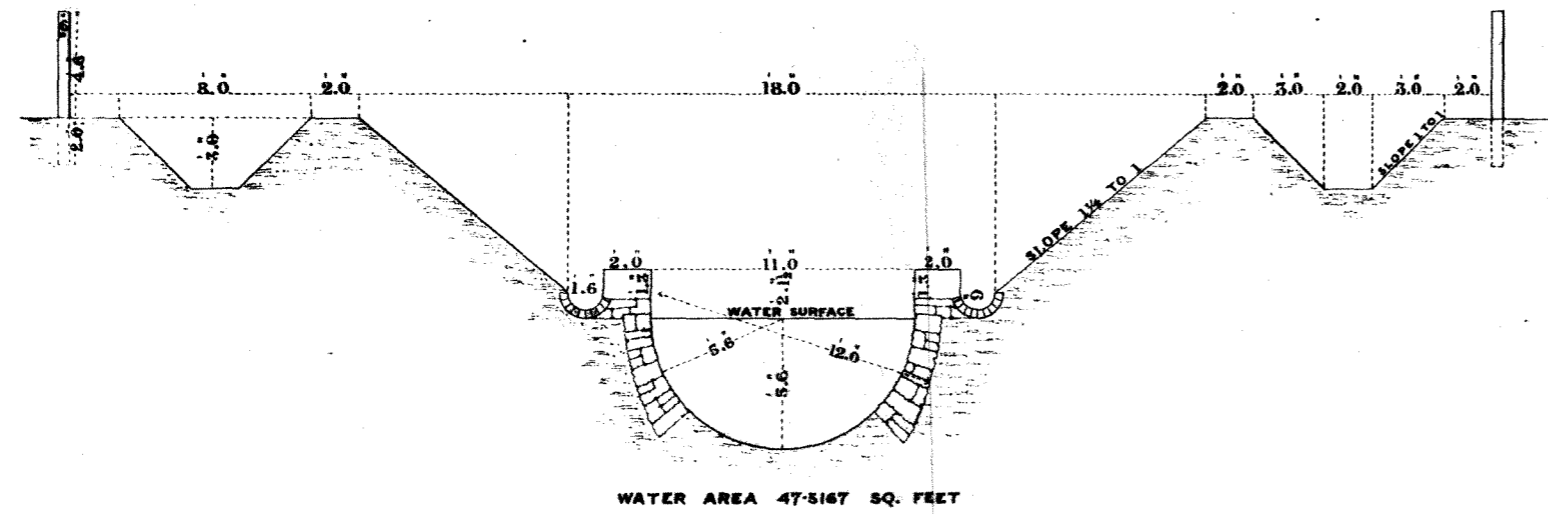
Photo-lithographed at the Govt Printing Office
Sydney, N. S. Wales.

SYDNEY WATER SUPPLY

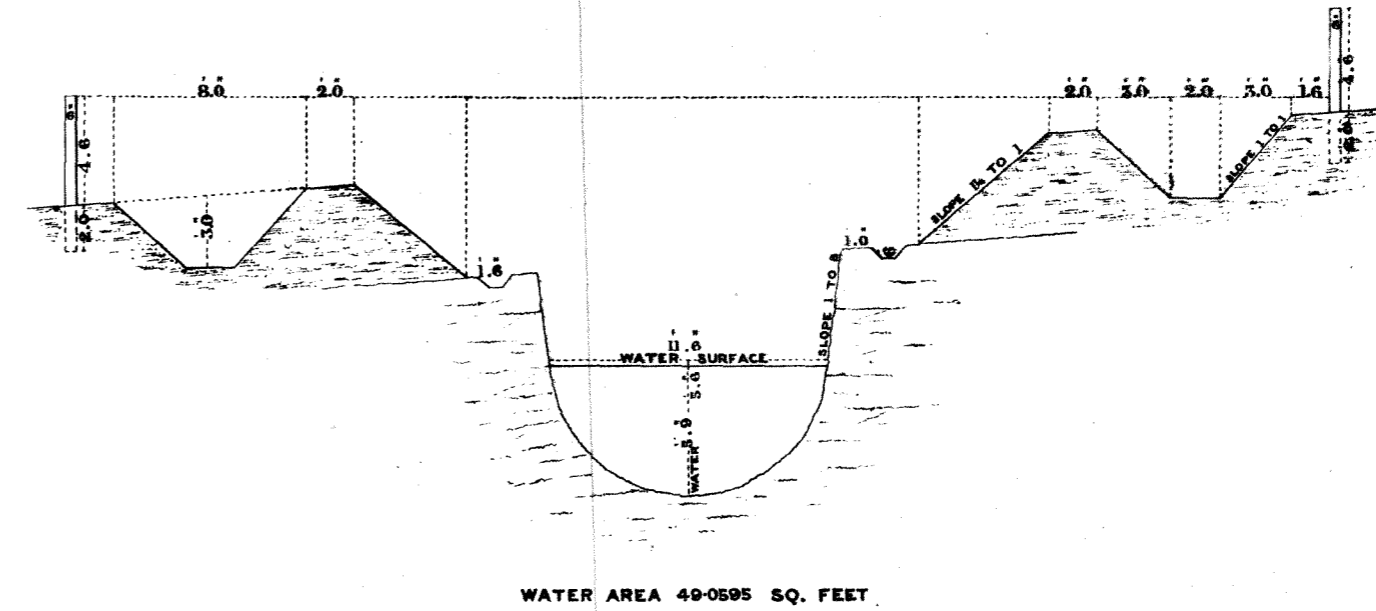
SECTIONS OF CONDUIT

Delivery 53,767 gallons per minute

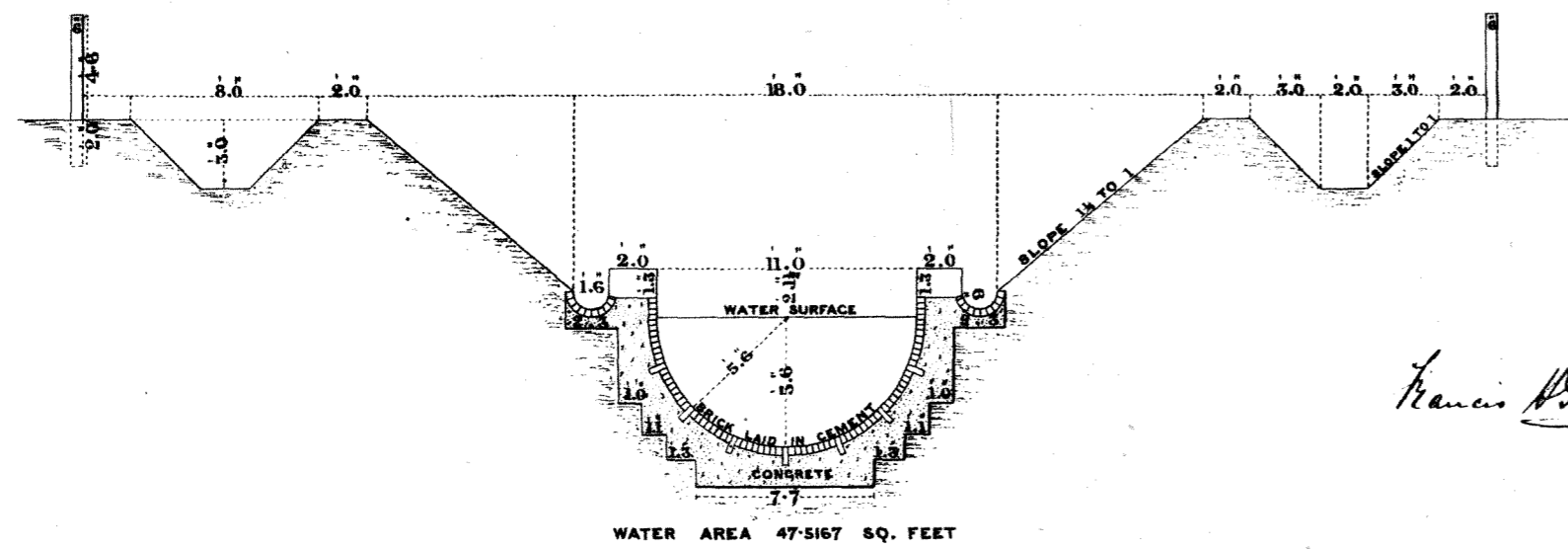
IN SOUND WATERTIGHT SHALE OR CLAY



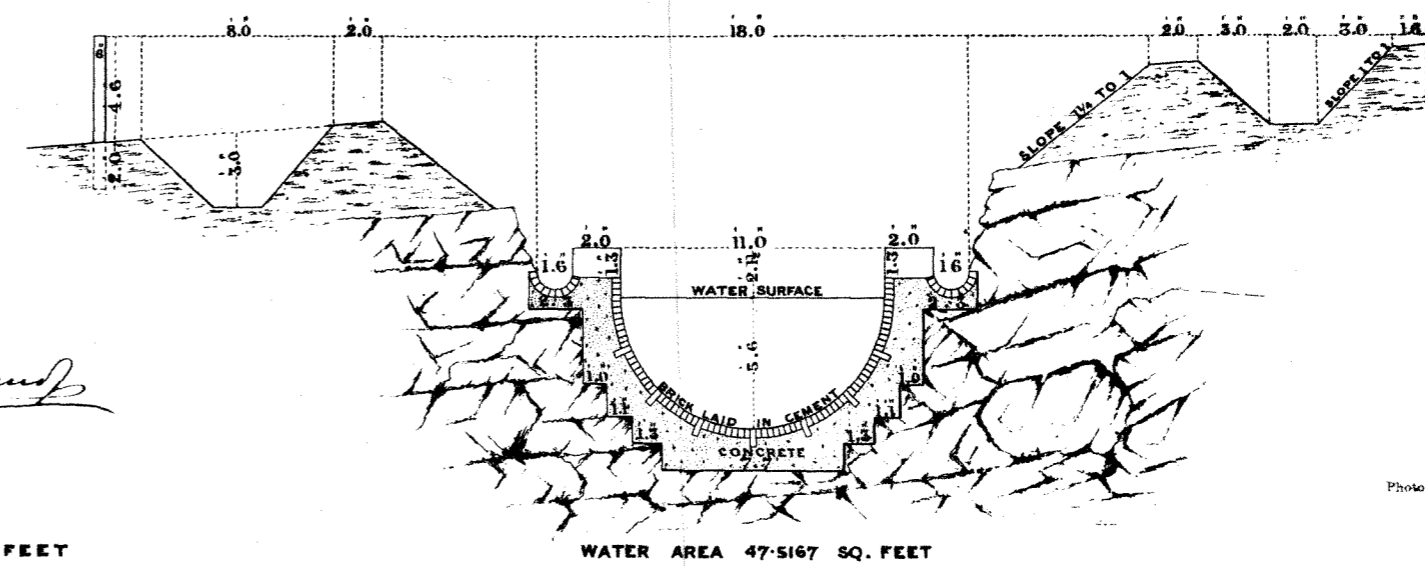
IN SOUND ROCK



IN LEAKY CLAY OR SHALE



IN UNSOUND ROCK



Francis H. Grundy



1869.

NEW SOUTH WALES.

AUSTRALIAN MUSEUM.

(REPORT FROM TRUSTEES, FOR 1868.)

Presented to Parliament, pursuant to Act 17 Vict., No. 2, sec. 9.

REPORT OF THE TRUSTEES OF THE AUSTRALIAN MUSEUM, FOR THE YEAR
ENDING 31ST DECEMBER, 1868.TO HIS EXCELLENCY THE GOVERNOR-IN-CHIEF,
&c., &c., &c.

1. The Trustees of the Australian Museum have the honor to submit to your Excellency this their Fifteenth Annual Report.

2. The Museum has been open to the public daily (Sundays excepted) during the past year, and has been visited by 108,727 persons.

3. The system of exchanging specimens of Natural History with the principal Foreign Museums is still maintained by the Trustees, who have received several valuable collections during the past year, a list of which is appended. (*Appendix No. 2.*)

4. Numerous donations have been received during the year, a list of which is appended. (*Appendix No. 3.*)

5. In Appendix No. 4 will be found a list of the various objects sent in exchange, together with the name of the recipients.

6. Several valuable works, purchased out of the Endowment Fund, have been added to the Museum Library, a list of which is appended. (*Appendix No. 5.*)

7. Two Taxidermists have been occupied during the year in preparing and mounting the following specimens:—

16 mammals,
195 birds,
10 reptiles,
12 skeletons of various animals,—

and in cleaning and preserving from decay the collection already displayed for public inspection.

8. The Trustees have again to draw attention to the fact that the first edition of their Catalogue is out of print, and that a second enlarged edition is urgently required; and as the Endowment Fund is much encroached upon already for the purchase of the necessary books and periodicals, they are not in a position to proceed with the printing. Under these circumstances, the Trustees recommend that application be made to have a sum put on the Estimates sufficient to cover the expenses of printing. The Trustees believe that if this was done for a few years, a publishing fund could thus be raised, which would cover the expenses of so desirable an object.

9. The new wing has been open to the public since January, and the number of visitors has largely increased, from 11,300, in 1860, to more than 100,000 persons during the past year. The collection is also much larger, in better condition, and far more valuable than it was previously; but to keep the specimens in this state, to prevent damage, and maintain order among the increased number of visitors some additional funds are urgently required.

10. The Assistant Curator, Mr. George Masters, has departed for West Australia, and collected already some valuable and interesting specimens, a list of which is appended. (*Appendix No. 6.*)

11. *Appendix No. 1* contains an abstract of the receipts and payments of the Trustees on behalf of the Museum, for the year ending 31st December, 1868.

12. *Appendix No. 2* contains a list of the specimens received in exchange.

13. *Appendix No. 3* contains a list of the various donations during the year, with the names of the donors.

14. *Appendix No. 4* contains a list of the specimens sent in exchange to various persons and institutions.

15. *Appendix No. 5* contains a list of the books purchased for the Museum Library.

16. *Appendix No. 6* contains a list of the specimens collected by Mr. George Masters, Assistant Curator.

17. The Trustees have the honor to submit this their Report for the year 1868; and in testimony thereof, have caused their Corporate Seal to be hereunto affixed, this third day of June, 1869.

(L.S.) E. DEAS THOMSON,
Chairman and Crown Trustee.

GERARD KREFFT,
Curator and Secretary.

APPENDIX No. 1.

CURRENT EXPENDITURE of the Trustees of the Australian Museum, during the Year 1868.

1868.		£ s. d.	1868.		£ s. d.
Jan. 1	To Balance	777 6 5	Dec. 31	By Salaries during the year	1,037 2 0
" "	" Cash, Col. Treasury ..	249 19 11	"	" Keeping grounds in order	24 18 0
" "	" " " " ..	208 6 7	"	" Taxidermist's department	116 13 2
Apl. 9	" " " " ..	250 0 0	"	" Carriage, freight, postage, &c. ..	80 9 10
May 29	" " " " ..	266 13 6	"	" Stationery, books, and periodicals ..	88 9 7
July 7	" " " " ..	250 0 0	"	" Wood, coal, &c.	12 11 6
" 31	" " " " ..	99 19 11	"	" Purchase of specimens	5 0 0
Aug. 10	" " " " ..	125 0 0	"	" Extra labour	29 1 0
" 17	" " " " ..	1,000 0 0	"	" Travelling expenses	111 8 10
Oct. 10	" " " " ..	250 0 0	"	" Construction of cabinets	1,546 4 8
Nov. 25	" " " " ..	125 0 0	"	" Balance	550 7 9
1869.		£ 3,602 6 4			£ 3,602 6 4
Jan. 1	To Balance	£ 550 7 9			

GERARD KREFFT,
Curator and Secretary.

APPENDIX No. 2.

LIST OF SPECIMENS RECEIVED IN EXCHANGE, DURING THE YEAR 1868.

From the Government Museum at Christchurch, New Zealand.

A collection of Moa bones, and two nearly perfect skeletons of extinct gigantic birds.

From Mr. C. L. Salmin, Hamburg.

A very fine specimen of a wild boar (mounted).
Skin of a crocodile, and a collection of reptiles and fishes.

From Mr. Marie, New Caledonia.

A collection of mammals, birds, reptiles, fishes, and insects, from New Caledonia.

From Professor Peters, Berlin.

A collection of Cheiroptera—20 species.

From Professor Keferstein, Göttingen.

Casts of skulls of various races of mankind—15 specimens.

From Mr. V. Fric, Prague.

A collection of glass models of various genera and species of Actinias, in their natural colours.
A collection of wood-models, illustrative of the various forms of crystals.
A collection of spiders, mounted on slides, in spirits of wine.

Australian Museum,
3 June, 1869.

GERARD KREFFT,
Curator and Secretary.

APPENDIX No. 3.

DONATIONS TO THE AUSTRALIAN MUSEUM, DURING THE YEAR 1868.

MAMMALS.

PRESENTED BY

A Deer	Captain Cadell.
A Phalanger (<i>Phalangista vulpina</i>)	Mr. J. Row.
A Tree Rat (<i>Hapalotis arboreicola</i>)	Mr. E. Dunne.
A Platypus (<i>Ornithorhynchus anatinus</i>)	Mr. J. Struth.
A South American Monkey	Mr. J. Defries.
A Dasyurus (<i>Dasyurus viverrinus</i>)	} From the Council of the Acclimatization Society, and the Botanical Gardens.
A Kangaroo (<i>Macropus major</i>)	
A Monkey	
Six Tree Rats (<i>Hapalotis arboreicola</i>)	Mr. W. Macleay, M.L.A. and F.L.S.
A Kangaroo (<i>Macropus major</i>)	} Mr. E. S. Hill.
Two Wallaroos (<i>Osphranter robustus</i>)	
A Kangaroo (<i>Macropus major</i>)	Mr. J. Oatley.
A Wallaby (<i>Halmaturus ualabatus</i>)	Mr. W. Newcombe.
A Kid—deformed	Mr. R. Richardson.
A Flying Squirrel (<i>Petaurista taguanoides</i>)	Mr. C. A. Wilson.
A Black Monkey	Mr. A. Kirschbaum.
Skeleton of Platypus (<i>Ornithorhynchus anatinus</i>)	Mr. J. F. Josephson.
A Tasmanian Opossum (<i>Phalangista fuliginosa</i>)	Mr. H. Parkes, M.L.A.
A Flying Squirrel (<i>Petaurista taguanoides</i>)	Mr. F. H. Blackstone.
A Wallaby (<i>Petrogale penicillata</i>)	Mr. J. Nuth.
A Flying Fox (<i>Pteropus poliocephalus</i>)	Mr. A. W. Scott, M.A.
A Koala (<i>Phascolarctos cinereus</i>)	Mr. G. M. Stephen.
A Dasyurus (<i>Dasyurus viverrinus</i>)	Trustees, Parramatta Park.
A Dasyurus (<i>Dasyurus viverrinus</i>)	His Honor Sir A. Stephen, C.B., Chief Justice.

BIRDS.

A Parrot (<i>Psittacus</i>)	Mr. F. H. Lewis.
A Collection of Eggs—Australian Birds	Mr. J. C. Ryrie.
A Hawk (<i>Jeracidea berigora</i>)	Mr. F. Blaxland.
An Egyptian Goose	} From the Council of the Acclimatization Society, and from the Botanical Gardens.
A White-breasted Eagle	
A Paradise Duck	
Five Pheasants	
A Pelican	
An Eagle	
A Golden Pheasant	
A Crane	

BIRDS—continued.

PRESENTED BY

A Hawk (<i>Elanus axillaris</i>)	Mr. A. West.
Two Divers (<i>Phalacrocorax leucogaster</i>)	Mr. J. H. Lewis.
A Red-bill Water-hen (<i>Porphyrio melanotus</i>)	Mr. E. S. Hill.
A Great King-fisher (<i>Dacelo gigantea</i>)	Dr. Eichler.
A Gull (<i>Xenia jamesonii</i>)	Captain Mein.
A Pigeon	Mr. A. G. Cooper.
Two Pelicans (<i>Pelecanus conspicillatus</i>)	Mr. J. A. Moore.
A small Honeyeater (<i>Ptilotis</i>)	Miss Fanny Wyatt.
A Pheasant Skin	Mr. R. Farquarson.
A Hawk (<i>Astur approximans</i>)	Mr. P. B. Rodd.
A Dove and a Magpie	Mr. Sallet.
Four Australian Birds	Mr. H. Ireland.
An Owl (<i>Athene boobook</i>)	Mr. J. B. Bossley.
A Hawk (<i>Astur</i>)	Mr. E. S. Hill.
A White Crane (<i>Ardea pacifica</i>)	Mr. J. Brown.
Two Doves (<i>Geopelia cuneata</i>)	Mr. S. C. Stuart.
A Cockatoo (<i>Cacatua eos</i>)	Miss Wyatt.
A Crane (<i>Ardetta</i>)	Captain Harley.
A Pelican (<i>Pelecanus conspicillatus</i>)	Mr. M. Gannon.
A collection of Birds from Solomon Islands	Captain M'Gregor.
A Night Heron (<i>Nycticorax caledonicus</i>)	Mr. G. A. Cheeke.
An Adjutant Bird	Trustees, Parramatta Park.
A collection of Eggs	Mr. S. Bonnett.
A South Sea Island Parrot	Mr. H. Packer.

REPTILES.

A Brown Snake (<i>Diemenia superciliosa</i>)	Mr. T. E. Newman.
A Black Snake (<i>Pseudechis porphyriacus</i>)	Mr. J. B. Holdsworth.
A Diamond Snake (<i>Morelia spilotes</i>)	Mr. Henry Williams.
A Scorpion and a Snake (<i>Diemenia superciliosa</i>)	Mr. W. E. Bones.
A Collection of Reptiles from New Ireland	Dr. J. C. Cox.
A Diamond Snake (<i>Morelia spilotes</i>)	Mr. J. E. Fassnidge.
A Black Snake (<i>Pseudechis porphyriacus</i>)	Mr. C. H. Fitzhardinge.
A Brown-banded Snake (<i>Hoplocephalus curtus</i>)	Mr. V. A. Prout.
A Tree Snake (<i>Dendrophis punctulata</i>)	} Captain E. B. Maides.
A Collection of Reptiles from Richmond River	
A Frog (<i>Hyla</i>)	Mr. Aldis.
A Lizard (<i>Pseudopus lepidopodus</i>)	Mr. Manton.
A Lizard (<i>Grammatophora barbata</i>)	Mr. Teeke.
A Snake (<i>Hoplocephalus signatus</i>)	Mr. Wallace.
A Collection of Reptiles	} Mr. H. B. Bradley.
A Collection of Snakes	
A Sea Snake (<i>Platurus laticaudatus</i>)	Mr. W. H. Alderson.
A Death Adder (<i>Acanthophis antarctica</i>)	} Captain Harley.
A Collection of Reptiles	
A Diamond Snake (<i>Morelia spilotes</i>)	Captain Stackhouse, R.N.
A Diamond Snake (<i>Morelia spilotes</i>)	Mrs. John Hay.
Two Black Snakes (<i>Pseudechis porphyriacus</i>)	Mr. J. Hickey.
Two Diamond Snakes (<i>Morelia spilotes</i>)	} Mr. Ireland.
Two Carpet Snakes (<i>Morelia variegata</i>)	
A Brown Snake (<i>Diemenia superciliosa</i>)	Mr. Chas. Hill.
A Brown-banded Snake (<i>Hoplocephalus curtus</i>)	Mr. C. J. Patterson.
A Collection of Reptiles from Ryde	Rev. G. E. Turner, S.C.L.
A Collection of Reptiles	Mr. Bell, F.R.C.S.
A Green Tree-snake (<i>Dendrophis punctulata</i>)	} Mr. G. Fitzhardinge.
A Lizard	
A Sleeping Lizard (<i>Cyclodus gigas</i>)	Mr. James Bray.
A Collection of Reptiles from Solomon Islands	Captain M'Gregor.
A Lizard (<i>Hinulia</i>)	Mr. B. Stenhouse.
A Tortoise (<i>Chelodina longicollis</i>)	Mr. John Gould.

FISHES.

A Fish (<i>Carranz</i>)	Mr. Wm. Love.
A Collection of Fishes from New Ireland	} Dr. J. C. Cox.
A Fish (<i>Diodon</i>)	
A Collection of Port Jackson Fishes	} Messrs. Fitzhardinge.
A Collection of Sharks (15) from Shell Cove	
A Fish (<i>Julis</i>)	Master Donovan.
Two Fishes (<i>Diodon</i>)	Mr. C. J. Mueller.
Specimens of Golden Carp (<i>Cyprinus aurantius</i>)	Mr. Patterson.
A Sucking-fish (<i>Remora</i>)	Mr. Willingale.
A Fish (<i>Julis</i>)	Mr. J. Hasmine.
A Fish (<i>Serranus</i>)	Mr. Geo. Packer.
Two Port Jackson Fishes	Mr. Henry Howe.
A Collection of Port Jackson Fishes	Mr. S. Brown.
A Fish (<i>Fistularia</i>)	Captain Purcell, R.A.
A Fish (<i>Julis</i>)	Mr. E. Dunne.
Two Fishes of the Genus <i>Diodon</i>	Mr. C. E. Mueller.
A Fish (<i>Julis</i>)	Captain J. S. Mein.
A Fish (<i>Saurus</i>)	Mrs. Brown.
A Golden Carp (<i>Cyprinus aurantius</i>)	Mr. C. Lemy.
A Fish (<i>Seriola</i>)	Mr. S. Brannett.
A Golden Carp (<i>Cyprinus aurantius</i>)	Mr. S. Douglas.
A Collection of Fishes from Solomon Islands	Captain M'Gregor.
A Fish (<i>Hippocampus brevirostris</i>)	Mr. J. Dingwell.
A Collection of Fishes from South Sea Islands	Mr. S. Underwood.
A Golden Carp (<i>Cyprinus aurantius</i>)	Mr. R. Thomas.
A Fish (<i>Teuthis</i>)	Mr. C. A. Thurlow.

MOLLUSCS.

MOLLUSCS.		PRESENTED BY
A Collection of Shells from Gulf of Carpentaria		Captain Edwards and Dr. Mil- dred Creed.
Twenty species of Port Jackson Shells.....		Mr. J. Brazier.
A Mollusc.....		Dr. Elliott.
Two Shells from Clarke Island, Kingsmills.....		Mr. R. Waters.
A Collection of Shells from Port Macquarie.....		Mr. E. C. Davis.
A Collection of Shells.....		Mr. W. Bell, F.R.C.S.
CRUSTACEANS.		
A Crab (<i>Pagurus</i>)		Mr. J. W. Blair.
A Crab (<i>Pagurus</i>)		Mr. E. Dunne.
A Crab (<i>Ibacus</i>)		Mr. A. H. Tofft.
A Collection of Crustaceans of Port Jackson.....		Mr. R. Rossiter.
ANALIDS.		
A Thread Worm		Mr. J. W. Jenkins.
INSECTS.		
A Phasma.....		Mr. J. Burrows.
A Collection of Insects from New Ireland.....		Dr. J. C. Cox.
A Collection of Insects from Clarence and Richmond Rivers		Captain E. B. Maides.
A Collection of Insects from Solomon Islands		Captain M'Gregor.
Four Moths		Mr. S. Bough.
RADIATED ANIMALS.		
A large specimen of White Coral.....		Mrs. J. C. Cox.
A large specimen of White Coral.....		Mr. Hen. Webber.
A large specimen of Black Coral		Mr. W. D. Gray.
GEOLOGY AND MINERALOGY.		
A specimen of Alum		Mr. B. Poole.
Mineralogical specimens		Mr. R. C. Kirkwood.
Specimens of Granite		Mr. T. S. Seller.
Specimens of Australian Rocks		Mr. J. Fassnidge.
Specimens of Gold in Quartz.....		Mr. H. Elliott.
Specimens of Lava from New Zealand.....		Mr. J. Wilson.
A fossil Bone of a gigantic Animal, from the Plains of Promise, North Australia.....		The Hon. J. Robertson, M.L.A.
A specimen of Iron Ore		Mrs. S. W. Pye.
A Collection of fossil Shells		Miss M. Walker.
Specimens of Lead from South Australia.....		Mr. W. Colyer.
Specimens of Iron Ore and Fossil Wood.....		Mr. G. M'Kay.
Lower Jaw of a species of <i>Nototherium</i>		Mr. P. E. Walsh.
Fossil remains of a gigantic Mammal		Mr. R. C. Joplin.
Anterior portion of Lower Jaw of a gigantic Marsupial, allied to <i>Nototherium</i>		Mr. Lloyd.
Specimens of Minerals from New Caledonia		Mr. H. Sinclair.
A fossil Shell.....		Mr. R. Simpson.
Specimen of Australian Cinnabar.....		Mr. Bensusan.
COINS.		
Twenty-six Silver and eleven Copper Coins.....		Mr. F. Senior.
One Silver and two Copper Coins.....		Master D. Murphy.
ETHNOGRAPHICAL SPECIMENS.		
A Collection of Stone Implements.....		Mr. George Macleay, C.M.G.
A Collection of Ethnographical Specimens from Samoa		Mr. Emberson.
A Collection of Ethnographical Specimens from Gulf of Carpentaria		Captain Edwards and Dr. M. Creed.
A Mask from New Ireland.....		Dr. Brown.
A Curtain from Fiji Islands		Mr. G. Carstairs.
A Spear.....		Mr. S. Bonnett.
A Stone Tomahawk.....		Mr. S. Robinson.
BOOKS.		
A Bible published in 1635.....	}	Mr. F. Senior.
Folkes' Book of Coins.....		
Geology of New Zealand, by Dr. Hochstetter		New Zealand Government.
MISCELLANEOUS.		
Specimens of Timber		Mr. E. D. Thomson, jun.
The Sternum of a small Whale.....		Mr. Thos. Porter.
Specimens of Natural History from Samoa.....		Mr. H. Emberson.
Specimens of Timber from Macquarie Fields		Mr. F. H. Gall.
Plan of the First Settlement, Sydney Cove.....		Mr. Grundy, C.E.

Australian Museum,
3 June, 1869.

GERARD KREFFT,
Curator and Secretary.

APPENDIX No. 4.

LIST OF SPECIMENS SENT IN EXCHANGE DURING THE YEAR 1868.

To Mr. C. L. Salmin, Hamburg.

BIRDS.

Haliaster sphenurus	Dicurus bracteatus	Myzomela sanguinolenta
Astur novæ-hollandiæ	Rhipidura motacilloides	Myzomela obscura
Astur approximans	Micræca macroptera	Melithreptus melanocephalus
Jeracidea berigora	Monarcha carinata	Climacteris picumnus
Falco frontatus	Monarcha trivirgata	Sittella leucocephala
Podargus humeralis	Gerygone albogularis	Cuculus opatus
Eurystomus australis	Petroica multicolor	Cuculus cineraceus
Dacelo gigantea	Eopsaltria australis	Scythrops novæ-hollandiæ
Halcyon macleayi	Psophodes crepitans	Eudynamis flindersii
Artamus sordidus	Malurus lambertii	Aprosmictus scapulatus
Pardalotus punctatus	Acanthiza nana	Aprosmictus erythropterus
Pardalotus leadbeateri	Donacola castaneothorax	Trichoglossus concinnus
Pardalotus melanocephalus	Ptilonorhynchus holosericeus	Ptilinopus swainsonii
Cracticus destructor	Ptilonorhynchus smithii	Chalcophaps chrysochlora
Graucalus melanops	Speotheres australis	Turnix melanogaster
Graucalus swainsonii	Pomatorhinus ruficeps	Synoicus diemenensis
Campephaga jardinii	Meliphaga sericea	Rallus pectoralis
Campephaga karu	Ptilotis auricomis	Scolopax australis
Pachycephala gutturalis	Anthochaera carunculata	Hiaticula ruficapilla
Colluricincla rufogaster	Tropidorhynchus corniculatus	
Falcunculus frontatus	Acanthorhynchus tenuirostris	

To Mr. Puls, Gand.

BIRDS.

Astur approximans	Monarcha carinata	Myzomela sanguinolenta
Jeracidea berigora	Monarcha trivirgata	Myzomela obscura
Podargus humeralis	Gerygone albogularis	Entomyza cyanotus
Eurystomus australis	Petroica multicolor	Climacteris picumnus
Halcyon macleayi	Eopsaltria australis	Sittella chrysoptera
Aleyone azurea	Psophodes crepitans	Sittella leucocephala
Artamus leucopygialis	Malurus lamberti	Scythrops novæ-hollandiæ
Pardalotus punctatus	Donacola castaneothorax	Eudynamis flindersii
Cracticus destructor	Estrela temporalis	Cacatus galerita
Graucalus melanops	Pitta strepitans	Aprosmictus scapulatus
Graucalus hypoleucus	Meliphaga australasiana	Polytelis barrabandi
Graucalus swainsonii	Meliphaga sericea	Polytelis melanura
Campephaga karu	Ptilotis auricomis	Platyercus palliceps
Pachycephala gutturalis	Ptilotis ornatus	Melopsittacus undulatus
Pachycephala pectoralis	Ptilotis chrysolis	Geopelia cuneata
Colluricincla harmonica	Anthochaera carunculata	Turnix melanogaster
Colluricincla rufogaster	Tropidorhynchus corniculatus	Rallus pectoralis
Dicurus bracteatus	Acanthorhynchus tenuirostris	Scolopax australis
Rhipidura motacilloides	Myzantha garrula	Anas superciliosa

To the Royal Museum, Berlin.

BIRDS.

Eurystomus australis	Sericornis frontalis	Platycercus flaviventris
Halcyon macleayi	Psophodes crepitans	Platyercus palliceps
Pardalotus melanocephalus	Anthus australis	Trichoglossus chlorolepidotus
Pardalotus affinis	Sphenæacus galactotes	Ptilonopus swainsonii
Pardalotus punctatus	Pitta strepitans	Geopelia humeralis
Graucalus swainsonii (2)	Sericulus chrysocephalus	Geopelia tranquilla
Dicurus bracteatus	Sphecotheres australis	Phaps chalcoptera
Pachycephala gutturalis	Meliphaga australasiana	Turnix melanogaster
Monarcha carinata	Anthochaera carunculata	Hiaticula nigrifrons
Monarcha trivirgata	Tropidorhynchus corniculatus	Lobivanellus lobatus
Petroica multicolor	Climacteris scandens	Scolopax australis
Petroica fusca	Sittella leucocephala	Parra gallinacea
Eopsaltria australis	Eudynamis flindersii	Spatula rhynchotis.
Malurus melanocephalus	Aprosmictus erythropterus	

A collection of Mammals, Reptiles, and Fishes, in spirits of wine.
A collection of Australian Coleoptera.

To Mr. C. A. Dohrn, Stettin.

A Collection of Australian Insects (Coleoptera).

To Dr. Mess, Munich.

A collection of Australian Insects (Coleoptera).

Australian Museum,
3 June, 1869.

GERARD KREFFT,
Curator and Secretary.

APPENDIX No. 5.

LIST OF BOOKS PURCHASED FOR THE AUSTRALIAN MUSEUM LIBRARY.

2 parts, folio.—Gould : Birds of Great Britain.	1 part, folio.—Gould : Supplement to The Birds of Great Britain.
2 parts, 4to.—Digges : Australian Ornithology.	5 parts, 4to.—Salvin and Sclater : Exotic Ornithology.
4 parts, 4to.—Ian and Sordelli : Iconographie générale des Ophiidiens.	1 vol., 8vo.—Catalogue of Insects : Heteroptera Hemiptera.
4 parts, 8vo.—Quarterly Journal of the Geological Society.	1 vol., 4to.—Gray's Lizards of Australia and New Zealand.
12 parts, 8vo.—Annals of Natural History.	1 vol., 4to.—Gray's Starfishes.
12 parts, 8vo.—Philosophical Magazine.	3 parts, 4to.—Salvin and Sclater : Exotic Ornithology.
12 parts, 4to.—Athenæum.	1 vol. 12mo.—Butler : Catalogue of Diurnal Lepidoptera.
3 parts 8vo.—Newton : "The Ibis"; Ornithological Journal.	1 vol., 12mo.—Walker : Catalogue of Blattariae.
1 vol., 4to.—Linnean Society's Transactions.	1 vol., 8vo.—Günther : Natural History Record.
6 parts, 8vo.—Proceedings of the Linnean Society of London.	1 part, 8vo.—Gray's Heminoptera.
1 part, folio.—Gould : Supplement to The Birds of Australia.	1 part, (II), vol. 26, 4to.—Transactions of the Linnean Society

Australian Museum,
3 June, 1869.

GERARD KREFFT,
Curator and Secretary.

APPENDIX No. 6.

SPECIMENS COLLECTED BY MR. GEORGE MASTERS, ASSISTANT CURATOR, IN WEST AUSTRALIA.

MAMMALS.

Canis dingo (skeletons).....	2	Bettongia grayi (2skins, 1skull)	3	Antechinus (adult, in spirits)	1
Nyctophilus (in spirits).....	17	Lagorchestes fasciatus (5 skins, 1 skeleton)	6	Antechinus (Podabrus) leucogaster (10 adults and young, in spirits, 2 skulls)	12
Hydromys fuliginosus (in spirits).....	1	Onychogalea lunata (3 skins, 1 skeleton, 1 young in spirits, 1 skull)	6	Antechinus (Podabrus) fuliginosus (adult, in spirits)	11
Mus (in spirits).....	20	Halmaturus brachyurus (8 skins, 6 skeletons, 8 young in spirits, 6 skulls)	28	Phascogale penicillata (1 adult, in spirits, 1 skull)	2
Hapalotis longicaudata (in spirits)	19	Halmaturus derbianus (8 skins, 1 young in spirits, 1 skull)	10	Perameles myosurus (2 skins, 20 adults and young, 7 skulls)	29
Phalangista vulpina (skins, skull, and young)	4	Halmaturus manicatus (5 skins, 1 skeleton, 3 skulls)	9	Perameles obesula (2 skins, 4 adults and young in spirits, 2 skulls)	8
Phalangista viverrina (3 skins, 1 skeleton, 4 young in spirits, 1 skull)	9	Macropus ocydromus (5 skins, 1 skeleton, 1 young in spirits, 9 skulls)	16	Myrmecobius fasciatus (1 skin, 1 adult, in spirits)	2
Hypsiprymnus gilbertii (1skel-ton, 1 young in spirits) ...	2	Dasyurus geoffroyi (2 skins, 1 skull)	3		
Hypsiprymnus platyops (1 skin, 2 adults, in spirits)	3				
Bettongia ogilbyi (3 skins, 1 skeleton, 2 young in spirits, 5 skulls)	10				

BIRDS.

Pandion leucocephalus	1	Eopsaltria griseogularis	10	Zosterops gouldi	12
Hieracidea occidentalis	1	Eopsaltria leucogaster	7	Chimacteus rufa	7
Astur cruentus	2	Psophodes nigrogularis	8	Sittella pileata	8
Accipiter torquatus	1	Malurus elegans	23	Cacomantis pallidus	1
Circus assimilis	1	Malurus splendens	23	Cacomantis flabelliformis	2
Strix novæ-hollandiæ	1	Malurus pulcherrimus	11	Lamprocoeyx plagusus	4
Spiloglaux boobook	1	Acanthiza inornata	3	Licmetis pastinator	2
Ægotheles novæ-hollandiæ	1	Sphenura longirostris	10	Calyptorhynchus bairdii	14
Podargus brachypterus	1	Atrichia clamosa	6	Polytelis melanura	11
Eurostodopus guttatus	1	Hylacola pyrrhopygia	1	Platyercus semitorquatus	3
Hirundo frontalis	2	Sericornis maculatus	15	Platyercus icterotis	6
Hyolchelidon nigricans	3	Acanthiza apicalis	9	Purpureicephalus pileatus	19
Cheramæca leucosterna	7	Acanthiza inornata	7	Euphema elegans	18
Merops ornata	1	Geobasileus chrysorrhous	4	Pezoporus formosus	1
Todirhamphus sanctus	2	Ephianura albifrons	4	Glossopsitta porphyrocephala	7
Artamus sordidus	7	Calamanthus campestris	1	Phaps chalcoptera	2
Pardalotus striatus	9	Anthus australis	3	Phaps elegans	7
Pardalotus punctatus	1	Ptenocedus rufescens	3	Leipoa ocellata	1
Pardalotus xanthopygius	2	Calamoherpe longirostris	1	Turnix varius	3
Strepera anaphonensis	2	Zonæginthus oculus	10	Synoicus australis	6
Gymnorhina leuconota	1	Cincoloma castaneonotum	2	Edicnemus gallarius	1
Cracticus torquatus	3	Corvus australis	1	Sarciphorus pectoralis	1
Grallina picata	1	Pomatostomus superciliosus	3	Ochthodromus nigrifrons	4
Graucalus melanops	4	Meliornis longirostris	16	Ægialophilus ruficapillus	5
Pteropodocys phasianella	1	Meliornis mystacalis	1	Chladorhynchus pectoralis	15
Pachycephala gutturalis	10	Glyciphala fulvifrons	4	Recurvirostra rubricollis	1
Pachycephala rufiventris	1	Glyciphala albifrons	1	Actodromus australis	7
Colluricincla rufiventris	7	Stigmatops ocularis	1	Ardea novæ-hollandiæ	1
Falcunculus leucogaster	2	Ptilotis sonora	5	Botaurus poiciloptilus	1
Oreoica cristata	5	Ptilotis cratitia	2	Porphyrio bellus	2
Rhipidura preissii	8	Ptilotis plumula	5	Anas superciliosa	1
Sauloprocta motacilloides	1	Acanthogenys rufigularis	1	Anas punctata	3
Seisura inquieta	2	Anthochaera carunculata	1	Spatula rhynchotis	1
Micræca assimilis	4	Annellobia lunulata	11	Biziura lobata	2
Gerygone culicivora	1	Acanthorhynchus superciliosus	10	Larus pacificus	2
Sericornis brevirostris	1	Melilthreptus chloropsis	13	Thalasseus poliochereus	2
Petroica multicolor	6	Melilthreptus gularis	2	Phalacrocorax melanoleucus	1
Melanodryas cucullata	3	Myzantha obscura	15	Podiceps nestor	1
Drymodes brunneopygia	2	Dicaeum hirundinaceum	1	Eudypitula minor	2

EGGS

EGGS OF BIRDS.

Hieracidea occidentalis.....	2	Stipiturus malachurus	3	Meliphaga longirostris	4
Phaps elegans.....	4	Acanthiza inornata	2	Sphenura longirostris	2
Turnix varius	4	Rhipidura preissi	1	Dromaius irroratus	1
Eopsaltria griseogularis	2	Sericornis maculatus	3	Nectris brevicaudus	10

NESTS OF BIRDS.

Eopsaltria griseogularis	1	Acanthiza inornata	1	Sphenura longirostris	1
Rhipidura preissi	1	Meliphaga longirostris	3		
Stipiturus malachurus	1	Sericornis maculatus	1		

Australian Museum,
3 June, 1869.

GERARD KREFFT,
Curator and Secretary.

[6d.]

1869.

LEGISLATIVE ASSEMBLY.
NEW SOUTH WALES.

SYDNEY INFIRMARY.

(CORRESPONDENCE RESPECTING THE CASE OF A YOUNG GIRL (ANNIE JESTON JESMOND) WHOSE
ADMISSION WAS REFUSED AT.)

Ordered by the Legislative Assembly to be Printed, 1 October, 1869.

JOHN E. MANNING, ESQ., to THE PRINCIPAL UNDER SECRETARY.

Sydney Infirmary,
28 September, 1869.

SIR,

I have the honor to acknowledge the receipt of your letter, dated 3rd instant, enclosing a communication from the Board of Management of the Government Asylum to yourself, in which attention is directed to the case of a young girl whose admission was refused at the Infirmary; and it is affirmed that other patients requiring active medical treatment have not been received, &c.

Your letter also contains a request from the Colonial Secretary that the matter should be brought under the notice of the Directors, with a view to their furnishing a report thereon.

Your letter, and the subject thereof, having been taken into consideration by the Board of Directors, I am instructed to report, for the information of the Colonial Secretary,—

1st. That the young woman (Annie Jeston Jesmond) presented herself for admission into the Hospital on the of August. She was examined by the Honorary Surgeon admitting for the week, who found her suffering from a slight attack of erysipelas, which was in no degree dangerous to life.

2nd. On the morning of August 21st, the Rev. G. Moreton visited the Infirmary, and personally made an application for her admission. It was explained to him that the patient was unfortunately suffering from a disease which experience had proved to be infectious and dangerous to others, and that it would be contrary to the rules of the institution for her to be admitted; but Mr. Moreton was also informed that, had her symptoms been such as *to place her life in danger, she would have been at once received and placed in a tent.*

3rd. Having, upon more than one occasion, been compelled to remove all the patients from certain wards and keep the latter unoccupied for many days, owing to the existence and extension of erysipelas, the Directors, having regard to the welfare of the patients (185) always under treatment for acute disease, have decided upon endeavouring to protect them as much as possible from the risk of taking a disease which is especially dangerous to those already suffering from severe illness.

4th. For the purpose of immediately relieving the wards of any cases of erysipelas which might arise within the Hospital, the Directors some time since applied to the Government for two tents, which the Colonial Secretary was good enough to supply. Since that time, besides using them for the accommodation of such cases, *all patients* applying for admission, and suffering from erysipelas, *attended by dangerous symptoms*, have been received and placed in the tents separate from the other inmates.

5th. In reference to a remark in the last paragraph of the Report enclosed in the Colonial Secretary's letter, to the effect that—"This is one of the numerous instances in which, for the sake of humanity, the Board has been constrained to admit to the Government Asylums for the Infirm and Destitute, patients requiring active medical treatment, who have been refused admission to the Infirmary, &c."—I am to observe that, after a full consideration of the accommodation and character of the Sydney Infirmary, the Directors have arrived at the conclusion that it is capable of receiving and of securing the efficient treatment of the acute cases of disease and accident in the community; but that the admission of incurable patients, as well as of those whose chronic ailments would require a lengthened and comparatively unskilled treatment, would very much lessen the amount of benefit they might otherwise be able to confer upon more important and severe cases of suffering. With the single intention, therefore, of affording the utmost benefit to the greatest sufferers from severe illness, the Directors have felt it their duty to select, as far as possible, patients afflicted with acute and curable disease for treatment in the Infirmary, leaving those suffering from chronic and incurable affections to be provided for in institutions where they can be equally well-treated and cared for at a less average cost.

6. I am further to mention that a limited but sufficient number of beds are always kept vacant for the reception of urgent cases of accident and disease, and I believe that no such case has for many years been refused admission.

I have, &c.,
JOHN E. MANNING,
Joint Hon. Secretary.

FREDERIC KING, Esq., to THE PRINCIPAL UNDER SECRETARY.

The Government Asylum,
Sydney, 26 August, 1869.

SIR,

Annie Jeston
Jesmond,
18 years of age.

I am directed by the Board of Management to request you to be good enough to solicit the attention of the Honorable the Colonial Secretary to the case of a young girl whose admission to this institution, while suffering from a dangerous disease, erysipelas, was forced on the Board, in consequence of the refusal, on the part of the authorities of the Sydney Infirmary, to give her shelter.

Application for her admission to the Hyde Park Asylum was made to the Chairman, by the Rev. Mr. Moreton, who stated that he had made personal application at the Infirmary for her admission, but had been informed that, as the girl was suffering from an infectious disorder, she was ineligible. This is one of numerous instances in which, for the sake of humanity, the Board have been constrained to admit to the Government Asylums for the Infirm and Destitute, patients requiring active medical treatment who have been refused admission to the Infirmary; and they desire to call the attention of the Government to the expediency of instituting an inquiry into the rules and practice of the Infirmary, with the view of causing such modification thereof as will open the doors of that institution, which is so largely supported out of the public funds, for the reception of such cases as that which they have brought under notice.

I have, &c.,

FREDERIC KING,
Secretary.

Submitted, 30 Aug., 1869.

Refer Infirmary authorities for report. JOHN R.—1 Sept., 1869.

Joint Hon. Sec., Sydney Infirmary, 2 Sept., 1869.

1869.

LEGISLATIVE ASSEMBLY.

NEW SOUTH WALES.

HOSPITAL FOR THE INSANE, TARBAN CREEK.

(REPORTS ON GENERAL CONDITION, &c., OF)

Ordered by the Legislative Assembly to be Printed, 30 September, 1869.

No. 1.

THE SUPERINTENDENT OF THE HOSPITAL FOR THE INSANE, TARBAN CREEK, to THE COLONIAL SECRETARY.

Hospital for the Insane, Tarban Creek, 22 October, 1868.

SIR,

In taking charge of this institution as Superintendent, I feel it a duty which I owe to you, and to myself, to report to you upon its general condition. I would beg at the same time to offer a series of suggestions for its improvement. With the imperfect means at present at command, the good government of the institution and the scientific treatment of the patients are alike almost impossible.

I have, &c.,

FRED^c. NORTON MANNING.

THE Hospital for the Insane, Tarban Creek, contains at this time 650 patients—420 males and 230 females. It stands on elevated ground, fronts the south-east, and from the front building and the general grounds there is a fine and varied view. The Parramatta River is distant about a quarter of a mile.

The building (the general arrangement of which can be understood by a reference to the accompanying plan) is, with the exception of the central offices, of one story, and is spread over a large extent of ground, in the shape of a parallelogram, of which the length is 710 and the breadth 205 feet. The original structure was erected for sixty patients, and has been gradually enlarged to its present extent, when it will afford accommodation for 300 people. The central offices, which include rooms for the officers, visiting rooms, kitchen and stores, were part of the original building, and would seem to have been designed to serve for a very limited number of patients. The building is arranged for the greater number of the rooms to serve as dormitories; and the very limited amount of corridor originally set apart for the accommodation of the patients during the day, has, owing to their large number, been given up for sleeping-room. The only rooms now used during the day are the small dining-rooms, which are not large enough to contain half of the present number of inmates, and are used as dormitories at night, the beds being placed on the floor. On wet or cold days many of the patients are obliged to remain in the yards, because the rooms will not contain them. Several of the rooms originally set apart as attendants' rooms have also been given up for sleeping accommodation. The number of patients accommodated in single rooms is about one-fifth of the whole. The cubic space of the single rooms varies from 770 to 1,080 cubic feet; and as two patients are never placed in one room, it is as a rule a fair proportion for each individual. The remainder of the patients sleep in association, in rooms originally intended for dormitories, or in corridors or dining-rooms, and are so closely packed that the space allowed for each does not exceed 200 cubic feet.

The superficial area allowed is small in the extreme, since the beds are seldom or never more than one foot apart, and in many cases absolutely touch, so that the patients can (and do) roll from one bed on to those next to it on each side. Nearly 150 patients are without bedsteads, owing to absolute want of space. The height of the rooms throughout is twelve feet. There is no special hospital division, the sick being treated in the division to which they belong.

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The asylum reserve consists of upwards of 300 acres, but the greater part is extremely rocky, and totally unfitted for cultivation. The general grounds—which have been enclosed by a wall of enormous solidity and strength—consist of about 50 acres, the major part of which is rocky and uncultivable land. There is no farm, and a patch of three acres is the only garden; in this, however, a considerable quantity of vegetables are grown, and there are some fine orange and other fruit trees. There is a small patch of grass land at the back of this institution, which serves as a paddock for the two horses kept for carting manure, stores, &c.

The distance from Sydney is about six miles by water and eight by land, but by the latter road the asylum cannot be reached without crossing the Parramatta River in a punt, a process which takes, under favourable circumstances, from 15 to 20 minutes.

The building is warmed throughout in winter by wood fires. There are no grates, and the simple open hearths are protected by heavy locked iron guards. The wood costs the institution 8s. 4d. a ton, and entails a considerable amount of labour to cut it into sufficiently small pieces.

The ventilation is entirely natural, by means of open windows, doors, and chimneys, with accessory openings for inlet near the floors, and for outlet through the roof of the majority of the rooms. Wherever it is possible, skeleton doors are used instead of solid ones, and the windows are kept constantly open except in bad weather; but with every care to ensure as much atmospheric change as possible, the dormitories are, as a rule, when occupied, indescribably offensive.

The windows in the outer walls are for the most part small, and placed so high as to prevent all view, and be completely out of reach of the patients. All the single rooms are, as a consequence, cell-like and gloomy. Along the front of the building, the windows are of larger size, and the patients can see out of them when standing up. The small windows to the single rooms open on a pivot longitudinally, the open space being protected with bars. The large ones are in iron frames, and are permanently closed, with the exception of a small section at the top, which opens outwards. The windows opening on to the central airing courts are of fair size, and are ordinary double-hung sashes, opening freely. Those in the divisions for the more violent classes are protected by heavy wire netting. The windows are everywhere without blinds or hangings.

There is no system of lighting. Three dismal lamps make darkness visible in the hall from which the administratives' offices and officers' quarters open, and a few small oil hand lamps are supplied for the use of the attendants. The kitchen is lighted in the evening by a big wick of rag or other material, placed in a tin dish of dripping, and serves to afford a considerable amount of smoke, and a very feeble light for the benefit of the night watchman, who makes the kitchen his resting-place in the intervals between his rounds.

The water supply is from a running stream which has been dammed up at some little distance from the asylum. Two reservoirs have been made, the upper capable of containing one and a half, and the lower half, a million gallons of water. The water passes through a filter of charcoal and gravel, and is pumped by a steam-engine to a tank near the asylum. About 60,000 gallons are used weekly from this source. The reservoirs are at present full, and contain therefore about nine months' supply. Rain-water is collected in tanks, three of which are under ground, and capable of holding an aggregate of 118,000 gallons; and the remainder are in the roof, and will contain 11,500 gallons. For the kitchen and laundry rain-water is largely used, and is obtained by means of hand-pumps. Water is laid on to the few water-closets and lavatories which exist, to the sinks and baths, and to a tap in each airing court. There is no mode of extinguishing fire, but long ladders have been provided as fire-escapes.

The water from the kitchen, laundry, sinks, bath-room, closets, &c., runs into the Parramatta River, and owing to the fall of the land, the drainage is rapid. The main sewer passes near the gate of the garden, and although it is trapped and a well is formed in this situation, very little of the sewerage is used as liquid manure. The privies, to be presently mentioned, are emptied at short intervals, and the contents, after being mixed with earth and allowed to remain some time, so as to permit of the putrefactive changes taking place, are used for manuring the garden.

The baths are placed in two rooms on the female and three on the male side, and are in the proportion of one to about thirty-five patients; about half, or ten out of the nineteen, are of cement, and have been recently made. The cocks to these are so placed as to be under lock and key, but on the male side the locks are lost or out of repair, and the hinges are loose. The remainder are of wood, very dilapidated, and with the taps unprotected. Hot and cold water are laid on to each bath-room. The hot water is heated in a furnace adjoining each room. In each bath-room is a solid-made wooden shower-bath; those on the female side are in good repair, and have bolts to the outside of the door; those on the male are out of repair—one at least is completely rotten, and one or two are without bolts. All are without locks, and one or two without hinges to the doors, and have been so for months.

Every patient is bathed once a week, two or three using the same water. There are no printed bath rules.

An excellent out-door bathing-place has been made at the bottom of the general grounds, by enclosing with piles a piece of the Parramatta River, and erecting a shed and a platform. A number of male patients go with the attendants to bathe daily in the summer mornings, and it is made a washing place for the majority in the summer, instead of using the warm baths.

There are no lavatories for the male patients. Iron basins are brought from the store rooms, and the patients wash under the verandahs in the airing courts, and dry on round towels hung in the yards. The water is obtained from the tap in each yard. In two of the divisions for women, lavatories have been provided. The basins, which are in the proportion of one to every twelve patients, are of zinc, set in wood, and fitted with a plug. The remainder of the women wash in the open air, under the verandah, in the same way as the men.

The kitchen is a small detached one-storied building, centrally placed, but offensively near the officers' rooms. It consists of two parts (the smaller of which was originally a scullery), is not open to the roof, and has no opening for the exit of steam and smoke, except the windows at each side. The ceiling is black with smoke, and the flooring is of stone slabs, which are so uneven and broken as to render cleanliness almost impossible. In the larger room the sole fittings are two old battered and begrimed dressers, and some filthy cupboards much gnawed by rats. All the roasting, as well as all the minor cookery for officers and patients, is done at an open hearth, over a wood fire. The smaller room, formerly the scullery, contains ordinary coppers for cooking meat and vegetables; but these are so small that the potatoes

potatoes are of necessity cooked at three times, and those first boiled are cold before the second and third batches are cooked. There is no scullery or vegetable room, and vegetables are prepared, and pots and pans washed, either in the kitchen, or more usually outside it.

At a little distance from the kitchen, in a small room, filthy dirty, and alive with rats, is a small and badly fitted oven.

The greater part of the meat for the patients' dinner at 1 o'clock is cooked by 10 or half-past 10 o'clock every morning. It is then roughly cut into pieces, the greater number of which are about an inch square, and the amount for each patient is placed in a circular tin dish about 2 inches deep; these dishes are arranged on and under the dressers, and as they are gradually filled, are covered with cloths to keep in as much heat as possible. The vegetables (the potatoes unpeeled) are placed with the meat in the tins. When the whole 650 tins are ready for serving to the patients, which is about half-past 12, as the meat is by this time more or less cold, hot water, or a thin watery mess made by boiling the bones of the day before, is added to each tin to impart some degree of heat. The tins after inspection by the medical officer are taken to the yard in open trays, whilst the bread previously cut into junks is carried in an attendant's apron. As many tins as can conveniently stand on the dining-room tables are placed on them, the remainder are set on window sills or in other convenient positions, and then the patients are called to dinner. As only half at the most can be accommodated in the dining rooms, those who so choose are allowed to come and take their tins into the yards and eat the contents, sitting either on the benches or on the ground. Horn spoons are supplied to convey the food to the mouth, but the fingers render important assistance. On some of the tables are placed some ragged and stained apologies for table-cloths, but even these impart some air of comfort to the tables. The trays which serve to carry in the tin dishes are placed on the ground in the yard. Each patient as he finishes, empties what he does not care to eat into these, and from them those who are unsatisfied with their allowance pick out such morsels as they please. The whole process of serving and eating the dinner is simply filthy, and more fitted for pigs than human beings. The amount of refuse daily is sufficient to fill three large tubs, and as no pig or fowls are kept, this is wastefully carted to the garden and dug in.

The cook and his paid assistant are allowed the fat as a perquisite. The sum obtained by them in this way amounts to between £3 and £4 monthly, and as might be expected under such an objectionable system, the meat is baked till the small amount of fat which the contractor supplies runs from it, and little or none reaches the patients. The circular tins which are the sole utensils used at dinner, serve for saucers in which to place the tin panikin in which the tea is served.

The tea is made by placing the leaves in boiling water, removing the fire as far as possible, and leaving it to simmer for twenty minutes or half an hour. Made in this way, it is, both in taste and appearance, a most uninviting concoction; and even when properly infused, the tea is so poor and tasteless, and the sugar so coarse and high flavoured, that the compound is not a palatable one.

The laundry is a detached wooden building, in which are two small rooms; in one all the coarser clothes, and in the other the sheets and pillow-cases, as well as all the minor articles, and the attendants' and officers' clothes, are washed. In the latter, all the mangling, ironing, folding, and sorting, are also done. In these rooms and a small lean-to room in addition, all the various washing operations are completed, though it is a puzzle to know how such a small space is made to serve for all the various operations. The washing is done entirely by hand. All drying is done in the open air. There is no receiving room for dirty clothes, which are placed in a heap in the open space in front of the laundry, and there is no separate washing room for the specially foul linen.

The only water-closets in the Asylum are four in each of two of the divisions for the females. In these the water supply is regulated from the seat, and the closets are badly arranged, unventilated, and far from sweet. In one of the divisions for males there has been an abortive attempt at introducing earth-closets. In all the remaining divisions, for both males and females, there are privies only, which open immediately from the court, are without water supply, and stink abominably. They are in the proportion, in one ward, of one to forty patients, and the remaining wards are only a trifle more liberally supplied.

The urinals are fewer in number, as primitive in shape, and only one degree less offensive than the privies.

The flooring of the rooms is of wood, except in those used for the more dirty classes of patients, which are either flagged or cemented. In several rooms the floor is so undermined by rats that small pieces of the flags break off and drop into the rat warren below. The walls are for the most part unplastered except with many coatings of whitewash, and are white throughout. Nothing in the shape of ornamentation is attempted. There are no pictures or plaster statuary, no plants, and no fern cases or aquaria. The only furniture provided for the patients, sick or well, during the day, are wooden forms fixed against the wall in the airing-courts, and two or three clumsy wooden chairs. There are plain forms and tables in the dining-rooms sufficient to seat only half or two-thirds of the patients. The tables are, in three wards for male patients, narrow, and fixed against the walls so that the patients sit back to back, in miserable unsociality, whilst they are less under the observation of the attendants than at ordinary tables. The dormitory furniture consists only of bedsteads, bedding, and chamber utensils. The bedsteads are iron, very roughly made, and the majority want repair and paint. A few of the beds are hair, but the large majority are of straw, loosely stuffed, and not matted. The sheets are very coarse, the pillow-case as a rule large enough to contain only about half or two-thirds of the pillow. The blankets are good, and the coverlets bright-coloured and warm, though somewhat coarse in appearance. Many of the bed-slips on the male side are unsewn and ragged. The majority of the men get only one sheet, on which they lie. The chamber utensils are large zinc or iron pans, one or two of which, placed in the centre of a room, and chained to a bedstead, serves for from twelve to twenty people. For the single rooms smaller ones are used. The closets and privies are inaccessible at night, and there are no night-stools. There are no wash-stands, and no boxes for clothes, but in some of the rooms the clothes are made into bundles and triced up to pegs placed at a height from the floor. The bed-clothes are folded for the day in the ordinary military fashion. There were formerly two padded rooms for each sex, but they got completely out of repair, and the padding was stripped from the walls. The walls are now bare, and just in the same condition as when first stripped. There are now no padded, and only one panelled room on each side.

There is no reading or amusement room. The library is kept in an office in the centre building, and there are no book-cases in the wards. The patients are permitted to smoke at fixed times, in the bath-rooms

bath-rooms and in the general grounds. One room, which is sixteen feet long by twelve feet six inches broad, serves as a board-room for the official visitors, as a reception-room for patients, and a visiting-room for their friends, and also as a chapel. Not more than thirty patients can be crowded into it, and this therefore is the entire number able to attend the public ministrations of the Chaplains. On visiting days this room is crowded almost to suffocation by patients and their friends. It is used at the same time for visitors to both male and female patients, and friendly and private communication between visitors and visited is almost impossible in such a crowded place. The female attendants all sleep in the house, in associated dormitories, some originally set apart for this purpose, some intended as single rooms for the patients. The only furniture provided consists of bedstead, bed and bedding, similar in character to that used by the patients; chairs even are not provided. Clothes are kept in boxes which the attendants themselves provide, and the rooms are bare and comfortless. The majority of the male attendants sleep out of the asylum; seven, however, are accommodated in the building, two in the mess-room, and five in a bare, uncomfortable dormitory. The attendants' mess-rooms are in a state of comfortless unrepair, and their dinner is served with only a small amount more nicety than of the patients. The dead-house is a small building consisting of one room, and opening at once on to the road. The windows are placed high at each side, and additional light is afforded by a glazed opening in the roof. It is completely unfurnished, and does not even contain a fit table for post-mortem examination. There are five airing yards for the male, and four for the female side, besides the general grounds. These yards are all completely enclosed, and from one only on each side can any view be obtained. All have verandahs on all four sides, and have with two exceptions been recently turfed; two or three have been planted with trees, and one is laid out in flower-beds, but the rats have undermined and destroyed many of the trees and shrubs planted. In the yards for the more quiet patients on the male side are a few parrots, &c., and on the female side a good supply of both song and plumage birds, as well as rabbits and pigeons. In one yard is a brace of wallaby. There is a small court (a dismal "air-tank") with enormously high walls, for a single violent female patient, but its floor is broken and in holes, and it is seldom used. In addition to the airing-courts there are large general grounds for each sex, and into these the patients are admitted morning and afternoon daily. These grounds consist of a fine grass lawn, consisting of five or six acres, and of fifteen to eighteen acres of rock and scrub for each sex. They contain some small stone quarries, and some natural precipices which are very dangerous. The thick scrub and bush affords opportunities for the secretion if not the escape of the patients, so that whenever they are in the grounds a line of attendants is placed along the top of the scrub, to prevent any of them straying. These grounds contain no closets, no seats, and no sun sheds.

The administrative department consists of the room which has been already mentioned as serving the purposes of chapel, board and visitors' room, four small offices, dispensary and store rooms.

The board and visitors' room is furnished with plain table and chairs; its walls are covered with dark green paint, and its utterly dismal and forlorn appearance is calculated to impress every one who enters it with an idea of desolation, and to make them imagine that the general fittings of the asylum are worse than they really are.

The offices are meanly furnished. The dispensary is of fair size, but dirty, and is in the front instead of the rear of the building, where it would be much more convenient of access.

The store rooms are miserably small, and are three in number, with a small attached office. In one room, where the rats have found their way into most of the cupboards, bread, groceries, wine, spirits, and general stores are kept; in another, tin and iron ware, tools and utensils; and in a third, clothing. The fittings of all are wretchedly inadequate. There is no store for meat or vegetables, and the store rooms are all much too small for the large number of patients.

The rooms for the Superintendent, to which the only approach is from the back, past stores and kitchen, are in the main building, and consist of dining-room, drawing-room, bed-rooms, kitchen, and cellars.

The attendant medical officer has two rooms, one near the entrance, the dimensions of which are 12 feet by 9 feet 6 inches, serves as a sitting room, is always redolent of drugs from the dispensary, placed next to it, and with which it directly communicates. The bed-room is on the upper floor.

The matron has one room only, and this is on the ground floor, serves as a passage to the wards, and is divided by a wooden screen into bed and sitting rooms. There is no attached store or office, and in this dark and scant accommodation, this important officer lives, sleeps, and works. The dispenser has two small rooms in the building. The whole of the officers' rooms are more or less out of repair.

There is no accommodation for the clerk, storekeeper, cook, porter, or engineer. The laundresses sleep in small lean-to rooms near the laundry, and away from the direct observation of the matron. The gardener's house is thoroughly out of repair, and although he is a married man with a family, consists of two small rooms only.

There is a dilapidated wooden stable with stalls for two horses, but no accommodation for horses belonging to the Superintendent, or official or other visitors. There are no farm buildings, piggeries or fowl houses. There are bells in the central hall to summon the matron and chief attendant, and the ordinary attendants can be summoned by means of bells rung in the passage separating the officers' rooms from the wards; but there are no bells to summon the servants of the Superintendent or officers; and in consequence, their privacy is continually liable to invasion by persons whose business is not immediately with them.

The keys of the wards are very large and heavy. The locks are very noisy, and frequently out of repair, and are so various in their size and kind, that no less than ten or eleven large keys are necessary to pass completely through the building. Besides these, the outer gates and others are for the sake of security (as no check locks exist), fastened with padlocks, each having different keys, so that the Superintendent must carry with him a bunch of some twenty keys, if he is to obtain access to all parts of the building. At the present time it is impossible for him to pass through the building without summoning other officers or attendants, owing to want of keys; whilst there is, from a want of system, and from the fact that keys have been lost, reissued, and re-manufactured, little or no check upon the attendants.*

The asylum is under the immediate government of the Colonial Secretary, who appoints all officers. The Auditor General and Treasurer examine into all questions of finance connected with the institution, and

* The present writer has, by way of experiment, found it easy to enter the building, and reach his quarters in the centre, without any key at all, owing to insecure fences, broken locks, and inattention of servants.

and make arrangements for the payment of all salaries and accounts. Formal requisitions are sent in for all necessary stores, and for repairs and furniture. The stores are supplied through the Store Department. Requisitions for repairs are sent, when likely to cost less than £5, direct to the Colonial Architect, and when over that amount to the Colonial Secretary, and so, in due official course to the Secretary for Works and the Colonial Architect.

The system of requisition is in many ways most unsatisfactory. The time spent in the transit of the necessary papers from one department to another is large, and those to whom the requisitions are ultimately referred are either burdened with other business, or are unable to appreciate the importance of prompt action, as the circumstances of the case do not come under their immediate inspection. Keys, urgently needed and demanded in July, /67, are yet unsupplied; cemented floors asked for twelve months since are yet unlaied; repairs to a water-closet, asked for six months ago, have never been executed; lids to the kitchen boilers, required to keep the rats from falling among the bones stewing for the patients' soup, were furnished nearly six months after the requisition had been signed and sent in. A shower-bath door, of which the hinges were off, was repaired on November 2nd, 1868, in fulfilment of a requisition dated June 11th, 1868. Drawers for stores, to replace some into which the rats have had free entry for a long time, are not yet supplied, though demanded four months since; and a requisition for a nightman to empty the cesspools of the privies has, on one occasion, at least, been a fortnight before it has been complied with.

It is no uncommon thing to find requisitions for stores cut down in amount by the Store Department—fifty of a given article being sent, when one hundred are requested: and in this way officers are not unfrequently put to great inconvenience, and necessary work hindered. At this time the ragged condition of the patients is to some extent due to a want of stores so caused. The delay caused by obtaining the clothing through the Store Department, instead of directly from the contractors, is always great; it is difficult to get the necessary alterations in the pattern or fit of the clothing carried out, and in some cases, by the time goods have been forwarded to the Store Department, and thence to the Asylum, and have there been found unsuitable, and returned by the same route, they have been paid for by the Treasury, and extreme confusion is the result.

The system of supply is by contract; and the terms on which such contracts are drawn, and the isolated position of the institution, afford a considerable amount of trouble to the officers in any case in which the supplies are not of sufficiently good quality; but a special difficulty occurs where the supplies are of a perishable nature, and intended for immediate issue to the inmates.

"In the event of a difference of opinion between the contractor and the party receiving the supplies," runs the wording of the conditions of contract, "the same is to be decided by a Board of Survey, constituted as follows, viz.:—The party objecting shall name one person as an arbitrator; the contractor or his agent, another; and these two shall (previous to any other proceeding on their part) concur in naming a third as umpire. In the event of the arbitrators not agreeing in opinion, the umpire will be called upon for his decision, which shall be final." But while this Board is being formed and is deliberating, the patients are waiting for their dinners; and, in an isolated position like Tarban, it must necessarily be late in the day before a second supply of bread or meat can be obtained. The consequence is, that the Superintendent is virtually unable to object to the supplies sent, for fear of keeping his patients dinnerless; and is, more or less, at the mercy of the contractor. He may, it is true, summarily reject articles of a perishable nature, at the time and place of delivery; but he does so under a right of appeal to the Government by the contractor, and under an almost certain knowledge that, unless owing to special alacrity on the part of the contractor himself, no other supplies can be obtained in sufficient time.

The Board of Visitors, appointed by the Government, and paid all necessary expenses, consists of three members—two medical, and one legal. Their exact powers and duties are not clearly laid down but they are charged with the general inspection of the institution and the patients, the examination of the warrants of all patients admitted, and the examination and discharge of all patients considered to be in a fit condition to leave the asylum. One medical member of the Board visits the asylum weekly, and the legal member at irregular intervals. It is necessary that both of the medical visitors should certify to the sanity of any patient before his discharge.

The Superintendent is a physician, and the head of the institution. He hires and discharges all servants, and is responsible to the Colonial Secretary for the good government of the institution.

The system of supply by requisition, which has been already alluded to, and which is carried into the smallest matters, considerably cramps both his powers and his usefulness, rendering the duties of his office difficult of fulfilment.

There is one assistant medical officer only, giving a proportion of one medical officer for 325 patients, who are for the most part of the acute and more violent class; since the chronic cases are, as a rule, drafted to Parramatta.

Officers and Servants.

The other staff for this large number of patients are—

Clerk		Gate-keeper
Matron		Labourer
Dispenser		Carter
Storekeeper		Laundress
Chief attendant		3 laundry maids
Out-door attendant		1 night watchman
Gardener		23 male
Cook		17 female
Cook's assistant		} attendants.

A clerk of works, under the orders of the Colonial Architect, superintends the execution of the repairs to the buildings, and an engineer under the same authority attends to the engine employed in pumping water.

The staff is very small, compared with that of any English asylum of similar size.

The matron has charge of the female patients, and a general supervision of the female division, the laundry, the offices, and officers' residences, and fulfils, therefore, all the duties of chief attendant as well as some of those of housekeeper. The kitchen is under the immediate charge of the storekeeper.

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The chief attendant on the male side is charged with a general supervision of the patients and attendants of the division.

The ordinary attendants number one to about thirteen and a half patients on the female, and (counting the night watchman and the out-door attendant) one to about seventeen on the male side. These patients, it must be remembered, are for the most part acute cases, and yet the proportion is (especially for the male side) much below that in almost every large British, American, and Continental asylum in which both acute and chronic cases are maintained.

The attendants wear no uniform, and are, as a rule, untidy in appearance; the men carry their keys, which are of large size, from a somewhat heavy chain, fastened to a strap round the waist. Several of the senior attendants write very badly or not at all, and little care appears to have been taken to select persons of education.

The system of punishment for attendants is by means of fine, for leave-breaking, for allowing escape of patients, and for misconduct.

The holidays allowed are one day a month, every third or fourth Sunday from after breakfast until tea-time, and from 7 to 10 every evening for unmarried, and from 7 p.m. to 5.30 a.m. for married men.

There is a permanent night watchman, who has a general charge of the whole buildings, and attends the entrance gate; he sits in the kitchen, and makes periodical rounds. The remaining night attendants—two for the male, and one for the female side—are the ordinary day attendants, who do duty in rotation, and are excused duty on the following day. One on the male side is stationed in a corridor in which the more suicidal class of patients sleep. Most of the wet and dirty patients on the female side are raised at intervals, and conducted to the closets or utensils, and the number of wet and dirty beds is on an average from three to five. The patients on the male side are never roused and taken to the utensils and closets, and the number of wet and dirty beds, which are never changed during the night, averages twenty-four. There is no mode of checking the rounds. The door locks are so stiff and noisy that a large number of patients are awakened in every ward by the opening of the doors, and the night attendants in their rounds wear thick noisy boots.

No artisans are employed. The clothing is all bought ready made, and the greater part is worn out without mending; a large number of the patients are therefore in rags, and the cost to the institution is large. The boots made by contract or in the gaols are received from the store, worn until they are in holes, and then discarded. Until within the last year (when about twelve dozen pairs were sent to Parramatta Gaol for that purpose) none have ever been repaired. A large number of the shoes, when discarded, would serve for a long time if properly mended, and those worn by destructive patients become useless before one-fourth worn out.

There are four divisions or yards on the female side, and five on the male. The classification is made according to the power of self-control, and the extra division on the male side is devoted chiefly to sick, infirm, and elderly patients. This division contains 120 patients during the day, and 160 sleep in the rooms attached to it. The other male divisions contain 88, 90, 77, and 45 patients respectively. The latter are patients of the most violent class. The yard is small, and completely surrounded by buildings, and the difficulty of preventing quarrels among such a number so situated is, as may be imagined, great. The number in the yard set apart for the more violent class of women is 47.

The amount of labour done in the asylum is comparatively small; none of the men's clothes are made, and few repaired. The women do all the mending for their own division, but the number of new clothes made is something trifling. The bed clothes are all bought ready made.

No boot-making or mending is attempted, and no single trade is properly carried out. One or two patients perform a little rough carpenter's work, and one does a little work as a blacksmith, but unsatisfactorily, and without system.

The numbers employed will be seen by an examination of the following tables:—

<i>Women.</i>	<i>Men.</i>
Needlework 14	Gardeners 4
Laundry 11	Labourers in grounds 9
In cleaning offices... .. 2	Kitchen 5
General work of wards—cleaning, &c. 29	Stable 1
—	Blacksmith 1
56	Tailor 1
	Assistant in surgery 1
	In store 1
	Wood yard 13
	General work of wards 27
	Messenger 1
	Carpenter 1
	—
	65

There are at this time three or four carpenters, a painter, two tailors, and various other workmen who could be usefully employed, if they had some one to direct their labour; but there is a general distaste for work, which shows that it has not been the ruling principle of the institution. It is no uncommon thing, when inquiries are made as to the reason why a patient does not work, to obtain for answer, "I've not come into Tarban to work," or "Work and I quarrelled long ago."

It must be remembered also, in considering this question, that the twenty patients paid for by their friends are, as a rule, above the class supporting itself by manual labour; and if not, consider that as their maintenance is paid for, work is a superfluity.

A large number of the indigent patients are from a class unused to work—they have been in better circumstances, and they are indigent because of their malady.

The dress of the patients is almost all provided ready-made from the Store Department. The men's dress consists chiefly of blue cloth trousers, waistcoat, and jackets, with black or white felt hats. For the working men moleskin trousers are used, and a few wear serge jumpers; for summer, duck jumpers are issued. The women wear print dresses—the majority of a dark sombre blue, which parts with its colour so readily when new that the patients become almost as blue as their dresses; some are dressed

dressed in lighter prints; a few in winseys. Small bright shawls are given for winter, and out-door use, and white hoods serve instead of bonnets, are comfortable to wear, afford protection from the sun, and are sufficiently sightly.

A certain number of the patients wear dresses of strong materials, but these are, as a rule, badly shaped and often ragged. The present supply of clothing, both for males and females, is deficient in amount, variety, pattern, and material.

One of the most striking things in the asylum is the generally untidy condition of the patients—the men are especially so. The clothes are torn and dirty; there is a want of buttons and fastenings to all the various garments, and in many cases little or no care is taken about a proper fit.* The boots are almost as often without laces as with them, and the number without boots is very large.

The linen is changed once a week.

The library consists of between 300 and 400 volumes; they are, however, in woeful unrepair, and are never patched and made decent. The newspapers and periodicals for the patients are—

2 Sydney Morning Herald,	1 Blackwood's Magazine,
2 Empires,	1 Cornhill Magazine,
1 Fraser's Magazine,	1 Edinburgh Review, and
	1 Quarterly Review.

£50 a year are allowed by the Government for books and papers.

No catalogue of the library exists.

The diet for patients is sufficient in amount, though wanting somewhat in variety.

The following is the diet scale:—

FULL DIET.

On Sundays and Thursdays.

1 pound fresh mutton	$\frac{1}{4}$ ounce tea
20 ounces bread	$1\frac{1}{2}$ „ sugar
1 pound vegetables	1 gill milk

On Mondays, Wednesdays, and Saturdays.

1 pound meat	1 pound bread
1 ounce rice	$\frac{1}{4}$ ounce tea
1 pound vegetables	$1\frac{1}{2}$ „ sugar
	1 gill milk.

On Tuesdays and Fridays.

1 pound meat	1 pound bread
$\frac{1}{2}$ ounce suet	$\frac{1}{4}$ ounce tea
6 „ flour	$1\frac{1}{2}$ „ sugar
	1 gill milk

$\frac{1}{2}$ pound flour, $\frac{1}{4}$ pound of raisins, and 1 ounce of suet, on Christmas Day and the Queen's Birthday, in addition to the authorized ration.

To be substituted in cases of sickness, at the discretion of the Surgeon:—

RATION NO. 3.—HALF DIET.

2 pints tea	$\frac{1}{4}$ ounce tea	$\frac{1}{2}$ pound meat
	$1\frac{1}{2}$ „ sugar	1 „ bread
	1 gill milk	$\frac{1}{2}$ „ vegetables
		1 pint broth

RATION NO. 4.—LOW DIET.

2 pints tea	$\frac{1}{4}$ ounce tea	$\frac{1}{4}$ pound meat
	$1\frac{1}{2}$ „ sugar	$\frac{1}{2}$ „ bread
	1 gill milk	$\frac{1}{4}$ „ vegetables
		$\frac{1}{2}$ pint broth

RATION NO. 5.—FEVER DIET.

2 pints tea	$\frac{1}{4}$ ounce tea
	$1\frac{1}{2}$ „ sugar
	1 gill milk

$\frac{1}{2}$ pound bread (with sago, arrowroot, pudding, and other extras, as occasion may require.)

1 ounce pepper and 25 ounces salt for every 100 full daily rations of provisions to patients.

The allowances for attendants are as follows:—

1 pound fresh beef or mutton	} Daily.
1 „ bread, first quality	
1 ounce rice	
$\frac{1}{2}$ „ salt	
1 pound vegetables	
1 gill milk	} Weekly.
4 ounces tea	
2 pounds sugar	

Tobacco is allowed to almost all who have been accustomed to smoke or chew; and all the workers get extras, in the shape of beer, bread and cheese, &c.

Relief is granted on discharge to all who have no money to pay travelling expenses or home to go to. It varies from one shilling to one pound, but never exceeds that sum.

There

* As only certain sizes are supplied, and there is no tailor attached to the institution, very short, tall, stout, or thin men, are fitted as well as possible from the stock in store; but the result would be in some cases ludicrous if it were not also painful. Men with peculiarities of feet are, for the same reasons, allowed to go shoeless.

There are no printed regulations for the guidance of either officers or attendants; no form for reports by day, night, and chief attendants; no extra or ordinary diet rolls; no bath rules. Written reports are made by the day and night attendants, but they are not at all so complete and satisfactory as they might be made. No reports by the Superintendent or Board of Visitors are published.

The cost per head for food, medicine, medical care and attendance, is 7s. 8d. a week.

As all clothing is supplied through the Store Department, and all repairs to the building and the furniture are provided for from the office of the Secretary for Works, no data exist at the Asylum on which to calculate the cost of these items.

The shower-bath is used both as a disciplinary measure and for treatment. Prolonged warm baths are seldom employed. No form of restraint is used in the Asylum. Seclusion is practised mainly as treatment. One man is at this time temporarily in seclusion on the male side, for the sake of quiet; and two women are secluded permanently on the female side—both are very violent and indecent, and if unchecked would undress themselves and walk about in a state of nudity—one is deaf and dumb.

The amount of seclusion for short periods is not more than in most English asylums.

A very small acquaintance with the patients is sufficient to show that a certain number might be with advantage discharged to the care of their friends (if such friends were able to maintain them), because harmless, and quite unlikely to be benefited by a longer stay in the institution; but the law, as it at present stands, is a direct barrier to their discharge, and they stay in the asylum and occupy the room which might, in the present crowded state of the institutions for the insane in the Colony, be much more beneficially given to acute and more curable cases. By the 3rd section of the Act passed in June, 1846, to amend the Lunacy Act of 1843, it is provided that it shall be lawful for the Governor, if he think it fit so to do, to order the discharge of any lunatic still labouring under insanity to the custody of his or her friends, provided that no person who may have been committed as a dangerous lunatic, or a dangerous idiot, shall be so discharged, unless the friend shall enter into sufficient recognizances for the peaceable behaviour of such dangerous lunatic or idiot, before two Justices of the Peace, in the Court of Quarter Sessions, or one of the Judges of the Supreme Court. As all or nearly all the insane are admitted into the asylum under a form denominating them dangerous lunatics or idiots, whether they really are so or not, a very small number (those admitted on the application of friends) can be discharged unless a bond, which costs at least £1, is entered into; and this, in the trouble which its execution entails and in its formal character, often serves to deter friends who would willingly take charge of harmless patients. Repeated applications have been made to the asylum for the discharge of harmless patients; but the friends, frightened by the bond, and unwilling to pay the £1 duty, have declined to execute it. The bond thus acts as a direct deterrent. There can be little doubt that it is in every way to the advantage of the Colony, in a financial and moral point of view, to offer encouragement to friends who are willing to undertake the charge of their insane, instead of placing obstacles in the way of their so doing. In many cases it would be to the pecuniary advantage of the Colony, and it would increase the happiness of the patient, if direct pecuniary aid were given to such families, otherwise willing, as could not without it undertake the burden of maintaining their insane relatives. In many cases, patients now costing the Colony at least 10s. per week would be taken charge of and kindly treated by friends for half that amount, and the necessary certificate of the continuance of insanity, and of the proper provision and maintenance, might be furnished to the Government at fixed intervals by medical practitioners of the district in which they live.

SUGGESTIONS.

An examination of the foregoing Report will show that the present institution at Tarban Creek is in many ways unfitted for an hospital for the insane; its position is isolated, and, as a consequence, supply is difficult and costly, and visitation, whether by officials or friends of patients, only possible by an expenditure of time which in most cases can be ill afforded. In addition, the patients are shut out from many sources of recreation, since it is equally impossible to induce persons who would otherwise be willing to contribute to their amusement to make such a journey, or to take the patients to the exhibitions, concerts, &c., which are always attainable in town. The amount of land useful for cultivation belonging to the asylum is extremely small. The greater part of the building is prison-like and gloomy. The kitchen, stores, and other offices, are utterly unfitted for the purposes to which they are at present applied; and chapel and amusement room, important accessories to such an institution, are wanting. Under these circumstances, if the building can be usefully employed as a benevolent asylum, or a reformatory, it should undoubtedly cease to be a residence for the insane as soon as possible. If it is decided that it is necessary to retain it as an asylum for some few years to come, such alterations and additions should be made as will render it fit for the purpose; and the following suggestions are offered for the consideration of the Government.

- 1st. That the number of inmates should be as speedily as possible reduced to 300,—200 males and 100 females. The present buildings are not fitted to contain more than that number; and, taking the site and the nature of the present structure into consideration, it is obviously unadvisable to add to the accommodation already existing.
- 2nd. That an adjoining estate, which consists of 28 acres of cultivable land, and on which stands a house which would serve as a residence for the superintendent, should be purchased and added to the asylum property. The land is urgently needed as a farm for the occupation of the patients, and for the growth of produce for the use of the asylum; and the present rooms occupied by the superintendent in the asylum are required as visiting rooms for patients' friends, and as sitting and bed rooms for the other officers.
- 3rd. That new and sufficient stores be erected for meat, bread, groceries, clothing, and utensils, with office for the storekeeper, in the rear of the present building occupied for these purposes.
- 4th. That the present store be converted into a kitchen, and fitted with such modern conveniences as will suffice to cook and serve the meals with comfort for 300 patients and the necessary officers and attendants, and that a good scullery and oven be placed near the kitchen.
- 5th. That the present kitchen and scullery be made into one room, and so fitted as to serve for chapel and amusement hall.

6th.

- 6th. That a new laundry be erected near the present one, to consist of a receiving-room for dirty linen, washing-room, mangling and ironing room, folding, sorting, and mending room, the fittings to be such as to serve for washing by manual labour. In this laundry, all the linen, the sheets, pillow-cases, the clothes of officers and attendants, and all minor articles, should be washed by women.
- 7th. That a small laundry should be erected adjoining the present engine-room at the reservoir; that this should consist of two parts—one for the blankets, counterpanes, and heavy clothes; the other for the extremely dirty clothes of all kinds. For the latter an open shed is best, as affording a freer escape for obnoxious odours. In this building should be fitted simple washing and wringing machinery, to be turned by the engine which pumps the water for the supply of the asylum. The small amount of manual labour necessary may be done by male patients.
- 8th. That new stable accommodation for five or six horses be provided, with the necessary harness-room, corn-loft, &c., so as to accommodate the horses belonging to the asylum as well as those of the Superintendent and visitors.
- 9th. That piggeries should be immediately erected, and cowsheds as soon as provision is made for feeding the cows.
- 10th. That a range of buildings should be erected to contain an upholsterer's shop (in which the beds might be stuffed), tailor's, bootmaker's, blacksmith's and carpenter's shops. The buildings just commenced and intended as dormitories for male patients would serve, with a few minor alterations, for this purpose, as soon as the patients to be placed in them are removed to the buildings about to be erected at Parramatta.
- 11th. That a fence should be erected in the present grounds on both sides, to separate the part to be used as airing-ground for the patients from the garden, the patches now in process of clearing for cultivation, and the rocky woodland into which it is not safe to allow the patients to enter.
- 12th. That sun-sheds, seats, and earth-closets should be placed in the general grounds for each sex.
- 13th. That cottages should be built as residences for the storekeeper, engineer, and gardener—(the latter in place of the ruinous structure at present in use)—all placed contiguous to the place where each of these individuals works.
- 14th. That proper approaches and fences be made to the asylum. The present palings at the back are in a ruinous state and afford no security.
- 15th. That the house now occupied by the Superintendent and other officers should be thoroughly refitted and repaired; that the room now used as a board-room, visitors' room, and chapel, be set apart as a visitors' room for male patients, and also as a reading-room and library for patients of this sex; that the corresponding room on the female side, now the Superintendent's dining-room, be made a visiting-room for female patients, and a reading-room for the more quiet patients of that sex; and that both these rooms be comfortably furnished. That offices be set apart for the Superintendent, clerk, and medical officer, on the ground floor of the building, and the dispensary removed from the front to the back for convenience in distributing medicine. That the upper rooms be apportioned between the officers (giving two rooms for each) and the domestic servants of the institution; and that the centre room, now used as the Superintendent's sitting-room, be used for the meeting of the official visitors. That the room for matron, and medical, and indeed all resident officers, be substantially furnished.
- 16th. That coals should be burnt in the kitchen instead of wood; and the heavy iron guards now in use in the wards discarded.
- 17th. That such windows as are now permanently closed, except a small portion at the top, should be made to open to a greater extent.
- 18th. That the dark passage separating the 1st and 2nd divisions on each side should be removed.
- 19th. That a system of lighting by means of properly arranged kerosene lamps should be introduced throughout the kitchen, central offices, amusement hall, day-rooms, and the associated dormitories.
- 20th. That cement instead of wooden baths should be used throughout; that all those already of cement be repaired; and that locks be placed on all the shower-baths so as to prevent their unauthorized use.
- 21st. That lavatories of simple form should be constructed in each division where they do not at present exist.
- 22nd. That proper tins for conveying the food to the wards, neat crockery, knives and forks, and all the necessary appliances for serving it in a proper manner, should be provided.
- 23rd. That a ward-kitchen, fitted with a small stove, at which sago, arrowroot, beef-tea, and other comforts for the sick, could be prepared, should be made in the male and female divisions.
- 24th. That the drying yards should be enlarged and properly arranged.
- 25th. That earth-closets should be fitted for all the wards except where the water-closets exist and can be made to answer satisfactorily.
- 26th. That all necessary repairs to flooring, skirting-boards, &c., should be done, the walls of the day-rooms properly coloured, some comfortable furniture provided, and some ornamentation by means of pictures, plants, &c., introduced.
- 27th. That the bedsteads should be all painted, the majority of the beds stuffed with coir or horse-hair, and that a better and more plentiful supply of bed-linen be provided, so as to give more than one sheet to each person, and a pillow-case which will cover more than half the pillow; that earthenware chamber utensils be provided, and boxes to keep the patients' clothes in at night, and to serve as seats.
- 28th. That an additional panelled room be made for each sex.
- 29th. That proper sleeping accommodation should be provided for all attendants sleeping in the house, and that their rooms be comfortably furnished.

- 30th. That fit attendants' mess-room should be provided and made habitable.
- 31st. That the dead-house should be so fitted as to allow of proper *post mortem* examination of all patients deceased in the asylum.
- 32nd. That the room now used as both bed-room and sitting-room by the matron be used as a matron's store-room and office, and that the corresponding room on the opposite side be used for a similar purpose by the chief attendant; that a separate room be set apart as a sewing and cutting-out room, in which all the patients capable of work could assemble under the care of an attendant. The building about to be erected for fifty female patients might serve for this and other purposes.
- 33rd. That bells should be fitted in the Superintendent's office, to summon the matron and chief attendant; and that the necessary house-bells should be fitted in the central residence.
- 34th. That a complete set of asylum locks should be sent for from England; that all those at present in use should be removed, and a proper system be introduced, check-locks being placed on all the doors at which officers alone are to have the free entry. This is most important, and should be immediately carried out.
- 35th. That either a Board of control should be appointed for the government of the asylum, or that increased powers be given to the Superintendent to order all minor repairs without going through the routine of requisition. The Clerk of the Works might carry out these repairs, the orders of the Superintendent, and payment be made by voucher. Provision should be made for the expenditure of minor sums in the same way, and immense trouble would be saved, and the clothing department of the asylum placed on an altogether more satisfactory footing, if the articles were supplied by the contractor immediately to the asylum instead of through the Store Department.
- 36th. When the number of patients is reduced to 300, if those of the more chronic class be retained, the office of assistant medical officer may be abolished, and the staff otherwise reduced. If the asylum is occupied by acute and chronic cases in the usual proportion—a plan which is desirable in a well-fitted asylum, but which is objectionable in such a building as Tarban, where scientific treatment must always be difficult—one medical officer would be unequal to the duties of superintendence and medical treatment.
- 37th. That the following artisans should be immediately added to the staff of the asylum:—A carpenter and joiner, a tailor, a bootmaker, and a workwoman. For the former, at this moment, nearly a year's full employment could be found; and with a clever workman, and the assistance which could be rendered by artisan patients, the asylum might be made nearly independent of the Colonial Architect's Department in this particular. A tailor is much needed to make and repair the clothing for the male patients, many of whom are now in rags; and a workwoman is necessary to render the same service in the female division. A bootmaker is needed to repair and make boots for the patients. The tailor and bootmaker might be assisted by patients for whom it is now difficult to find useful occupation, and who are not fit to be employed at their trades without some superintendence. There can be little doubt that by the employment of these artisans a saving would be effected to the institution, the mass of the patients be better dressed and made more comfortable, and a few usefully employed.
- 38th. That the supply of newspapers and periodicals for the use of the patients should be largely increased.
- 39th. That the dress of the patients should be improved by a more liberal allowance of material, as well as a larger choice of patterns, and improvements in shape and fit.
- 40th. That pigs be at once bought, and fed on the refuse of the institution, which is now wasted; and that as soon as sufficient land is brought into cultivation to afford food, cows be purchased, and so far as is possible, the milk needed be thus supplied.
- 41st. That printed rules and regulations for the guidance of officers and servants be drawn up and submitted to the Government for approval, as soon as convenient; and that a complete system of attendants' reports be instituted.
- 42nd. That some alteration be made in the law requiring friends to enter into recognizances before harmless or chronic patients are discharged to their custody; and that arrangements be made for affording pecuniary aid in cases where it is deemed advisable.
- 43rd. That the friends of patients should be charged with their maintenance in accordance with their ability to pay. That in special cases sums as low as 5s. a week should be received, and in others 2 guineas and upwards should be charged. The sum at present charged, 2s. 2d. a day, scarcely suffices to meet all the expenses incurred for this class of patients, as extra attention is bestowed upon them and some extra diet necessary, whilst they seldom or never employ themselves for the benefit of the institution.

If these suggestions, certain of which have already been submitted for the consideration and met with the approval of the Government, are carried out, they will involve the expenditure of a considerable sum of money; it is therefore with the greatest reluctance that they are offered, but if the building is to be retained even for a short time as an institution for the *treatment* of insanity and not a mere lock-up for the insane, a number of alterations (those mentioned in the 1st, 3rd, 4th, 5th, 7th, 10th, 11th, 12th, 14th, 17th, 19th, 20th, 22nd, 24th, 25th, 26th, 27th, 28th, 29th, 34th, 37th, 38th, and 41st suggestions) are absolutely and immediately necessary; and the remainder are much to be recommended, if it should be decided to retain the building as an institution for the treatment of the insane beyond the period necessary for the erection of new asylums. It must always be borne in mind that by far the greater number of the suggested alterations, and those certainly requiring the largest expenditure of money, are of such a character that they will be useful, and indeed necessary, for a reformatory, benevolent asylum, or any other purpose for which the buildings may ultimately be destined. The massive stone buildings, the main character of which it is impossible to alter without an unjustifiable expenditure of money, will be

be useful as a dwelling for the indigent or vicious for many years yet to come; and wherever a large number are gathered together, kitchen, stores, and offices are required. If the land which it is suggested should be now purchased is not required, its position will always render it sufficiently saleable. Some part of the expense attending the alterations might be defrayed by the sale of a large part of the asylum reserve, which, although for the most part of rocky land, is finely situated for building purposes. The part capable of cultivation is too far from the asylum to be worked by the labour of the patients; and the whole, consisting of many acres, is of no service to the institution even as ensuring privacy.

FRED^c NORTON MANNING, M.D.

Tarban Creek,
October 22nd, 1868.

No. 2.

E. S. P. BEDFORD, ESQ., to THE PRINCIPAL UNDER SECRETARY.

169, Macquarie-street,
1 March, 1869.

SIR,

On behalf of the Board of Visitors, I have the honor to acknowledge the receipt of your letter requesting a report from the Board as to the present state of accommodation at the Parramatta and Tarban Asylums.

In May, 1867, the Board brought under notice the overcrowded state of the Tarban Asylum, which then had 553 inmates in a building adapted for 350 or 300; and on the 31st of January last there were 651 patients there. At Parramatta, the numbers in 1867 were 525, and on the 5th February there were 541.

The buildings in the asylum at Parramatta hold these patients, but they are very unfit, almost in every respect, for the purpose, and must give way to another asylum.

There has been increased accommodation in the criminal division, by putting another story on the building and adding separate cells; but this provides only for a particular class of patients—criminal lunatics—and it is full.

At Tarban temporary wooden buildings have been erected, to receive 100 men and 50 women in sleeping-rooms, thus relieving in part the day-rooms from being used as dormitories; and from the female side twenty-five patients have been removed to Mr. Tucker's establishment at Cook's River, thus giving further relief to that part of the establishment.

There are in the course of erection, on the Vineyard Property, temporary buildings, which will we trust be completed in two months, that will accommodate comfortably 200 male patients. This will greatly relieve the overcrowded state of Tarban, and reduce its number of patients to 451; but the imperfect day accommodation will only be for about 350 or 300, and there is no provision for the increasing numbers which goes on weekly.

While it is not desired for one moment to undervalue the great benefit of the temporary buildings, which give great relief to Tarban, and render it possible to effect improved arrangements in that asylum which otherwise would not have been possible,—it must not be lost sight of that the present permanent buildings are not fitted for the purpose, that the day accommodation is quite insufficient, and that most of the other arrangements, in both the asylums, for bathing, and the latrines, require great changes for present use, and no improvements can render the erection of fresh asylums unnecessary.

In conclusion, we would venture to suggest that it is most desirable that the Government should determine what should be the number, nature, and situation of these buildings that are necessary for the proper reception and treatment of the lunatics of the Colony; for by having a regular plan laid down, expense will be saved and efficiency ensured; whereas if from time to time provision is made, rendered absolute by pressing wants, no asylum will be well arranged, and it will always be worked at a disadvantage.

I have, &c.,

E. S. P. BEDFORD,
President of the Board of Visitors.

P.S.—In asylums provision for workshops and amusements forms an effective part of the accommodation required, and these are not yet provided.

No. 3.

THE COLONIAL ARCHITECT to THE UNDER SECRETARY FOR PUBLIC WORKS.

Department of Public Works,
Colonial Architect's Office,
Sydney, 13 March, 1869.

SIR,

In returning the enclosed communication respecting the present state of accommodation at the Lunatic Asylums, Parramatta and Tarban Creek, forwarded to me under blank cover on 10th ultimo,—

2. I do myself the honor to subjoin a statement showing the accommodation at these institutions, asked for in the communication referred to.

PARRAMATTA.

PARRAMATTA ASYLUM.

Male Division—

	ft.	in.	ft.	in.	Cubic contents of each ft.	No. of patients capable of accommodating.			
2 dormitories, each	22	0	x	20	0	} 233			
5 " "	45	0	x	24	0				
2 " "	77	0	x	15	0				
2 " "	57	0	x	25	0				
1 dormitory	56	0	x	18	0				
1 " "	45	0	x	12	0				
Now in course of erection } 10 temporary do., each	55	0	x	25	0	15 feet high	20,625	} 200 { Calculated at 1,000 cubic feet for each patient.	
12 cells, "	12	0	x	5	3	9 feet high	567		} 12
3 day-rooms "	81	0	x	11	0	12 feet high	10,692		
1 day-room	15	0	x	12	0	} 9 feet high	1,620		
1 " "	50	0	x	20	0		9,000		
Now in course of erection } 5 temporary do., each	47	0	x	24	0	15 feet high	16,920		
<i>Female Division—</i>									
2 dormitories, each	30	0	x	12	0	} 10 feet high	3,600	} 69	
1 dormitory	20	0	x	12	0		2,400		
1 " "	45	0	x	24	0	} 9 feet high	9,720		
1 " "	40	0	x	20	0		7,200		
1 " "	50	0	x	20	0		9,000		
36 cells, each	8	0	x	5	0	} 9 feet high	360		} 72
36 " "	12	0	x	8	0		864		
<i>Criminal Division—</i>									
19 cells, each	8	0	x	6	0	} 12 feet high	576	} 57	
38 " "	8	6	x	6	0		612		
Total						643			

TARBAN CREEK ASYLUM.

Male Division—

2 dormitories, each	16	8	x	13	9	} 12 feet high	2,750	} 106
2 " "	25	6	x	16	6		5,049	
4 " "	51	0	x	16	0		9,792	
3 temporary do., each	79	4	x	17	0	13ft. 3in. high	17,850	105
9 cells, each	10	0	x	6	6	} 12 feet high	780	} 80
10 " "	10	6	x	7	6		945	
29 " "	10	9	x	6	2		795	
10 " "	12	0	x	7	6		1,080	
18 " "	12	2	x	6	3		912	
4 " "	13	0	x	6	8		1,040	
At present used as dormitories } 1 day-room	69	9	x	11	6		} 12 feet high		9,625	} 55
1 " "	73	0	x	11	6	10,074		
1 " "	60	0	x	11	6	8,280		
1 dining & day room	84	0	x	10	9	10,836		
1 " "	88	6	x	11	0	11,682		
<i>Female Division—</i>								
2 dormitories, each	25	0	x	16	6	} 12 feet high	4,950	} 91
3 " "	35	0	x	16	6		6,930	
2 " "	40	0	x	18	0		8,640	
2 temporary do., each	62	0	x	17	0	13ft. 3in. high	13,965	56
10 cells, each	10	0	x	6	0	} 12 feet high	720	} 32
12 " "	12	0	x	6	0		864	
10 " "	12	0	x	7	8		1,104	
At present used as dormitories } 2 day rooms, each ...	61	6	x	11	2		12 feet high		8,241	32
2 dining & day rooms, each.....	16	6	x	14	0	} 12 feet high	11,110	
1 dining & day room	84	2	x	11	0			
Total						557		

3. The accommodation is calculated at 500 cubic feet to each patient in the dormitories, excepting the temporary building at Parramatta; and the cells, irrespective of size, are intended to accommodate one patient each.

I have, &c.,
JAMES BARNET,
Col. Archt.

1869.

NEW SOUTH WALES.

UNIVERSITY OF SYDNEY.

(REPORT FOR 1868.)

Presented in pursuance of the Act of Incorporation, 14 Vict., No. 31.

REPORT of the University of Sydney, for the Year ended 31st December, 1868.

1. In accordance with the provisions of the Act of Incorporation, 14 Victoria, No. 31, the Senate of the University of Sydney have the honor to submit to His Excellency the Governor and the Executive Council the report of their proceedings during the year 1868.

2. In Lent Term, twelve (12) students passed the statutory examination and were admitted to Matriculation.

3. Dispensations were granted to the following persons who produced satisfactory evidence that there were sufficient reasons for their exemption from lectures, viz. :—1. The Reverend James White, of Singleton, who had received a Dispensation during the years 1866–1867. 2. Mr. Thomas Bowyer, late Scholar of Corpus Christi College, Cambridge, and an undergraduate of one years' standing, who was admitted "*ad eundem statum*," in this University. 3. Mr. William West, an undergraduate of this University of two years' standing. 4. Mr. George Sly—on condition that he should attend the entire University course during the second and third years.

4. Thirteen candidates presented themselves at the Public Examinations. Certificates were granted to nine. The names and order of merit will be found in Appendix A.

5. Certificates of having passed the B.A. examination were granted to ten students. The names will be found in Appendix B.

6. Three candidates presented themselves for the degree of LL.B. As the examination is still in progress, the result will not be declared before Lent Term, 1869.

7. The following Degrees were conferred, the candidates having in every case qualified themselves by passing the examination required by the By-laws, viz. :—

M.D.

Goldsbro, Charles Field, M.B.

M.A.

Faithfull, William Percy, B.A.

M'Gibbon, Rev. John, B.A.

Metcalf, George, B.A., (Melbourne).

O'Brien, Francis, B.A.

LL.B.

Garran, Andrew, M.A. (University of London).

M'Gibbon, Rev. John, B.A.

B.A.

Barton, Edmund.

Clune, Michael.

Cooper, Pope Alexander.

Crompton, William.

Dillon, John Thomas.

Dunstan, Edmund.

Garrick, Joseph Hector.

O'Meara, Michael.

Purves, William Adams.

Thompson, Joseph.

Tole, Joseph.

8. The Scholarships were awarded as follows, viz. :—

“Deas Thomson” (*for proficiency in Physical Science*) :—

Thomas Roseby.

“Barker” (*for proficiency in Mathematical Science*) :—

John Alston.

“Cooper” (*for proficiency in Classics*) :—

John Alston.

“Lithgow” (*for the best student in the second year*) :—

Robert Morris.

“Levey” (*for the student who received the Junior Scholarship in the first year*) :—

Edward Rennie.

Scholarships for General Proficiency.

Third year :—John Alston.

First year :— { Richard Meares Sly.
 { Sydney Dargin.

9. The following students obtained special prizes, viz. :—

£25 *for first class honors in Classics.*

Edmund Barton.

£25 *for first class honors in Mathematics.*

Pope Alexander Cooper.

£10 *for Chemistry and Experimental Physics.*

William Adams Purves.

Professor Pell’s Medal (*for Mathematics for incepting Bachelors*) ;—

Pope Alexander Cooper.

Professor Smith’s Prize (*for Physics*) :—

J. Alston. } *æqs.*
R. Morris. }

10. Mr. Pope Alexander Cooper, who obtained the “Barker” and “University” Scholarships in 1867, and who passed the B.A. examination in Michaelmas Term of the same year, was nominated by the Senate, on the recommendation of the Professors, in the faculty of Arts, for the “Gilchrist” Scholarship. Mr. Cooper left for England early in the year, for the purpose of entering upon his studies at the University of London, in accordance with the conditions imposed by the Trustees of the “Gilchrist” Foundation.

11. A dramatic entertainment was given in the great hall before His Royal Highness the Duke of Edinburgh. The plays performed were the “Phormio” of Terence and “Molières,” Monsieur de Pourceaugnac. The parts were sustained by members of the University.

12. A vacancy in the Senate was caused by the absence of John Bayley Darvall, Esquire, from the Colony, beyond the term of his leave. At a Convocation holden on the 6th April, the Honorable William Munnings Arnold was elected in his room.

13. The Senate have to announce with regret the resignation of his seat on the Senate by Bartholomew O’Brien, Esq., M.D., in consequence of failing health; and they desire to record their sense of the valuable services rendered by him to the Institution, with which he was connected from its foundation. At a Convocation holden on the 12th December, Charles Nathan, Esquire, Fellow of the Royal College of Surgeons, England, was elected to fill his place.

14. The Senate have been in communication with the Council of Education on the subject of the recognition by that Board of the certificates issued to successful candidates in the public examinations. It has been decided that any person producing a certificate of having passed the *Junior* Public Examination shall be entitled to admission to the Council’s Training School without further examination. The question of the practicability of substituting the *Senior* Public Examinations in lieu of certain alternative subjects of examination for teachers’ higher class certificates, is still under the consideration of the Council.

15. Considerable difficulty having arisen in determining the value of Diplomas lodged by foreigners as a preliminary to admission to examination in Medicine, the Senate placed themselves in communication with the Consul of the North Germanic Confederation, with a view to obtain through his aid, information from Germany, as to the qualifications required to constitute a legally recognized Medical Practitioner in that country.

16. At the instance of the Professors, the Senate have under consideration the question of the expediency of making certain changes in the "curriculum" of study, more especially in relation to the election of subjects for the B.A. degree by students at the commencement of their third year.

17. The report of the Receipts and Expenditure for the year, duly certified by the Auditor, is appended to this Report (C).

This Report was agreed to at a duly convened meeting of the Senate, held on the 3rd March, and ordered to be transmitted for the approval of the Government.

HUGH KENNEDY,
Registrar.

APPENDIX A.

PUBLIC EXAMINATIONS.

(Names of the *Senior* candidates who have passed, arranged in alphabetical order in the several classes.)

CLASS I.

Kelly, Samuel (Sydney Grammar School), passed in Latin, Greek, English, Mathematics, Physics.

CLASS II.

M'Phillamy, John (Mr. Savigny's School, Bathurst), passed in Latin, French, Mathematics.
Rutledge, David Dunlop (Sydney Grammar School), passed in English, Latin, Greek, Mathematics, Physics.

CLASS III.

Donaldson, George G. (Mr. Pendrill's School, Glebe), passed in Latin, Greek, French.
Fanning, William (Mr. Blackmore's School, Sydney), passed in English and Latin.
M'Lardy, William M.S. (Sydney Grammar School), passed in Latin, Greek, Physics.
Peter, William (Sydney Grammar School), passed in Latin, Greek, Mathematics.
Walker, William John (Sydney Grammar School), passed in English and Mathematics.

(The following candidates gained distinction.)

LATIN.	GREEK.	FRENCH.	MATHEMATICS.	PHYSICS.
1st Class.	1st Class.	1st Class.	1st Class.	1st Class.
None.	None.	None.	Kelly.	Kelly.
2nd Class.	2nd Class.	2nd Class.	2nd Class.	
M'Phillamy.	Kelly.	M'Phillamy.	M'Phillamy.	
Kelly.	M'Lardy. } <i>æqs.</i>			
M'Lardy.	Peter.			
Donaldson.				

(Names of *Junior* candidates who passed, arranged in alphabetical order.)

Ebsworth, Alfred (Sydney Grammar School), passed in French and Mathematics.
Jacobs, Joseph (Sydney Grammar School), passed in Latin, English, Mathematics.
Coghlan, Timothy, passed in Mathematics, but his examination was interrupted by illness.

APPENDIX B.

Names of those who passed for B.A. in 1868.

Alston, John.		Houison, Andrew.
Cooper, David.		Purves, John M.
Coutts, James.		Roseby, Thomas.
Faithfull, H. M.		White, James.
Gibbes, William.		Yeomans, Allen.

APPENDIX C.

APPENDIX C.

RECEIPTS and EXPENDITURE for the Year 1868.

RECEIPTS.		AMOUNT.	EXPENDITURE.		AMOUNT.
ENDOWMENT FUND.		£ s. d.	ENDOWMENT FUND.		£ s. d.
Balance in Commercial Bank, 31st December, 1867		727 9 3	Paid for salaries, charges, printing, prizes, &c.		4,823 17 9
Received from the Government—Annual Endowment		5,000 0 0	„ for labour on grounds		99 6 6
„ for Lecture Fees, after paying Professors their shares		142 4 9	„ for University Scholarships		175 0 0
„ Fines		0 5 0	„ on account Scholarships, &c., under Private Foundations, viz. :—		
„ Pasturage		93 13 3	“Lithgow” Scholarship	50 0 0	
„ Sale of Text Books—“Plutarch’s Lives”		3 0 0	“Salting” Exhibition	20 0 0	
„ Degree and other Fees		105 0 0	“Professor Pell’s” Medal	10 0 0	
„ Public Examination Fees		26 0 0	“Barker” Scholarship.....	90 3 9	
„ from Investment on account Scholarships, &c., under Private Foundations, viz. :—			“Cooper” Scholarship.....	90 3 9	
“Lithgow” Scholarship.....	60 0 0		“Deas Thomson” Scholarship	57 0 0	
“Salting” Exhibition.....	25 0 0		“Wentworth” Prize Medal	9 5 5	
“Barker” Scholarship	97 15 6		“Levey” Scholarship	35 0 0	
“Wentworth” Fellowship	20 0 0				361 12 11
“Professor Pell” Medal	10 0 0		„ on account expenses of Dramatic Performance before H.R.H. the Duke of Edinburgh		200 19 10
“Wentworth” Prize Medal	9 19 1		„ Professors amount of Public Examination Fees, received in 1867, less charges.....		50 18 3
“G. W. Allen” Scholarship.....	5 0 0				
“Levey” Scholarship	40 0 0				
“Deas Thomson” Scholarship	115 0 0				
“Cooper” Scholarship	97 15 5				
		480 10 0	Balance in Commercial Bank on 31st December, 1868		866 7 0
		£6,578 2 3			£6,578 2 3

G. EAGAR, Auditor.

Sydney, 31st December, 1868.

W. CLARK, Accountant.

1869.

LEGISLATIVE ASSEMBLY.

NEW SOUTH WALES.

UNIVERSITY OF SYDNEY.

(BY-LAWS.)

Ordered by the Legislative Assembly to be Printed, 29 September, 1869.

BY-LAWS OF THE UNIVERSITY.

[All By-laws heretofore passed by the Senate, and now in force, are hereby repealed, and in lieu thereof, the following By-laws shall be, and are hereby declared to be, the By-laws under which the University of Sydney shall henceforth be governed. Provided always, that nothing herein contained shall be deemed to revive any By-law previously repealed, or to prejudice any matter already done, or commenced, under any By-law hitherto in force.]

I.—CHANCELLOR.

1. The election to the office of Chancellor shall take place at a duly convened meeting of the Senate, to be held in the first week in Lent Term.

2. The Chancellor shall be elected for a period of three years (except as hereinafter provided) to be computed from the date of election, but shall be eligible for re-election.

3. In the event of the office of Chancellor becoming vacant by death, resignation, or otherwise, before the expiration of the full term of office herein prescribed, the election of a successor shall be proceeded with at the next ensuing regular meeting of the Senate; and the Chancellor so appointed shall hold office until the first regular meeting of the Senate in the Lent Term next after the expiration of three years from the date of such election.

II.—VICE-CHANCELLOR.

1. The election of the Vice-Chancellor shall take place at a duly convened meeting of the Senate, to be held in the first week in Lent Term, except as in cases otherwise provided for by the Act of Incorporation.

III.—SENATE.

Meetings and Rules of Procedure.

1. The Senate shall meet on the first Wednesday in every month, or on the nearest convenient day, should such first Wednesday be a Public Holiday, and may adjourn from time to time to conclude any unfinished business.

2. At any time in the interval between such monthly meetings, it shall be competent for the Chancellor, or in his absence, the Vice-Chancellor, in any case of emergency, to call a special meeting of the Senate, to be held as soon as conveniently may be, for the consideration of any business which he may wish to submit to them.

3. Upon the written requisition of any three members, the Chancellor, or in his absence the Vice-Chancellor, or in the absence of both, the Registrar, shall convene a special meeting of the Senate, to be held as soon as conveniently may be after the expiration of nine days from the receipt of such requisition.

4. Except in any case of emergency as aforesaid, no motion initiating a subject for discussion shall be made, but in pursuance of notice given at least nine days previously; and every such notice shall be entered in a book, to be kept by the Registrar for that purpose.

5. The Registrar shall issue to each Member of the Senate a summons with a written specification of the various matters to be considered at the next meeting of the Senate, whether such meeting be an ordinary or a special one; and such summons, except in any case of emergency as aforesaid, shall be issued at least seven days previously to such meeting.

6. In the event of a quorum of the Senate not being present at any monthly or other meeting, within half an hour after the hour appointed, the meeting shall lapse, but the members then present may adjourn the meeting to any convenient future day, of which seven days' notice shall be given by the Registrar in the usual manner.

7. All the proceedings of the Senate shall be entered in a journal; and at the opening of each meeting the minutes of the preceding meeting shall be read and confirmed, and the signature of the Chairman then presiding shall be attached thereto.

8. If any Fellow shall, without leave from the Senate, be absent from their meetings for six consecutive calendar months, his fellowship shall *ipso facto* become vacant.

Election to Vacancies.

9. At the first meeting of the Senate after the occurrence of a vacancy among the Fellows, a day shall be fixed for a Convocation for the election of a successor, such day to be within sixty days from the date of such Senate meeting, and to be announced at least thirty days previously to such Convocation, by notice posted at the University, and by advertisement in one or more of the daily newspapers, provided that no Convocation for the election of a Fellow be held during the month of January.

10. No person shall be eligible for election to fill any vacancy among the Fellows, unless his name shall have been communicated to the Registrar by some *legally qualified voter at least ten clear days before the time of Convocation; and it shall be the duty of that officer to cause the name of such person and the fact of his candidature to be forthwith advertised in one or more of the daily papers published in Sydney, and to be posted in a conspicuous place in the University, for eight clear days at least before such Convocation.

11. The Convocation for the election of a Fellow shall be held in the University, and shall be presided over in the same manner as if it were a meeting of the Senate. Every candidate submitted for election must be proposed and seconded by legally qualified voters. If one candidate only be so proposed and seconded, then such candidate shall be declared by the President to be duly elected, but if more than one candidate be so proposed and seconded, an election shall be made by ballot. Before proceeding to such ballot, two members of Convocation shall be chosen by the members present to act as Scrutineers, and such Scrutineers shall report the result of the ballot to the President, who shall declare the candidate having the majority of votes, to be duly elected; and in the event of an equality of votes, the election shall be decided by the casting vote of the President.

12. At the time fixed for a Convocation for the election of a Fellow, the Registrar shall prepare for the President's use a complete list of all persons entitled to vote under the provisions of the law, and a copy of such lists shall be posted in a conspicuous place in the University for two days at least before the time of Convocation.

13. None but legally qualified voters shall be allowed to be present during the taking of a Poll.

Ex-officio Members.

(24 Victoria, No. 13.)

14. The Senior Professor of Classics, the Senior Professor of Mathematics, and the Senior Professor of Chemistry and Experimental Physics, shall be "*ex-officio*" Members of the Senate, under the provisions of the "Sydney University Incorporation Act Amendment Act of 1861."

IV.—SUPERIOR OFFICERS.

(24 Victoria, No. 13.)

1. The Registrar is hereby declared to be a Superior Officer of the University, entitled to the rights and privileges conferred by the "Sydney University Incorporation Act Amendment Act of 1861."

2. The Solicitor to the University is hereby declared to be a Superior Officer of the University, entitled to the rights and privileges conferred by the "Sydney University Incorporation Act Amendment Act of 1861."

V.—REGISTRAR.

1. The Registrar shall keep all necessary records of the proceedings of the University, conduct all necessary correspondence, and keep such registers and books of account as may be required.

2. All fees, fines, or other sums received by the Registrar in his capacity as such, shall be paid over to the credit of the University, in order that the same may be applied, accounted for, and audited in such manner as the Senate may from time to time appoint.

VI.—SEAL OF THE UNIVERSITY.

3. The Seal of the University shall be placed in the charge of the Chancellor or Vice-Chancellor, and Registrar, and shall not be affixed to any document except by order of the Senate.

VII.—FACULTIES.

1. There shall be three Faculties in the University, viz. :—

1. Arts.
2. Law.
3. Medicine.

VIII.—LIMITATION OF TITLE OF PROFESSOR.

1. The title of Professor shall be distinctive of Public Teachers in the University; and no person belonging to the University or to any College within it, shall assume that title without the express authority of the Senate of the University.

IX.—PROCTORIAL BOARD.

1. The Chancellor, the Vice-Chancellor, the Senior Professor of Classics, the Senior Professor of Mathematics, and the Senior Professor of Chemistry and Experimental Physics, shall form a Board, to be called the "Proctorial Board," to which shall be confided the duty of enforcing the observance of order on the part of the Undergraduates of the University. This Board shall make such regulations as it may deem expedient for the maintenance of discipline amongst the Undergraduates, and shall have the power of inflicting or authorizing to be inflicted, all such academic punishments as are sanctioned by the present usage

* The legally qualified voters are—Fellows of the Senate for the time being, Professors, Public Teachers and Examiners in the Schools of the University, Principals of Incorporated Colleges within the University, Superior Officers of the University declared to be such by By-law, and Graduates keeping their names on the Registrar of the University, who shall have taken any or either of the Degrees of M.A., LL.D., or M.D. in this University.

usage of British Universities, including fines to an amount not exceeding Five Pounds (£5) for any one offence: Provided however that the Board shall not proceed to the expulsion of any Undergraduate, or to his suspension for a period exceeding one Term, without the express authority of the Senate.

2. No question shall be decided at any meeting of this Board, unless three members at the least shall be present.

3. At meetings of this Board, the Chair shall be occupied by the Chancellor, or in his absence by the Vice-Chancellor, or in the absence of both the Chancellor and Vice-Chancellor, by the Dean of the Faculty of Arts; and in the event of an equality of votes at any meeting, the Chairman shall have a casting vote. At meetings of this Board the Registrar of the University shall attend and record the proceedings, and it shall be his duty to collect all fines imposed by or under the authority of the Board. It shall be the duty of the Registrar to convene the Board on the requisition of any one of its Members, at such time within seven days from the date of the requisition as may be directed by the Chancellor, or in his absence by the Vice-Chancellor, on whom it shall be incumbent to give such direction on the Registrar's application. In the event of the absence of the Chancellor and Vice-Chancellor, the time of meeting shall be fixed by the Dean of the Faculty of Arts.

X.—BOARDS OF STUDIES.

1. The Professors in the subjects required for the examinations for the Degree of B.A. shall form a Board; of which the Senior Professor, being a member of the Proctorial Board, shall be President, with the title of Dean of the Faculty of Arts.

2. The Professors and Examiners in the Faculty of Law shall form a Board; of which the Senior Professor shall be President, with the title of Dean of the Faculty of Laws.

3. The Professors and Examiners in the Faculty of Medicine shall form a Board; of which the Senior Professor shall be President, with the title of Dean of the Faculty of Medicine.

4. It shall be duty of the above-named Boards to deliberate and report to the Senate upon all questions relating to the studies and examinations in their several Faculties.

5. The Chancellor, the Vice-Chancellor, and the Professors of the three several Faculties, shall form a Board, to be called the "Conference Board," for the consideration of all general questions relating to the studies of the University, or which may be referred to them by the Senate.

XI.—DEAN OF THE FACULTY OF ARTS.

1. The Dean of the Faculty of Arts in the University shall be elected by the Senate from time to time for a term of three years.

2. The first election to that office shall be held at the meeting of the Senate in the first week in Lent Term of 1868.

3. Thereafter such election shall be held at the corresponding meeting of the Senate in every third year.

4. Upon any casual vacancy, or upon a failure to make an election at the time required by the foregoing Rules, the vacancy shall be filled up for the unexpired residue of the current term of three years at some meeting of the Senate, to be held within two months from the time when such vacancy shall have become known to the Chancellor, or from the time of such failure to elect.

5. So much of the By-law in section 1 of Chapter 10 as is inconsistent with the above is rescinded, and the Dean of the Faculty of Arts to be elected as above provided shall be President of the Board of Studies in the said By-law mentioned.

XII.—TERMS.

1. The Academic Year shall contain three Terms, that is to say:—LENT TERM—Commencing on the second Monday in February, and terminating with the third week in May, with an interval (not exceeding eight days) at Easter.

TRINITY TERM—Commencing on the third Monday in June, and terminating with the last week in August.

MICHAELMAS TERM—Commencing on the first Monday in October, and terminating with the second week in December.

XIII.—FACULTY OF ARTS.

Subjects of Study.

1. Professors and Lecturers, appointed by the Senate, shall give instruction in the following subjects:—

1. Greek Language and Literature.
2. Latin Language and Literature.
3. Ancient History.
4. Mathematics.
5. Natural Philosophy.
6. Chemistry.
7. Experimental Physics.
8. Mental Philosophy and Logic.
9. Geology.
10. Mineralogy.

Board of Examiners.

2. The Members of the Board of Studies in the Faculty of Arts, together with such other persons as may from time to time be appointed by the Senate, shall form a Board of Examiners for conducting the examinations in the Faculty of Arts; and of this Board the Dean of the Faculty, or in his absence the Professor next in seniority, shall be Chairman.

3. The Board of Examiners shall, from time to time, and in accordance with the provisions of the By-laws for the time being, frame rules, and appoint times and places for the several examinations in the Faculty of Arts.

4. At the conclusion of each examination, the Board shall transmit to the Senate a report of the result, signed by the Chairman, and by at least two other Members.

Matriculation.

Matriculation.

5. Candidates for Matriculation must make application to the Registrar before the commencement of Lent Term.

6. The Matriculation Examination shall take place once a year, and shall commence on the second day in Lent Term.

7. The examination shall be conducted by means of written or printed papers; but the Examiners shall not be precluded from putting *vivâ voce* questions.

8. The names of all candidates who have passed the Matriculation Examination shall be arranged alphabetically; but it shall be competent to the Examiners to place in a separate class the names of those who may have specially distinguished themselves.

9. All Students who shall receive a *testamur* of having passed the Matriculation Examination, and shall have paid a fee of two pounds to the Registrar, shall be admitted by the Senate as Members of the University.

10. The examination for Matriculation shall be in the following subjects:—

The Greek and Latin Languages.

English Grammar and Composition.

The French or German Language,—translation from some modern Author.

Arithmetic.

Algebra, to simple equations, inclusive.

Geometry, first book of Euclid.

Lectures.

11. Lectures shall commence on the first day of Term excepting in the first or Lent Term, in which they shall commence at the conclusion of the Matriculation and Scholarship Examinations.

12. Lectures of an hour each shall be given by the Professors in Classics, Logic, Mathematics, Chemistry, and Experimental Physics, at such times and in such order as the Senate may from time to time direct.

13. Before the admission of a Student to any course of Lectures, he shall pay to the Registrar of the University such fee as shall have been appointed by the Senate.

14. The subjects of Lectures shall be publicly notified by the Registrar before the commencement of each academic year.

15. Candidates for degrees shall, during their first and second years, attend the University Lectures on the following subjects:—

1. Greek.

2. Latin.

3. Logic.

4. Ancient History.

5. Mathematics.

6. Natural Philosophy.

7. Chemistry.

8. Experimental Physics.

16. Candidates for Degrees shall, during their third year, attend the University Lectures upon those subjects in which they shall be liable to examination for the Degree of B.A., in accordance with section 41.

17. Any Undergraduate not holding a Scholarship in the University, nor being a Member of a College established under the provisions of the Act 18 Victoria, No. 37, may be exempted from attendance upon any or all of the above-named Lectures, upon producing evidence which shall satisfy the Senate that there are sufficient reasons for such exemption; provided that no such exemption shall be granted for more than one year at any one time.

Yearly Examinations.

18. Examinations of the Undergraduates of the first and second years shall be held once a year during the last fortnight of Michaelmas Term, and no Undergraduate shall absent himself therefrom except under medical certificate.

19. The Undergraduates of the first and second years shall be examined in the subjects of the Undergraduate course upon which Lectures have been given during the year.

20. No Undergraduate not exempted under section 17 from attendance upon Lectures shall be admitted to these examinations, who without sufficient cause shall have absented himself more than three times during any one Term from any prescribed course of Lectures.

21. Every Undergraduate exempted from attendance upon Lectures under section 17 shall, before being admitted to any yearly examination, pay to the Registrar a fee of Three Pounds. If any such candidate fail to pass the examination, the fee shall not be returned to him, but he may be admitted again to examination without the payment of any additional fee.

22. After examination the names of the Undergraduates shall be arranged in classes, and in order of merit.

23. Prize books, stamped with the University Arms, shall be given to each member of the first class in each year.

24. Such Undergraduates as absent themselves from the examinations, except under medical certificate, or fail to pass them in a satisfactory manner, shall, at the discretion of the Senate, on the report of the Examiners, be required to keep additional Terms before proceeding to a B. A. Degree.

25. At the end of each academic year those Undergraduates who shall have attended Lectures, and otherwise complied with the Regulations, shall receive certificates to that effect, signed by the Dean of the Faculty of Arts and by the Registrar; but no certificate shall be granted to any such Undergraduate who shall without sufficient cause have absented himself more than three times during any one Term from any prescribed course of Lectures.

26. Undergraduates who shall have passed the yearly examinations shall receive certificates to that effect, signed by the Dean of the Faculty of Arts and by the Registrar.

Public

Public Examinations.

27. Two Public Examinations shall be held every year. The one to be called the Junior Public Examination shall be open to all candidates under the age of sixteen years; the other to be called the Senior Public Examination shall be open to all candidates who may present themselves.

28. The Public Examinations shall be held at such times and at such places as the Senate may from time to time appoint.

29. The subjects of the Junior Public Examination shall be the English Language and Literature, History, Geography, the Latin, Greek, French and German Languages, Arithmetic, Algebra, Geometry, and such other branches of learning as the Senate may from time to time determine.

30. The subjects of the Senior Public Examination shall be those mentioned in section twenty-nine, together with Trigonometry, Conic Sections, Natural Philosophy, Chemistry, Experimental Physics, and Geology and Palæontology.

31. Every candidate who shall pass either of these examinations, or such portions of either of them as may be required by the Regulations of the Senate in force for the time being, shall receive a certificate to that effect, specifying the subjects in which he shall have passed, and signed by the Dean of the Faculty of Arts and by the Registrar.

32. No person shall be admitted to either of the public examinations until he shall have paid such fees as may be required by the Regulations of the Senate in force for the time being.

33. The Professors and Assistant Professors not engaged in tuition except publicly within the University, together with such other persons as the Senate may from time to time appoint, shall form a Board for conducting the public examinations; and of this Board the Dean of the Faculty of Arts, or in his absence the Professor next in seniority, shall be Chairman.

34. At the conclusion of each examination, the Board shall transmit to the Senate a Report of the result, signed by the Chairman and at least one other Member.

35. Subject to these By-laws, the public examinations shall be conducted according to such Regulations as the Senate may from time to time enact.

Admission ad eundem statum.

36. Any person may be admitted without examination as an Undergraduate Member of this University, who shall have kept any number of Terms at any of the undermentioned Universities, namely,—Oxford, Cambridge, St. Andrew's, Glasgow, Aberdeen, Edinburgh, Dublin, Durham, London, Queen's University of Ireland, or Melbourne; and shall be considered of the same standing as if he had been during the same time an undergraduate Member of the University of Sydney: Provided always, that he shall give to the Registrar, to be submitted to the Senate, evidence of having kept such Terms, and of good conduct at any such University.

Bachelor of Arts.

37. The examination for the Degree of B.A. shall take place once a year, at the close of Michaelmas Term.

38. No candidate shall be admitted to this examination unless he produce a certificate from the Dean of the Faculty of Arts of having passed the required examinations, and of having complied with the Regulations during three Academic years, or during the Terms required when, in the exercise of the powers reserved by their By-laws, the Senate may have required additional Terms, or may have allowed Students to matriculate at other than the ordinary times of examination. This certificate shall be transmitted to the Registrar before the day appointed for the commencement of the examination.

39. The fee for the Degree of B.A. shall be Three Pounds. No candidate shall be admitted to the examination unless he have previously paid this fee to the Registrar. If a candidate fail to pass the examination, the fee shall not be returned to him; but he shall be admissible to any subsequent examination for the same Degree without the payment of an additional fee.

40. The examination shall be conducted in the first instance by means of printed papers; and at the termination of such examination, each candidate shall undergo a *vivâ voce* examination, if the Examiners think fit.

41. To obtain the Degree of B.A. candidates shall pass a satisfactory examination in the following subjects, viz. :—

1. The Greek and Latin Languages.
2. Mathematics and Natural Philosophy.
3. Chemistry, Experimental Physics, Geology and Mineralogy.

Any candidate for the Degree of B.A. may, however, at the commencement of his third academic year, elect to be exempted from examination in one of the above groups of subjects, provided that he shall have obtained at least a second class place in that group at the second yearly examination.

42. All persons who have passed the ordinary examination for Degrees, shall be admissible for Honors in the Classical and Mathematical Schools.

43. The candidates in each school shall be arranged in classes and order of merit.

44. The most distinguished candidate for Honors in each of the aforesaid schools shall, if he possess sufficient merit, receive a prize of twenty-five pounds.

45. The candidate most distinguished at the ordinary examination in Chemistry and Experimental Physics, shall, if he possess sufficient merit, receive a prize of Ten Pounds.

Master of Arts.

46. There shall be a yearly examination for the Degree of M.A. during Lent Term, before the Easter recess.

47. Every candidate for this examination must have his name on the Register of the University; he must have previously obtained the Degree of B.A., and two years must have elapsed since the time of his examination for such Degree. He will also be required to furnish evidence of having completed his twenty-first year.

48. The fee for the Degree of M.A. shall be Three Pounds. No candidate shall be admitted to the examination unless he have previously paid this fee to the Registrar. If a candidate fail to pass the examination,

examination, the fee shall not be returned to him; but he shall be admissible to any subsequent examination for the same Degree without the payment of an additional fee.

49. Candidates for the Degree of M.A. shall elect to be examined in one or more of the following branches of knowledge:—

1. Classical Philology and History.
2. Mathematics and Natural Philosophy.
3. Logic; Moral, Mental, and Political Philosophy.
4. Chemistry and Experimental Physics.

The candidate most distinguished in each branch at the examination shall, if he possess sufficient merit, receive a Gold Medal.

50. The Senate shall have power to admit to examination for the Degree of Master of Arts, any person who shall have obtained at least two years previously the Degree of Bachelor of Arts, or equivalent first Degree in Arts, in any of the Universities hereinbefore mentioned as those from which Undergraduates will be admitted *ad eundem statum*. Every candidate for admission under this By-law must make application in writing to the Registrar, and supply satisfactory evidence of his qualification as aforesaid, and that he is a person of good fame and character; and upon the approval of his application shall pay to the Registrar a fee of Two Pounds, for the entry of his name in the University Register, in addition to the prescribed fee for his degree. Before the granting of the Degree, every candidate will be required to furnish evidence of having completed his twenty-first year.

Scholarships.

51. In addition to the Private Foundations, viz.:—the *Barker*, *Deas-Thomson*, *Cooper*, and *Lithgow* Scholarships, each of the annual value of £50, and the *Levy* Scholarship of the annual value of £35, there shall be five University Scholarships, each of the annual value of £50, payable out of the Public Endowment.

52. The above Scholarships, tenable for one year, shall be awarded after examination in the following manner:—

To Undergraduates of the *first* year—
Three Scholarships for General Proficiency, viz.—
Two *University Scholarships*.
The *Levy Scholarship*.

To Undergraduates of the *second* year—
Three Scholarships for General Proficiency, viz.—
Two *University Scholarships*.
The *Lithgow Scholarship*, founded in 1864.

To Undergraduates of the *third* year—
Four Scholarships, viz.—
One *University Scholarship* for General Proficiency.
Three *Special Scholarships*, viz.—

1. For proficiency in Classics the *Cooper* Scholarship, founded in 1857.
2. For proficiency in Mathematics and Natural Philosophy the *Barker* Scholarship, founded in 1853.
3. For proficiency in Chemistry and Experimental Physics the *Deas-Thomson* Scholarship, founded in 1854.

53. No Undergraduate of the first or second year shall hold more than one Scholarship; and no Undergraduate of the third year shall hold more than three Scholarships.

54. None of the above Scholarships shall be awarded except to such candidates as exhibit a degree of proficiency which shall be satisfactory to the Examiners.

55. The examinations for Scholarships shall take place at the beginning of Lent Term.

56. In the first year, candidates for Scholarships shall be examined in the following subjects:—

1. Classics.—Translation from Greek and Latin authors into English; Greek and Latin Composition, in prose and verse.
Ancient History.

2. Mathematics.—Arithmetic and Algebra; first four books of Euclid.

In the second and third years, candidates for Scholarships shall be examined in—

1. Classics.—Translation from Greek and Latin authors into English; Greek and Latin Composition in prose and verse.
Ancient History.
Philology.

2. Mathematics.—The branches enumerated for candidates in the first term, together with—
The 5th and 6th books of Euclid.
Algebraic Geometry of two dimensions.
Plane Trigonometry.
Elements of the Differential Calculus.
Statics and Dynamics.

3. Chemistry and Experimental Physics.

XIV.—FACULTY OF LAWS.

Bachelor of Laws.

1. Until Professorships are established, there shall be a Board of Examiners appointed by the Senate to test the qualifications of candidates desirous of obtaining a Degree in Laws. The examination for the Degree of LL.B. shall take place in Michaelmas Term, and the Degree shall be granted in Lent Term.

2. Every candidate for the Degree of LL.B. shall lodge with the Registrar satisfactory certificates, or furnish other satisfactory evidence of having taken the Degree of B.A. or some equivalent Degree, at least one year previously, in this or one of the Universities hereinbefore mentioned as those from which Undergraduates will be admitted *ad eundem statum*. Every such candidate shall also furnish satisfactory evidence that he is a person of good fame and character.

3. The fee for the Degree of LL.B. shall be ten pounds. No candidate shall be admitted to the examination unless he have previously paid this fee to the Registrar. If the candidate fail to pass this examination, the fee shall not be returned to him; but he shall be admissible to any subsequent examination for the same degree without the payment of an additional fee.

4. Candidates for the Degree of LL.B. shall be examined in the following subjects:—
Civil and International Law.
Constitutional History, and Constitutional Law of England.
General Law of England.

Doctor of Laws.

5. The Degree of LL.D. shall be conferred at the expiration of two academic years from the granting of the LL.B. degree. The candidate shall be required to prepare and defend a Thesis on some subject selected by himself from the Pandects, or Institutes; such Thesis shall be in the Latin or English language, and if recommended by the Board of Examiners, and approved by the Senate, may be printed. The fee for the Degree of LL.D. shall be Ten Pounds.

6. The Senate shall have power to admit to examination for the Degree of LL.D. any person who shall have obtained, at least two years previously, the degree of LL.B. at any of the Universities hereinbefore mentioned as those whose Bachelors of Arts will be admissible to examination for the Degree of Master of Arts in this University, and who shall also have obtained the Degree of Bachelor of Arts, or an equivalent first Degree in Arts, at any of the said Universities, or shall pass an examination similar to that prescribed for the Degree of Bachelor of Arts in this University. Every candidate for admission under this By-law must make application in writing to the Registrar and supply satisfactory evidence of his qualification as aforesaid, and that he is a person of good fame and character; and upon the approval of his application, he shall pay to the Registrar a fee of Two Pounds for the entry of his name in the University Books, in addition to the prescribed fee for his Degree. Before the granting of the Degree, every passed candidate will be required to furnish evidence of his having completed his twenty-third year.

XV.—FACULTY OF MEDICINE.

Bachelor of Medicine.

1. A Professor, appointed by the Senate, shall give Lectures in Chemistry.

2. Until other Professorships in the Faculty of Medicine be constituted in the University, there shall be a Board of Examiners, appointed by the Senate, to test the qualifications of candidates who may apply for Medical Degrees, to be granted in accordance with the provisions contained in the Act of Incorporation.

3. Such candidates must lodge with the Registrar of the University satisfactory certificates of having taken the Degree of B.A. or some equivalent Degree, in this or any of the Universities hereinbefore mentioned as those from which Undergraduates will be admitted *ad eundem statum*. Candidates who have not taken such Degree must pass an examination similar to that prescribed for the B.A. Degree in this University; but it shall be in the power of the Senate to dispense with this examination in the case of candidates who have been in *bonâ fide* medical or surgical practice for not less than ten years.

4. The candidate must also furnish evidence that he is of good fame and character, that he is not under twenty-one years of age, and that he has diligently pursued a course of medical studies extending over a period of four years, at some Medical School approved of by the Senate. His certificates must show that he has attended the following eight classes, each for a course of six months:—Anatomy, Practical Anatomy, Physiology, Chemistry, *Materia Medica*, Surgery, Practice of Medicine, Midwifery; and the following five classes each for a course of three months:—Botany, Practical Chemistry, Medical Jurisprudence, Clinical Medicine, and Clinical Surgery:—also that he has attended for eighteen months the medical and surgical practice of a Hospital containing not fewer than eighty beds; and that he has been engaged for six months in compounding and dispensing medicines.

5. Medical or Surgical Diplomas from regular constituted examining Boards in Europe or America, may, at the discretion of the Senate, be accepted as equivalent to the whole or part of the above-mentioned certificates.

6. As soon as the required documents have been declared satisfactory by the Senate, the Registrar shall notify to the candidate the day on which his examination will commence.

7. Before being admitted to examination, the candidate must deposit with the Registrar a fee of Ten Pounds, which will not be returned in the event of the candidate not passing the examination; but such Candidate may be admitted to any future examination without any further charge.

8. Upon compliance with the above regulations, and on the report of the Examiners that the candidate has passed a satisfactory professional examination, the Senate shall confer upon him the Degree of M.B.

Doctor of Medicine.

9. The Degree of M.D. shall not be conferred until after the expiration of two academic years from the granting of the M.B. Degree.

10. The candidate shall be required to prepare and defend a Thesis on some medical subject, to be selected by himself; such Thesis shall be in the Latin or English language, and if approved by the Senate, on the report of the Board of Examiners, may be printed.

11. The fee for the Degree of M.D. shall be Ten Pounds.

12. The Senate shall have power to admit to examination for the Degree of Doctor of Medicine any person who shall have obtained, at least two years previously, the Degree of Bachelor of Medicine at any of the Universities hereinbefore mentioned as those whose Bachelors of Arts will be admissible to examination for the Degree of M.A. in this University. Every candidate for admission under this

By-Law

By-law must make application in writing to the Registrar, and supply satisfactory evidence of his qualification as aforesaid, and also that he is a person of good fame and character. Upon the approval of his application, he shall pay to the Registrar a fee of Two Pounds for the entry of his name in the University Books, in addition to the prescribed fee for his Degree. Before the granting of the Degree, every passed candidate will be required to furnish evidence of his having completed his twenty-third year.

XVI.—REGISTER OF GRADUATES.

1. A Register of the Graduates of the University shall be kept by the Registrar in such manner as the Senate shall from time to time direct; and for the retention of his name on the Register, every Graduate must pay an annual fee of one pound, on or before the Commemoration day in each year, in default of which his name shall at once be taken off by the Registrar, but may be restored upon payment of all arrears due, at any time, except during the four days preceding the day fixed for a Convocation for the election of a Fellow.

2. The Annual Register Fee may be compounded for by a payment of Five Pounds.

3. The Register of Graduates shall be conclusive evidence that any person whose name shall appear thereon as holding the Degree of Master of Arts, Doctor of Laws, or Doctor of Medicine, at the time of his claiming to vote at a Convocation for the election of a Fellow of the Senate, is so entitled to vote; and that any person whose name shall not appear thereon at the time of his claiming to vote in Convocation is not so entitled to vote.

XVII.—SPECIAL EXAMINATIONS.

It shall be competent to the Senate, on the report of the Proctorial Board, to admit to special examination, at such time as they may appoint, any candidate who shall have failed to pass any examination provided for in the By-laws, or who shall have shown sufficient cause for having been absent from any such examinations.

XVIII.—SUBSTITUTES FOR OFFICERS.

Any Act required by the By-laws to be performed by any Officer of the University may, during the absence or other incapacity of such officer, unless otherwise provided, be performed by a person appointed by the Senate to act in his place.

XIX.—ACADEMIC COSTUME AND DISCIPLINE.

1. The Academic Costume shall be: for—

The Chancellor and the Vice-Chancellor—a robe and cap similar to those worn by the Chancellor of the University of Oxford. In undress, the silk gown worn by other Members of the Senate,—black velvet cap and gold tassel.

A Member of the Senate—the habit of his Degree, or a black silk gown (of the description worn by civilians holding Degrees from Oxford and Cambridge), with tippet of scarlet cloth, edged with white fur, and lined with blue silk,—black velvet trencher cap.

Doctor of Laws or Medicine—the gown worn by Graduates of the same rank in the University of Oxford,—hood of scarlet cloth lined with blue silk,—black cloth trencher cap.

Master of Arts—the ordinary Master's gown of Oxford or Cambridge, of silk or bombazine, with black silk hood lined with blue silk,—black cloth trencher cap.

Bachelor of Laws or Medicine—the black gown worn by civilians in Oxford and Cambridge holding Degrees, with hood of blue silk lined with white fur,—black cloth trencher cap.

An Officer, not being a Graduate—a black silk gown of the description worn by civilians not holding Degrees,—black cloth trencher cap.

Bachelor of Arts—a plain black stuff gown, with hood similar to that worn by the B.A. at Cambridge,—black cloth trencher cap.

Undergraduate—a plain black stuff gown,—black cloth trencher cap.

Scholar—the same gown, with a velvet bar on the sleeve—black cloth trencher cap.

2. Members of the University shall, on all occasions when convened for Academic purposes, appear in their Academic Costume.

3. The Undergraduates shall, on all occasions within the precincts of the University, wear their Academic Costume; and whenever they meet the Fellows, Professors, or other Superior Officers of the University, shall respectfully salute them.

XX.—NON-MATRICULATED STUDENTS.

1. Any person desirous of attending University Lectures may do so without Matriculation, upon payment of such fees as the Senate may from time to time direct.

2. Such Students are exempt from examinations, are not required to wear any Academic Costume, and are not qualified to compete for Honors, nor to proceed to Degrees.

1869.

NEW SOUTH WALES.

SYDNEY GRAMMAR SCHOOL.

(REPORT FOR 1868.)

Presented to Parliament, pursuant to Act 18th Victoria.

THE SECRETARY TO THE TRUSTEES, SYDNEY GRAMMAR SCHOOL, to THE COLONIAL SECRETARY.

Sydney Grammar School,
25 March, 1869.

SIR,

I have the honor, by direction of the Trustees of the Sydney Grammar School, to transmit to you, for the purpose of being laid before Parliament, the following Report of their proceedings and the progress of the school, during the year 1868.

At the January meeting of the Trustees, Professor Pell was re-elected Chairman of the Board for the current year. At the same meeting, a letter was read from the Head Master, informing the Trustees of the resignation of the Rev. W. H. Roberts, M.A., as Assistant Classical Master. This vacancy was filled up on the 24th January, by the appointment of Charles Orlando Helm, Esq., M.A.

At a meeting of the Trustees held on the 3rd February, the following Report was received from the Examiners for Foundation Scholarships.

“ Sydney Grammar School,
7 December, 1867.

“ Gentlemen,

“ The Board appointed by you to examine candidates for Foundation Scholarships have the honor to report as follows :—

- “ 1. The examination was held on Wednesday and Thursday, the 4th and 5th instant.
- “ 2. There were eight candidates.
- “ 3. The subjects of examination were—Latin, Arithmetic, Euclid, History, Geography, English Grammar, and Dictation.”
- “ 4. The following candidates were recommended for appointments,—

J. Jacobs, T. Coghlan, R. Fewings.

(For the Board),
A. B. WEIGALL,
Chairman.”

The Head Master informed the Board of Trustees that Mr. Jacobs had declined to apply for the Foundation Scholarship for his son.

T. Coghlan and R. Fewings having furnished the certificates required by the regulations, were appointed Foundation Scholars.

At a special meeting held on the 12th October, a letter was read from Mr. C. J. Nelson, resigning his office of Writing Master. This vacancy was filled up at the December meeting, by the appointment of Mr. T. C. Fàche.

The Trustees have the honor to report that the number of boys in attendance continues to increase ; and the high state of discipline and efficiency which has characterized the school under Mr. Weigall’s management is fully maintained.

Since the date of the last Report, the Trustees have not found it necessary to make any further regulations for the government and discipline of the school.

The account of the whole income and expenditure of the school, and the number of pupils who attended during the year, will be found in the annexed Appendix.

I have, &c.,

W. H. CATLETT,

Secretary.

APPENDIX.

RETURN of the Receipts and Disbursements of the Sydney Grammar School, for the Year 1868.

Receipts.		Amount.	Disbursements.		Amount.
	£ s. d.	£ s. d.		£ s. d.	£ s. d.
To Endowment		1,500 0 0	By Amount overdrawn on 31st December, 1867		149 9 10
„ Interest on fixed deposits	52 15 0		„ Salaries	1,938 10 0	
„ School fees from pupils	1,299 10 0		„ Allowances	51 4 3	
		1,352 5 0	„ Capitation fees paid to Masters	762 10 0	2,752 4 3
„ Deposit accounts		850 0 0	„ Printing and stationery	26 2 0	
„ Balance, amount overdrawn		241 7 7	„ Petty expenses	59 5 11	
			„ Insurance	12 0 0	
			„ Advertisements	27 1 6	
			„ Repairs and improvements to buildings		124 9 5
			„ Philosophical instruments		44 10 6
			„ Deposit accounts		22 18 7
					850 0 0
		£ 3,943 12 7			£ 3,943 12 7

1 February, 1869.

Examined and found correct.

M. B. PELL,

ARTHUR M. A'BECKETT, } Auditors.

W. H. CATLETT,

Secretary.

RETURN of the Sydney Grammar School, for the Year 1868.

Office.	Name.	Salaries.	Allowances.	Fees from Pupils.	Total.	State whether allowed a Residence.	Remarks.
		£ s. d.	£ s. d.	£ s. d.	£ s. d.		
Head Master	Albert Bythesea Weigall	500 0 0		304 0 0	804 0 0	Residence allowed.	
Mathematical Master	Edward Pratt	400 0 0		199 10 0	599 10 0	Do. do.	
Assistant Classical Master	Edwin Whitfield	300 0 0	12 10 0	199 10 0	512 0 0	Do. do.	Resigned.
Do. do.	William Henry Roberts	20 16 8			20 16 8		
Do. do.	Charles Orlando Helm	254 3 4	12 10 0	59 10 0	326 3 4		
Lecturer on Physical Science	Alexander M. Thomson	50 0 0			50 0 0		
Writing Master	Carl Johan Nelson	112 10 0	2 0 0		114 10 0		Resigned.
Do. do.	Patrick T. Sheehy	31 0 0			31 0 0		Employed temporarily.
German Master	Ferdinand J. Lander	60 0 0			60 0 0		
Drawing Master	Joseph Fowles	60 0 0			60 0 0		
Secretary and Accountant to Trustees	William Henry Catlett	50 0 0	12 4 3		62 4 3		
Janitor and Drill Sergeant	Sebastian Hodge	100 0 0	12 0 0		112 0 0	Residence allowed.	
	Total	£ 1,938 10 0	51 4 3	762 10 0	2,752 4 3		

1 February, 1869.

Examined and found correct.

M. B. PELL,

ARTHUR M. A'BECKETT, } Auditors.

W. H. CATLETT,

Secretary.

RETURN of the Number of Teachers of the Sydney Grammar School, as well as the Number of Scholars, in the Year 1868.

Number of Teachers.	Number of Scholars.*			
	1st Quarter.	2nd Quarter.	3rd Quarter.	4th Quarter.
Five engaged for their whole time.				
Four engaged for particular lessons.	82	98	112	126
	Average, 104½			

* The number of Scholars in attendance at this date is 168.

1 February, 1869.

M. B. PELL,

ARTHUR M. A'BECKETT, } Auditors.

W. H. CATLETT,

Secretary.

1869.

NEW SOUTH WALES.

REPORT

OF THE

COUNCIL OF EDUCATION

UPON THE CONDITION

OF THE

PUBLIC SCHOOLS

FOR

1868.

Presented to both Houses of Parliament, by Command.

By Authority :

SYDNEY: THOMAS RICHARDS, GOVERNMENT PRINTER.

1869.

[Price, 3s. 9d.]

7—A

THE COUNCIL OF EDUCATION *to* HIS EXCELLENCY THE GOVERNOR,

SUBMITTING

REPORT UPON THE CONDITION OF THE PUBLIC SCHOOLS, FOR 1868.

To His Excellency the Right Honorable SOMERSET RICHARD, Earl of Belmore, a Member of Her Majesty's Most Honorable Privy Council in Ireland, Governor and Commander-in-Chief of the Colony of New South Wales, and Vice-Admiral of the same.

MAY IT PLEASE YOUR EXCELLENCY,

In accordance with the provisions of the Public Schools Act of 1866, we, the Council of Education, have the honor to submit to your Excellency this our Second Annual Report upon the condition of the Public Schools under our superintendence, with which is also included a general statement of our proceedings during the year 1868.

I.—COUNCIL.

The constitution of the Council remained unaltered during the year, the Members being those originally appointed, viz. :—

The Honorable George Allen, Esq., Member of the Legislative Council.

The Honorable William Munnings Arnold, Esq., Speaker of the Legislative Assembly.

The Honorable James Martin, Esq., Member of the Legislative Assembly;

The Honorable Henry Parkes, Esq., Member of the Legislative Assembly; and,

John Smith, Esq., M.D., Professor of Chemistry and Experimental Physics in the University of Sydney.

At a Meeting of the Council held on 6th January, 1868, Mr. Parkes was again elected President.

2. Although the reorganization of the system was nearly completed in all essential matters by the end of 1867, the rapid increase in the number of schools prevented any diminution in the amount of business to be transacted as compared with the previous year. The subsequent portions of this Report will disclose the extent and nature of the business with which the Council's attention was occupied.

II.—GENERAL STATISTICS.

3. The following table exhibits the number of schools of each kind in operation in 1868, and the number of pupils by whom they were attended, similar information for the year 1867 being included.

	Schools.		Pupils.	
	1867.	1868.	1867.	1868.
Public	288	318	28,434	34,234
Provisional.....	31	103	733	3,113
Half-time	6	38	267	593
Denominational.....	317	289	35,306	35,930
Total.....	642	748	64,740	73,920

These

These figures show an increase in the number of schools of all descriptions except the Denominational. There was also a corresponding increase in the number of pupils and, although the return of scholars is open to objection on the ground that some must have attended more than one school in that period, it is unquestionable that a large accession was made to the number enrolled in schools subject to the Council's supervision.

4. The sum of £34,164 3s. 6d. was paid as school fees, being an advance of £3,444 14s. 9d. upon the amount paid in the previous year. Notwithstanding the general distress that prevailed in many parts of the country in consequence of the protracted drought, the number of free scholars was somewhat diminished, there having been only 8,289 in 1868, or 314 less than in the previous year.

5. It might be anticipated that so large an addition to the number of schools in operation would occasion a corresponding augmentation of the number of teachers; but the actual increase in the number of teachers was not in proportion to the number of new schools. The following table will exhibit this clearly.

	1867.		1868.	
	Schools.	Teachers.	Schools.	Teachers.
Public.....	288	} 528	318	} 581
Provisional.....	31		103	
Half-time	6		38	
Denominational.....	317	443	289	433
Total.....	642	971	748	1,014

Schools, therefore, have been multiplied faster than teachers, and the latter have consequently a larger average number of pupils each. In 1867 there were 66·67 pupils to each teacher; in 1868, 72·68.

6. It may not be uninteresting to inquire, in this place, what proportion of the children of the Colony are now receiving education. From a return furnished by the Deputy Registrar General, it appears that the estimated population of the Colony, on 30th June, 1868, consisted of 456,372 persons. Assuming that the proportion of children between the ages of five and fourteen to the whole population has not altered materially since the Census of 1861 was taken, the number of a school-going age would be 100,651, or 22·03 per cent.

7. The aggregate number of children that attended schools under the Council's supervision at any time during the year was 73,920; but, inasmuch as a considerable, though unknown, proportion of these must have attended two or more schools within that period, while numerous others attended but for a brief time, it would be unsafe to regard the aggregate number as correctly representing the number actually receiving education. For the purpose in view, a more exact approximation to the truth may be obtained by taking the average number on the school rolls—51,164. To these must be added the children educated in private schools. The number of these, according to the latest information obtainable in 1867, was 11,699. While the growth of population may warrant the supposition that a larger number of children would be educated by this means, it must not be forgotten, on the other hand, that largely increased facilities for attendance at schools supported by the State have been supplied, and that these would naturally tend to diminish the demand for private schools. Allowing that these two considerations balance each other, the number 11,699 may be held to represent with sufficient exactness the aggregate of children educated in private schools.

8. But, besides the children attending schools public or private, a certain number receive their education at home. In the absence of a Census, no recent authentic information can be given upon this point. It was shown by the Census of 1861, that the number of children educated at home was 8,025, or 2·28 per cent. of the entire population.

population. There is little reason to believe that this ratio has been exceeded, but on the contrary, good grounds may be stated for supposing that it has diminished. There is consequently little danger of under-estimating, if the total number of children under instruction be thus represented:—

In schools supported by the Council	...	...	51,164
In private schools	...	...	11,699
At home	...	...	8,025
Total	...	...	<u>70,888</u>

It follows, therefore, that 15·53 per cent. of the population, or 1 in every 6·43 persons, is receiving instruction in one or other of these modes. Considering the circumstances of the Colony, the scattered nature of the population in many districts, and the difficulty of placing the means of education within the reach of large numbers of people, this result cannot be deemed unsatisfactory. In Victoria, with a more compact territory, and a population less widely scattered, the proportions are 17·93 per cent. of the population, or 1 in 5·58 persons.

9. There is, however, a dark side to the picture. Regarded in the most favourable light even, the foregoing statistics exhibit the important fact that upwards of 25,000 children are growing up destitute of education. Excepting some neglected children to be found in the larger centres of population, these will, for the most part, be found in remote and sparsely populated localities, inaccessible to the ordinary educational agencies. How to provide for them is a problem of which the importance can only be equalled by the difficulty of solution.

III.—SCHOOLS.

PUBLIC SCHOOLS.

10. The number of Public Schools in actual operation in 1868 was 318. Since 31st December, 1867, 7 schools have been closed; 36 additional schools have been opened; and one school formerly closed has been reopened on the footing of a Provisional School. Detailed statistics respecting the 318 schools will be found in a return attached to this Appendix A. Report.

11. On examining this return it will be seen that, in some instances, the average number of pupils in attendance fell greatly below the minimum required by the Public Schools Act. The Council, in all cases in which there was reason to believe that the diminished attendance would be permanent, either closed the schools so circumstanced, or reduced them to the position of Provisional Schools as regards the scale of expenditure. It is to be expected that cases of this kind will continually occur. For many years to come, the population of various portions of the Colony will be subject to considerable fluctuations, and schools will necessarily be affected by the disturbance thus produced. Calamitous floods in some districts, and excessive drought in others, have driven the occupants of land from their holdings, to seek, in localities deemed less liable to these disasters, the means of support for their families. The exhaustion of the soil for the purposes of cultivation has led to the abandonment of many localities and the removal of the people to districts hitherto unsettled, and their places have not been supplied by other persons, the proprietors having devoted the land to other uses. But perhaps the most powerful motive in causing a redistribution of the population has been the desire to take advantage of the provisions of the Lands Alienation Act, in order to become freeholders, instead of remaining in the position of tenants.

12. The Public Schools, eight in number, closed at the end of the year, were those situated at—

Avisford,
Bendolba,
Binda,
Bodalla,
Castlereagh,
Dondingalong,
Eccleston,
Hexham,

And the undermentioned were placed on the footing of Provisional Schools :—

Barrington.
Bo Bo Creek.
Carawa.
Gosforth.
Lower Hawkesbury.
Lower Macdonald.
Meadow Flat.
Millbang.
Murrumburra.
Ophir Road.
Panbula.
Pelican Point.
Seven Oaks.
Watagon Creek.
Woodburn.
Worragee.

Appendix B.

13. The annexed Schedule contains a list of the applications received in 1868 for the establishment of Public Schools, and shows further what action was taken by the Council in each case. It discloses the fact that forty-eight of such applications were received during the year, and also that 865 persons engaged to send their children to the schools, 2,315 pupils being thus promised. Of the persons joining in the applications, the number of each Denomination was—

Church of England	...	...	...	...	...	461
Roman Catholic	...	...	...	...	...	147
Presbyterian	...	...	...	...	...	113
Wesleyan	...	...	...	...	...	100
Others	...	...	...	...	...	44
						865
Total	...	...	...	...	...	865

The number of children belonging to each Denomination, whose parents guaranteed their attendance at the Public Schools applied for, was—

Church of England	...	...	...	...	...	1,236
Roman Catholic	...	...	...	...	...	382
Presbyterian	...	...	...	...	...	286
Wesleyan	...	...	...	...	...	299
Others...	...	...	...	...	...	112
						2,315
Total	...	...	...	...	...	2,315

14. The applications from Cudgegong, Ellalong, Upper M'Donald River, Tarago, and Wallaby Hill, may be regarded as representing the Denominational Schools previously existing in those localities from which certificates had been withdrawn. In the cases of Bankstown, Currajong (Bathurst District), Dural, and Kiora, which had also previously existed as Denominational Schools, applications for their conversion into Public Schools were voluntarily made by their local supporters.

The applications declined were so dealt with, either because there was no proved necessity for extending the means of education in the localities interested, or because the requirements of the Public Schools Act could not be reasonably fulfilled.

PROVISIONAL SCHOOLS.

Appendix C.

15. In addition to the Public Schools, there were in operation during the year, 103 Provisional Schools, attended in the aggregate by 3,113 pupils. The great increase in the number of schools of this kind, is an evidence of their utility in supplying a want long and urgently felt. They enable the Council to effect improvements in schools which, in their origin, are of a private character, and thus to reach a branch of educational effort hitherto unrecognized and unaided by the State. As a condition on which aid can be granted, the Council secures the right to introduce a more complete organization, more regular discipline, and a more systematic course of instruction, each

of

of which points is tested by periodical inspection. Further, by means of Provisional Schools, the means of education are introduced into localities which would otherwise remain altogether destitute, or be supplied with instruction of a very inferior character.

16. From incidental notices contained in the Inspectors' reports, it will be observed that, as was to be expected, the Provisional Schools are generally inferior to Public Schools and Certified Denominational Schools in most of the essentials of education. Still, they are capable of providing the rudiments of instruction, and are susceptible of further improvement, while in some instances they are found to be thoroughly efficient. When the amount expended on these schools is compared with the number of children attending them, the expense per head is seen to be greater than in others attended by a larger average number of pupils. Being, for the most part, situated in very sparsely populated districts, Provisional Schools can obtain but a small number of pupils; and it may be regarded as an axiom, that the cost of education per head will be augmented in proportion as the number of scholars is diminished.

17. Ninety-three applications for aid to new Provisional Schools were made in 1868, the number of pupils whose attendance was guaranteed being 2,369. The religious Denominations of the parents may be thus exhibited:—

Church of England	...	...	...	...	411
Roman Catholic	...	...	...	...	302
Presbyterian	...	...	...	...	77
Wesleyan	...	...	...	...	49
Others	...	...	...	...	15
Total					854

The number of children of each Denomination was—

Church of England	...	...	...	...	1,112
Roman Catholic	...	...	...	...	857
Presbyterian	...	...	...	...	229
Wesleyan	...	...	...	...	138
Others	...	...	...	...	33
Total					2,369

18. Thirteen of these applications were received from places in which Denominational Schools had formerly been in operation, but which had failed to supply the number of children necessary to warrant their continuance on that footing. The withdrawal of the Council's certificate in these cases did not therefore interrupt the existence of these schools, but deprived them of their sectional character, and afforded opportunity for reducing the expenditure. The manner in which each of the applications was disposed of may be seen on referring to the Schedule annexed.

Appendix D.

HALF-TIME SCHOOLS.

19. The experiment as regards schools of this class, initiated in 1867, was continued during the following year with increased success. The number of separate Half-time Schools, or schools under the supervision of Itinerant Teachers, in operation, Appendix E. was 38; and 32 applications for aid in establishing schools of this class were received. Appendix F. The establishment and proper organization of Half-time Schools requires, in most instances, the assistance of the Inspector located in the District; but as our Inspectors were unable to devote the time necessary for this purpose, some of the applications could not be dealt with in 1868. Had it been practicable for the Inspectors to spare from other duties a sufficient amount of time, many other applications would have been received.

20. The parents or guardians undertaking to send children to Half-time Schools applied for may be thus classified:—

Church of England	...	...	...	...	102
Roman Catholic	...	...	...	...	34
Presbyterian	...	...	...	...	21
Wesleyan	...	...	...	...	6
Others	...	...	...	...	3
Total					166

21. The number of children of each religious Denomination promised to attend

as—

Church of England	303
Roman Catholic	125
Presbyterian	66
Wesleyan	14
Others... ..	12
Total	<u>520</u>

22. The Special Rules for Half-time Schools to which allusion is made in our First Annual Report have been prepared, and have to some extent undergone the test of experience. The following are the more important of these rules:—

- “Aid will not be granted towards the establishment and maintenance of Half-time Schools, unless suitable school-houses and sufficient and proper furniture be provided.
- “No schoolroom will be approved unless it be 10 feet at least in width, be floored, be provided with a fire-place, and be properly lighted and ventilated.
- “Aid will be given towards the erection of suitable school-houses, provided the sites be vested in the Council, and there be a probability that the schools so established will ultimately become Public Schools.
- “Grants of school books and apparatus will be made from time to time, as may be deemed expedient; and a full supply will be granted as a first stock to all schools newly established.
- “The same registers are to be kept, and the same returns furnished, as in Public Schools.
- “In addition to the duties prescribed in article 42, section II, of the Regulations, teachers in Half-time Schools will endeavour to make themselves acquainted with the educational wants of their several Districts,—will study to acquire a knowledge of the character of the people,—and will strive to deport themselves so as to win their respect and confidence.
- “As a rule, the number of schools placed under one teacher will be limited to two.
- “Every teacher is expected to divide his time between the schools under his charge, with the view of effecting the largest amount of good. Where practicable, it is recommended that he devote the mornings to the teaching of one school, and the afternoons to the teaching of the other; but should any other arrangement be found more suitable, the teacher is at liberty to adopt it. In any case, the parent or guardian of each child is to be supplied with a time-table, showing the hours at which school will be open.
- “As regards instruction, every Half-time School is to be conducted in all respects as a Public School.
- “Teachers are required to carry out a systematic course of home lessons. Exercise books for this purpose will be provided by the Council, and these books must be retained for the information of the Inspector of the District.
- “When practicable, Boards will be appointed to supervise Half-time Schools, or the duty may be confided to a single individual.
- “In the absence of such authority, teachers of Half-time Schools will hold themselves directly responsible to the Inspector of the District.”

23. The Inspector of the Goulburn District, in which portion of the Colony Half-time Schools are most numerous, reports in the following terms:—

- “The establishment of Half-time Schools by the Council will, I am satisfied, in time, produce most gratifying results; even now, although few of them have been more than fifteen months in operation, the results are highly satisfactory. So far as I have inspected them, the teachers are painstaking

taking and energetic in the performance of their duty, and, in some cases, the progress of the pupils has surpassed my most sanguine expectations. In some of these schools I found a considerable number of children who commenced to learn the alphabet about a year or fifteen months ago, and they can now read ordinary prose, such as the Third Book, or Scripture Lessons, with tolerable correctness, write from copies or from dictation legibly, and are making some progress in the elements of arithmetic. The organization, discipline, and instruction of the schools, in many cases, admit of great improvement, but on the whole, the success so far appears to me to be truly gratifying. The results, however, are quite in accordance with the views of some of the most eminent educationists of the present day. They say that manual and mental labour combined facilitates school instruction; and it is all but the universal testimony of the teachers and Inspectors of Industrial Schools, that the boys employed in spade husbandry learn far more readily than boys not so employed; and that, although their time in school is shorter, they learn more quickly whilst there. Now I consider Half-time Schools are much like Industrial Schools; the pupils attend to rural industries at home, under the direction of their parents, for half their time, and they receive school instruction from the teacher during the other half. I fully concur in the views of Mr. Inspector Johnson, contained in his report of last year, as to the success and future usefulness of Half-time Schools. There are twenty-eight of these schools in the Goulburn District, attended at the close of the year by 474 pupils, being an average of 17 pupils for each school. The teachers report to me monthly the work done at each teaching station; and, at the close of the year, in accordance with my request, each teacher furnished an annual report, containing information as to the time he had been in charge of his schools, the number of the pupils, the subjects taught, the number of miles travelled monthly, the classification of the pupils, and the number promoted by him to an advanced reading book or higher class. On an average, the schools have not been much over a year in operation, and 523 scholars attended in 1868. During the year, 110 children were promoted to advanced reading books, and 116 to higher classes; and, at the close of the year, the classification stood as follows:—

First class	247 pupils.
Second class.....	139 „
Third class	38 „

24. Half-time Schools are found to be more expensive than even Provisional Schools, but they supply the means of education to localities in which the population is too scanty to support even schools of the latter class. If such localities are to be supplied at all with the means of instruction, it can only be at an increased cost as compared with schools more favourably situated.

BUILDINGS.

25. The great number of applications for the establishment of Public Schools received in 1868, for new buildings for existing schools, and for repairs to old school-rooms, caused the total expenditure on this head to reach the sum of £18,113 9s. 7d. In some cases the poverty of the people, owing to the long drought, was so evident that the Council did not insist upon their contributing in the usual proportion towards the cost. Such a course, indeed, would have amounted to a virtual denial of assistance. But generally speaking, the applicants for grants in aid of school buildings were required to provide one-third of the cost.

26. The concurrent testimony of educationists, in all parts of the world, proves that the success, and consequent usefulness of a school, depends, in the first place, upon the efficiency of the teacher; and, secondly, upon the nature of the school buildings. A convenient schoolroom, in a healthy situation, will frequently attract scholars who would be deterred from attending at all, if the buildings were uncomfortable and disreputable in appearance; and not only is the number of pupils thus affected, but also the health

and comfort of both teachers and scholars, the convenience of teaching, the stimulus to learning, the status and influence of the teaching profession, and, through them, the whole progress of education.

27. The new school buildings at Cleveland-street, Sydney, the foundation-stone of which was laid by Sir John Young, were completed last year, and opened for the purposes of a Public School, by your Excellency, on the 3rd of September, 1868. The necessity for increased accommodation was demonstrated by the fact that, within three months from the date of the opening, the attendance of pupils had increased 20 per cent., there being upwards of 1,000 on the rolls; while the schools situated in the vicinity maintained their usual numbers, and in some instances augmented them. The school is now attended by about 1,100 children, and is already inconveniently crowded in some departments.

28. Early in the year, arrangements were entered into for the purchase of the Goulburn School, the Trustees of which offered to dispose of the premises to the Council, for the purposes of a Public School, at a price less by one-third than the value at which it was appraised by the Council's Architect. The Council, seeing in this case an opportunity for establishing a superior school of the kind referred to in the Progress Report for 1867, accepted the offer from the Trustees. The school was accordingly opened in May, 1868, and by the end of the year was attended by 324 pupils.

29. We have been in correspondence with other localities respecting the establishment of superior schools, but the pressure of the ordinary business has prevented us from completing arrangements for this purpose.

BOOKS AND SCHOOL REQUISITES.

30. The cost of books and school requisites supplied to schools in 1868 was £3,525 Os. 7d. All the schools under our superintendence are now amply provided as regards this branch of their material equipment, except in a few cases in which the neglect of the teachers to apply for the requisite materials, or the delay in transit, had left the available stock insufficient for the actual wants of their pupils. In a very few instances, teachers have permitted their scholars to waste and destroy the school stock; but these are so rare that they do not affect to any appreciable extent the general description of the condition of the schools.

Appendix G.

31. The Council has not added to the list of books originally sanctioned for use in the ordinary instruction of schools. The names of these books may be ascertained on reference to the list hereto appended.

32. Much difficulty having been experienced by teachers in procuring correct information respecting the animals peculiar to the Colony, the Council resolved to publish for their guidance a brief text-book on this subject, and also a series of illustrative lithograph engravings. The work was entrusted to A. W. Scott, Esq., who has made considerable progress with the manual. Several of the plates have also been prepared, and are executed in such a style, both as regards artistic skill and adaptation to the end intended, as to merit high commendation. These engravings will be supplied to schools under the Council's supervision, in the usual way, and may also be purchased by the general public.

IV.—TEACHERS.

STAFF.

33. The staff of teachers in the Council's service at the end of the year comprised 1,014 persons, viz. :—

712	principal teachers.
137	assistant teachers.
165	pupil teachers.

1,014

Of these, 690 were males, and 324 females. The number of female teachers having sole charge of schools is very small, and there appears to be a very general objection, on the part of parents, to their employment in any other capacity than that of assistants. The high approval of the labours of female teachers in the United States and in Canada, renders somewhat remarkable the undervaluing of their services in this Colony.

34. The changes in the number and rank of the teachers as compared with the previous year, may be accounted for principally by the operation of the rules by which the staff of a school is adjusted. The effect of these rules has been to establish a definite proportion between

between the number of pupils in each school and the number of teachers. But this is necessarily a work of time, inasmuch as it was undesirable, on the one hand, to deprive of employment teachers against whom no complaint had been lodged, and on the other to reduce suddenly the staff of a given school.

QUALIFICATIONS.

35. Various efforts have been made to enable teachers to improve their qualifications. In Sydney and at Windsor, teachers of drawing and of singing upon the Tonic Sol-fa method, were employed to give instruction in these branches. The Inspectors of the Sydney District report that "a great impulse has been given to the teaching of drawing during the year: there is but one school in which it is not systematically taught." In furtherance of the same object, the Council employed Mr. T. P. Hill, to give a course of lessons to teachers in the art of reading. Arrangements have also been made to assist teachers in the purchase of text books for study preparatory to examination, and for the formation of teachers' libraries.

EXAMINATIONS.

36. By article 37 of the Regulations, "all teachers holding a lower classification than Class III, Section A, are required to undergo examination annually." This regulation virtually affirms the principle that, until teachers have shown themselves to possess the ability indicated by the possession of that rank, they cannot consider themselves fully qualified for their office. The necessity for requiring a high degree of practical skill in teaching, as well as attainments, has led the Council to lay down the rule that the Inspectors shall not admit teachers to examination for higher classifications, unless they possess skill of the order stated below, viz. :—

For Class I.—Excellent or Very Good.

For Class II.—Good.

The total number of teachers examined in 1868 was 337, of whom 166 were employed in Public Schools, and 171 in Certified Denominational Schools. Many of these teachers had not been previously examined, as the time at the disposal of the Inspectors in 1867 was too limited to allow of their holding examinations in every district. In some instances also, the Council had not awarded even a provisional classification, as the Inspectors not having visited the schools, were unable to supply the information requisite to enable the Council to decide in a matter of so much importance. The rank of the teachers examined, prior to undergoing the test, may be seen in the following table :—

Holding no Classification	...	...	...	...	111
Class III, Section C	...	...	...	...	84
" " B	...	...	...	...	127
" " A	...	...	...	...	13
Class II, Section B	...	...	...	...	1
" " A	...	...	...	...	1
					337

Of these, 157 failed to gain any promotion, the want of success being attributable, in numerous cases, more to defective management of the schools than to insufficiency of attainments. The classifications gained by the 180 successful teachers may be thus indicated :—

Class III, Section C	...	...	...	...	40
" " B	...	...	...	...	42
" " A	...	...	...	...	86
Class II, Section B	...	...	...	...	10
" " A	...	...	...	...	1
Class I, Section A	...	...	...	...	1
					180

The results of the various examinations may therefore be pronounced reasonably satisfactory, though the fact that forty-four teachers failed to gain any classification, cannot be viewed otherwise than with much concern.

Appendix H.

37. The nature of the examinations passed by the teachers may be seen on reference to the copies of Examination Questions appended hereto. It will be evident from an inspection of these papers that, as required by our Regulations, they have been drawn up mainly with a view to test the knowledge of teachers in the branches they are called upon to teach. The Regulations bearing upon this subject—Articles 34 to 38—embody three leading principles applicable to the examination of teachers:—1. That while extent and variety of attainments are desirable, the complete mastery of the ordinary subjects of instruction is essential to the efficiency of a teacher. 2. That if the choice lie between the two, clearness and precision within a limited range are more useful to a teacher than great proficiency in the higher branches; and, 3. That without a natural aptitude for teaching, and the skill acquired by experience in school management, teachers cannot be fully successful in practical work. In accordance with these principles, the Council is desirous to encourage teachers to render themselves proficient in the ordinary subjects, and to acquire a knowledge of them, so exact and so familiar as to be able to employ them with readiness and accuracy. By this means, it is hoped that the daily teaching in school will become more exact, pointed, and pervasive, and the results more commensurate with the time and labour expended.

These views, to some extent, influenced the decision of the Council with respect to a suggestion made by Professor Pell, of the Sydney University, with reference to the examination of teachers in the Alternative Subjects. Mr. Pell proposed that those teachers who profess a knowledge of such subjects should be required to submit to portions of the examinations provided for by the Regulations passed by the Senate for the purpose of instituting Public Examinations. It was further suggested by Mr. Deas Thomson, whether it might not be desirable that the certificates granted by the Board appointed to conduct these examinations should be considered a sufficient test of the competency of candidates who desire to obtain employment under the Public Schools Act. The Council, while willing to sanction the substitution of the Public Examinations for those hitherto passed by teachers in the Alternative Subjects, deemed it inexpedient to forego the usual examinations in elementary branches.

38. In conducting the examinations, full directions were given to the teachers as to the method of procedure, both with a view to guard against errors likely to arise through inadvertence, and to secure from the Council's Examiner an impartial revision of their papers. The Examiner was not informed of the names of persons examined, until their papers had been revised and his estimate recorded; and they were instructed, in addition to minor directions—

- " 1. To write upon the title-page of the papers the date of examination,—a distinguishing number,—name in full,—the name of the school, if in charge of one,—the present rank or classification, if classed,—the date of last examination, if previously examined,—classification sought,—and professional experience.
- " 2. To place the title-page in an envelope provided for the purpose, and forward it at once to the Secretary.
- " 3. That the time allowed for each paper could not be exceeded; that they should not consult books, maps, or notes; that conversation during examination was rigidly prohibited; and that inattention to these cautions would necessitate the stoppage of examination, the offender being reported to the Council.
- " 4. To answer every question specified.
- " 5. To write down each question precisely as it stood on the paper, before commencing to answer it; and to write down every question, whether answered or not.
- " 6. To write in a full, clear, and legible hand, and to keep the papers free from stains.
- " 7. To compose in a clear and simple style.
- " 8. To punctuate so plainly as to leave no doubt of the intended meaning.

"9.

- “9. In the Grammar papers, to arrange the words to be parsed singly in column, and to place the parsing of each word opposite. To follow strictly the order of parsing and analysis sanctioned by the Council. To use such abbreviations only as are perfectly intelligible, and contain so much of the whole word as to leave no doubt of the intended meaning.
- “10. In arithmetical processes, to shew the working fully.
- “11. In answering geographical questions, to guard against vague statements on the one hand, and guessing at measurements, distances, latitudes, longitudes, &c., on the other, especially when uncertain as to the truth of the data.
- “12. To remember that bad spelling disqualifies for classification, and that no amount of knowledge will avail when seeking promotion, if skill is wanting.”

CLASSIFICATIONS.

39. At the termination of 1868, the teachers in the Council's service, exclusive of pupil teachers and teachers of Provisional Schools, were classified as follows:—

Probationers	...	...	...	...	...	135
Class III, Section C	...	...	...	...	...	169
" " B	...	...	...	...	...	137
" " A	...	...	...	...	...	197
Class II, " B	...	...	...	...	...	56
" " A	...	...	...	...	...	26
Class I, " B	...	...	...	...	...	12
" " A	...	...	...	...	...	2
						734

EMOLUMENTS.

40. The emoluments of principal teachers depend upon their classification. The highest salary paid to the teacher of any school, other than a Model School, is £150 per annum; the lowest paid to the teachers of some small Provisional Schools is £24 per annum; but the average emoluments, calculated for all teachers except pupil teachers, is found to be as follows:—

				£	s.	d.
From salary	...	...	...	70	5	6
From fees	...	...	...	40	1	11
Total	...	...	...	110	7	5

This calculation includes teachers of Provisional Schools. As their salaries do not on an average exceed one-half of the rates paid to Public or Certified Denominational School teachers, the result is proportionately reduced. Excluding Provisional Schools from the estimate, the respective amounts on the average would be—

				£	s.	d.
From salary	...	...	...	74	0	1
From fees	...	...	...	44	3	5
Total	...	...	...	118	3	6

41. In addition to the remuneration derived from salaries and fees, teachers in a large majority of cases are provided with residences. The teachers' dwellings are not, however, all that could be desired. From special inquiries made during the year, and affecting 370 schools, it appears that 204 teachers are provided with residences that may fairly be regarded as affording sufficient accommodation, and as reasonably suitable in respect to appearance. In the case of 88 schools, no houses have been built for the teachers. In 78 others, the buildings appropriated to the teachers' use are either too small, and furnish insufficient accommodation to secure comfort, or even decency; or, are constructed of slabs, the openings between which admit rain and wind freely, to the great

great discomfort of the inmates ; or are in such bad repair as to present a disreputable appearance. As teachers are compelled to live near their schools, and as it sometimes happens that houses are difficult to obtain in the neighbourhood, it becomes a source of serious embarrassment to find a residence. In the remoter districts it is of course absolutely necessary that residences on the spot should be provided for teachers. The Council regards it as most desirable that teachers' houses should be erected in connection with schools ; and, as essential, that in point of accommodation and appearance they should be at least respectable. The influence of his surroundings upon the mind of a teacher cannot fail to be of a powerful nature ; and the estimation in which he is held by the community in which he labours will be affected by the same circumstances. Not only his self-respect, but the respect manifested by others, will depend in some measure upon the condition of his dwelling. A man content to inhabit a wretched hovel, in which he is unable to set an example of decency or respectability, will fail to secure esteem, or to exercise that influence for good which is so necessary for his full efficiency. These considerations seem to the Council to be of great moment ; and the fact that many teachers are compelled to live in this manner must be regarded with deep concern.

42. The Council does not regard the remuneration allowed to classified teachers in Public and Certified Denominational Schools as sufficiently high ; but, for the present, the Council is unable to make any advance on the scale of salaries. Some relief would be obtained, however, by amalgamating small rival schools in localities where they exist ; the fees now divided between two or more teachers might then become the property of one ; moreover, the effect of competition for scholars upon school fees is, first, to lower the rate ; and, secondly, to induce the withholding of payment by parents to an extent not justified by their pecuniary circumstances. Where, from the multiplicity of schools, parents not only have a choice, but are expressly invited to confer their patronage upon a particular institution, it is natural to expect that they will gradually lose sight of their own responsibility in the matter, and feel disinclined to pay, when they have reason to believe that they are bestowing a favour by allowing their children to be educated. Had not the various other evils arising from the existence of small schools in close proximity been already sufficiently explained, the Council would here proceed to point out the serious injury to the quality of the education given, as well as to the emoluments of teachers.

SUPERANNUATION FUND.

43. The question of a retiring allowance for teachers when no longer capable, from age or infirmity, of performing their duties, has been forced upon the attention of the Council on various occasions ; but it was specially brought under notice by a memorial from teachers and officers, in which they urged the following considerations :—

- “ 1. That, although not appointed to their respective offices by the Governor with the advice of the Executive Council, they are nevertheless as fully and directly servants of the public as the members of the Civil Service ; that the services they render are at least as important and valuable as those performed by any other body of public servants ; and that the examinations to which they are subjected form severer tests of competency than are required in any other branch of the Public Service.
- “ 2. That the remuneration awarded to teachers is insufficient to enable them to provide for old age, especially after deductions have been made from their slender incomes to meet demands arising out of sickness, and the provision required for their families after their own death.
- “ 3. That teachers are prohibited by the Regulations—article 54, section 2— from engaging in any enterprise or business which would enable them to add to their emoluments ; and that even if this prohibition did not exist, the engrossing nature of their duties would itself suffice to prevent them from adopting such course.
- “ 4. That it is desirable that teachers should be secured against the possibility of want in old age, so that, being free from anxious cares about the future, they may be at liberty to devote their whole energies to their work.

“ 5.

- “ 5. That it is desirable, even for the cause of education, that teachers who have grown old and feeble in the service should retire, so that younger and more energetic men might carry on the work of instruction.
- “ 6. That under existing circumstances, teachers, although infirmity and old age suggest that they might, with advantage to the cause of education, be superannuated, are compelled to remain in their schools, because they cannot afford to give up their living.
- “ 7. That superannuation would serve as a bond of union among the teachers ; and, by giving them a vested interest in their profession, would act as an incentive to well-qualified men to enter and to remain in the Council’s service.”

44. Being desirous to meet the wishes of the teachers, the Council employed an actuary (Mr. Robert Thomson) to prepare a scheme of superannuation. After obtaining the requisite information and making the necessary calculations, Mr. Thomson submitted a scheme, but the premiums required by it are so high as to render it impracticable. Although we can discern no prospect of establishing a Superannuation Fund at present, we venture to commend the subject to the consideration of Parliament, as an act of justice to a deserving body of public servants.

CHARACTER OF TEACHERS.

45. We have great pleasure in recording our opinion that, as a body, the teachers in our service are devoted to their work, faithful in the discharge of their duties, and desirous to carry out the provisions of the law under which they serve. The Inspectors bear testimony to the high character of the teachers, and the excellent spirit generally manifested by them. In the Sydney District, the Inspectors remark of the teachers that—

“The general body are earnest, zealous, and painstaking. A few have shown themselves to be possessed of high attainments, and gifted with rare teaching ability.”

Mr. Dwyer, referring to the Maitland District, states :—

“The teachers of this district are, as a body, respectable, anxious to fulfil their duties, and do their utmost to give satisfaction. I am happy to say that, during the past year, there was not a single case of anything tending to lower their character or lessen their moral influence.”

Mr. M’Credie’s testimony respecting the teachers in the Bathurst District is not less favourable. He reports :—

“In the majority of schools, the teachers are respectable persons, and are earnest and diligent in the discharge of their duties. In nearly every instance, I found them willing to receive and carry out suggestions for the improvement of their schools.”

Mr. Huffer, referring to the Camden District, reports :—

“The teachers are, as a body, conscientious, intelligent, and fairly well fitted for the efficient discharge of their duties. In my intercourse with them, I have also found them, in all cases, willing to receive and act upon my suggestions for the improved working of their schools.”

Messrs. Coburn (for the Albury District) and Allpass (Newcastle District) speak in similar terms of the teachers under their immediate superintendence. The report of Mr. Forbes, Cumberland District, though less eulogistic, is not unfavourable. He remarks :—

“Much need not be said about the character and general fitness of teachers for their office. The very fact of their holding office ought to be their testimonial. That such is not invariably the case is matter of regret. There are, undeniably, persons holding the office of teachers, whose fitness for that position appears never to have been seriously taken into account. They have in some manner got into that office, and the difficulty with which the Council has to contend is, how to dispose of them without treating them with any seeming harshness. The cases thus pointed to are comparatively

paratively few. The great majority of the teachers are reasonably fitted, both as regards moral character and attainments, for their part in the all-important work with which the Council of Education is charged."

PUPIL TEACHERS.

46. The valuable body of young teachers thus designated, numbered 165 at the end of 1868. Although this number, as compared with that of 1867, shows but a slight increase, the new appointments, owing to the removal of some who appeared not fully qualified, by want of natural aptitude for teaching, or inability to study successfully, were more numerous than at first sight appears.

47. The great importance of the pupil teacher system, as a means of providing for the future requirements of the Colony a staff of teachers trained to the work from their youth, has induced the Council to dwell at some length upon the subject. As in England and other countries in which this system has been tried, it will doubtless prove eminently successful in securing, in a comparatively inexpensive manner, teachers who will be the life of the educational organization of the Colony.

48. Pupil teachers are appointed at an age not less than thirteen, and not more than sixteen years. If appointed when younger, they sometimes prove physically unable to perform the duties assigned them; while, on the other hand, if their appointment be too long deferred, they arrive at adult age before the period of their engagement has expired, and they become dissatisfied with their position. It is also found that pupil teachers above the age of eighteen years are less useful for the precise service for which they are needed than those who, being younger, are more easily moulded to the fashion required. Although not bound by indentures, pupil teachers are virtually apprenticed to the teachers under whom they serve, receiving daily instruction in matters pertaining to the management of schools. The Regulations bearing upon this subject (articles 50 and 51) are intended to secure the proper instruction of pupil teachers on the one hand, and their efficiency as assistants in the actual work of the school on the other.

49. The scale of salaries paid to pupil teachers, though not fixed by the Regulations, has not varied in practice from the following:—

	Females.		Males.
Class IV.—£18 per annum.			£30 per annum.
„ III.— 24 „			36 „
„ II.— 30 „			42 „
„ I.— 36 „			48 „

These rates, though small, are found to be sufficient, together with the prospective advantages afforded by the teaching profession in the Colony, to attract a large number of applicants. In 1868, no less than 111 candidates for appointment were examined. Of these, 51 failed, and were, consequently, not deemed eligible for appointment at the time. Successful candidates are appointed in the order of merit, as indicated by the number of marks gained at the examination.

50. Pupil teachers are subjected to examination yearly, success being followed by promotion to a higher class, and a corresponding increase of salary. The number examined in 1868 was 157, of whom, as the following table shows, 109 were successful:—

Classes.	Number examined.	Number promoted.
Probationers	14	5
Class IV	78	50
„ III	32	30
„ II	15	12
„ I	18	12
	157	109

Each of the successful pupil teachers was promoted one grade. Those who failed were chiefly persons appointed several years ago, when the arrangements for their instruction were less perfect than at present, and who had since experienced some difficulty in meeting the demands upon their capacity required by the Council's Regulations.

51. The usefulness of pupil teachers, and their influence upon school work, are favourably noticed by those Inspectors who are officially brought into contact with them, and have opportunities for personally observing their conduct. Messrs. Johnson and Flannery, the Sydney Inspectors, for example, speak in the following terms of the pupil teachers (115 in number) under their superintendence:—

“They form an important part of the teaching staff of this district. They are only appointed after they have afforded evidence, during a three months’ probation, that they possess aptitude and general fitness for the office of teacher. Their work generally is of a very satisfactory kind.”

TRAINING SCHOOL.

52. No material change has been made in the organization of the Training School, which during the past year has been the scene of great activity in the preparation of teachers, 132 candidates having been admitted. The number of applicants was 243, of whom 136 were males, and 107 females. The average age of the former was 28, and of the latter, 22 years. Their respective denominations were:—

	Males.	Females.	Total.
Church of England	51	31	82
Roman Catholics	26	47	73
Presbyterians	20	12	32
Wesleyans	21	10	31
Others	18	7	25
Totals	136	107	243

In addition to the 132 admitted to the Training School, 9 were, for various reasons, directed to attend the Model Public School in Sydney, or convenient District Model Schools, and the remaining 102 either failed to pass the preliminary examination in a satisfactory manner, or were deemed ineligible upon other grounds. A few did not present themselves for examination at the appointed time. With regard to the class of persons applying for admission into training, it is found from the “personal statement” furnished by each, that, even including pupil teachers whose term of service in that capacity had expired, only thirteen per cent. had received special preparation for the office of teacher; and that thirty-four per cent. had been engaged for various periods in the work of teaching, but in most cases privately and in a desultory manner. More than fifty per cent. were entering the profession for the first time, and, in too many instances, as a last resource—from no particular love for the work, or conviction of their fitness, and, as the experience of past years proves, with the intention of quitting it in the event of any more congenial employment offering.

53. Not a few of those presenting themselves to the Training School, and failing in the preliminary examination, profess to be governesses out of employment, or persons who have been engaged in private schools. Their statements as to the length of their previous occupation in teaching may be correct; but the results disclosed by their examination papers are melancholy. The composition of the papers, and style of expression, are loose in the extreme; and the punctuation is often wholly wanting. The knowledge of grammar scarcely enables them to specify even the names of the leading parts of speech; while the details of parsing are frequently unknown. Thus, “some” is declared by one person to be an article, “payment” a verb, “persons” a pronoun, and “could” a conjunction. Another applicant describes the relative pronoun “who” as a “neuter verb,” and “to confound” as an adjective. Another gives “the” as the “article nominative plural.” With others, again, it is quite common to ascribe gender and case to verbs, and tense and mood to nouns. In the simple and compound rules of arithmetic, the most imperfect knowledge is exhibited. In “long division,” and in multiplication involving *ciphers*, failure is so common as to create little surprise. In the following question—“One-half of an article costs £37 7s. 5½d., what will 653 such articles, entire, cost? Work in as many ways as you can”—33 out of 49 failed to answer correctly. In geography the answering is even more extraordinary. One young lady, when asked to enumerate the peninsulas and islands of Europe, gave—“Formosa,” “The Hercules,” “Madras,” and “Madrid.” Another stated that “Borneo and Sumatra are

are islands in Europe, and lie across the line." Another affirmed that "Ireland is to the east of England, and that Australia is remarkable for its climate." The following is a fair specimen of the mode in which Australian geography is treated:—

"Australia may be said to be a very healthy climate. The transparency of the sky and the air refreshing. To a stranger it would appear rather different from Europe. For instance, the leaves of the trees are of a very dull colour; and are more vertical than horizontal there are the *Acicia* family and the *Eualypti* the *Banksias* which send down suckers that cling to the sides. The animals of Australia are the kangaroo, the opossum, large owls and many others."

This is by no means the worst answer. Australia is stated to be bounded on the west by the Atlantic, and on the north by the Arctic Ocean, while the Murray is placed on the east coast, and some of the eastern rivers transferred to the western plains across the Dividing Range. Serious mistakes are also made in describing the relative positions of the Colonies on the Australian Continent; and one person cites "New Zealand" and "Hobart Town" as two of the five. Among the rivers of Asia are enumerated the "Senegal," "Ammon," "Shang," "Tagus," "Amoi," and "Iadastes."

54. The above examples are among the first selected from a mass of papers even more unpromising still. Nor is this all. The spelling is frequently defective, the penmanship slovenly in the extreme, and the mode of executing the exercises so void of care and good taste, as to create painful misgivings regarding the value of much that now passes current as essential to female education. While substantial branches of education appear to have been little studied, the main results indicate, in a very decided manner, that the precision, forethought, and high interest in duty, so essential in those who assume to mould the mind of youth, formed no part of these applicants' qualifications. Many have been examined twice, some three times, and still failed to pass the comparatively simple entrance examination. In fact, it may safely be affirmed, that two years of hard work at school, under such discipline as that to which the upper classes in the best Public Schools are subjected, would barely suffice to qualify many of the applicants for a profitable use of the routine of the Training School.

55. When the large number of failures is considered, it will be evident that the applicants have been subjected to a thorough sifting; and hence it may reasonably be expected, that those who pass the preliminary examination, and satisfy the Council's Officers as to their moral fitness, should present a class of persons in a fair degree eligible for the calling to which they aspire. Speaking generally, such is the case. As regards their physical qualifications, the statements already given show that a very large majority have their prime of life before them; while the enforcement, as far as is practicable, of the provision that "candidates must be free from any bodily infirmity likely to impair their usefulness as teachers," has secured tolerable satisfaction in this particular.

56. Of the 132 candidates admitted to the Training School, 117 succeeded in gaining certificates of classification. The number to whom the several grades were awarded is exhibited in the following table:—

	CLASS III.			
	Section A.	Section B.	Section C.	Total.
Males	24	28	28	80
Females	12	8	17	37
	36	36	45	117

The remaining fifteen are thus accounted for:—Three voluntarily withdrew; the attendance of three others was disallowed, in consequence of their not exhibiting sufficient promise of future usefulness; and nine, of whom eight were females, failed to pass the final examination.

57. The results now recorded are not unsatisfactory. They show that, in respect of intellectual qualifications, the trained teachers have been fairly successful, and that the Training School has worked effectively during the past year. In one particular the information possessed by the Council concerning candidates is defective. In judging of the moral character of applicants, the Council has frequently no means of obtaining information except such as is furnished by testimonials; and however rigidly these may be scrutinized, it will sometimes happen that an improper person may be admitted. Further, the existing arrangements do not afford opportunities for discovering the real character of individuals who, on moral grounds, are not fit for the office of teacher. The difficulty and its remedy are thus stated by the Training Master :—

“Of the moral qualifications of candidates I am not in the best position to form an opinion. From the shortness of the term of training, and the fact that, except during the period in which they receive instruction, they are not under my supervision, it is apparent that the moral character, more especially when faulty, is not fully shown; and thus, vices whose existence has never been suspected, have developed themselves when the candidate, having received an appointment, is removed from immediate observation and restraint. It is not intended to imply that instances of this kind are of frequent occurrence, but rather to show the desirability of devising some means whereby, as much as possible, opportunity may be afforded of forming a correct estimate of this phase of character. The most effective plan that could be adopted for securing such an end would be the boarding and lodging of candidates on the premises, under the direct control and supervision of the Training Master, or other responsible officer; but this, for the present at any rate, may be deemed impracticable, on the ground of expense. Much good, however, would, I think, result, were the Council to select and license one or two houses in the vicinity of the Training School, as boarding establishments for candidates—a suggestion offered by my predecessor. Facilities for gaining an insight to the moral character of each would thus be afforded that are at present almost entirely wanting; while the students themselves would have the opportunity of friendly intercourse and mutual improvement.”

58. Before offering an opinion upon the Training Master's proposal, we deem it advisable to refer to other suggestions he has made, with a view to the increased efficiency of the department under his charge, and which he explains in the following terms :—

“1. The training session should occupy six months, instead of, as at present, three.

“When the fact is called to mind, that more than half of the applicants are persons that have had no previous experience in, or training for, the work of teaching, but came, as it were, fresh from the plough, the workshop, the counting-house, the gold fields—from avocations but little akin to that of the teacher, and that in the space of three months they are expected to obtain a fair knowledge of the subjects set forth in the programme of studies, the time at disposal to effect such a task must seem, and is, as far as my experience extends, altogether inadequate. But another and far more important result should attend the training received. What has just been said refers merely to the amount of information the candidate must acquire to enable him to answer the examination questions creditably. Beyond this, the term of training should be an apprenticeship to the art of teaching, during which he shall have facilities for studying the nature of the material on which he will have to operate, frequent and regular opportunities of observing the methods of instruction employed by the best teachers, and of practising occasionally himself; and be so influenced, by precept and example, as to imbibe the spirit of earnestness and enthusiasm characteristic of the true teacher. And how are both these ends to be attained in a space of time too short to accomplish either of them? If, in connection with the foregoing remarks, it be borne in mind that, on the average, the training session in
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the principal educational establishments of Great Britain and the Continent is ten times as long as ours, the desirability of extending the period, as suggested, may be the more evident.

“II. In the second place, I think it very necessary that a Practising School should be formed, in connection with the Training Department—one that would, in its organization, &c., approximate as nearly as possible to the class of schools to which the larger number of candidate teachers receive appointment.

“Under the present arrangement, the practical training to which candidates are subjected is given in the Model School, under the direction of the Head Master and the Head Mistress; one day per week, during the session, being set apart for the purpose. While in attendance at the Model School, they are employed in observing the methods of instruction used, noting the disciplinary and other arrangements, teaching occasionally, and in receiving instruction in the art of teaching. This is without doubt good, as far as it goes; but, as results prove, it is not calculated to prepare the candidate for efficiently conducting his own school; for it is obvious that the Model School, in which his practical knowledge is mainly acquired, must widely differ in its organization from the ordinary country school. When, therefore, the time arrives for him to commence actual work, difficulties present themselves which he has neither anticipated nor fitted himself to meet. What is wanted, then, is a “Mixed” School of say forty or fifty pupils, of the character indicated above—in short, the model of a country school. In it the candidate should have, not merely the opportunity of observing the routine and of occasionally taking charge of a class or section, but the responsibility (under supervision) of conducting all its operations for a certain portion of the session. The experience thus obtained would be invaluable, and would soon manifest itself in the increased efficiency of our schools—many of the existing defects in the management being attributable to ignorance rather than to wilful neglect. The following considerations also, though of minor importance, should weigh with the Council in forming a decision on this proposal. The presence of the large number of candidates ordinarily in training must, to a large extent, exercise a distracting and injurious influence on the operations of the Model School; while the trial lessons, given in the presence of the Inspector and Head Master, upon which the future classification of each candidate in no small degree depends, are attended with difficulties that it would be but just to remove.

“III. Lastly, I would suggest that the number of admissions into training be adapted to suit the Council’s demand for teachers.

“The advantages attending this course are readily apparent. On the side of the Council it will be found that a saving of money will be effected, a better selection of material may be made, and the staff and accommodation of the training department will not be unnecessarily overtaxed; while the advantages to the candidate will be, a better training, and prompt despatch to his sphere of duty.”

59. We deem it requisite, before incurring any expense for the improvements pointed out by the Training Master, to decide what is the proper organization for a permanent Training School. This question is felt to be one of great importance, not only in this, but also in the neighbouring Colonies. Upon the answer will depend, in a great measure, the qualifications of future teachers, the status of the teaching profession, and the nature of the education to be imparted in Primary Schools supported by the State. The necessity of having teachers fully qualified in all respects for their duties may be assumed; the advantages to the country generally are apparent. But while the prospect of obtaining a sound and useful education at a cheap rate may attract large numbers to the Training School, of whom many may become most efficient teachers, the uncertainty that they will hereafter be adequately remunerated for their services, and the small inducements

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to remain in the profession, will dispose some to relinquish teaching whenever they can obtain other employment accompanied with greater emoluments. It is probable that the class of men by whom this course would be most frequently adopted would be precisely those who were of most worth as teachers; those who remained in charge of the schools being some who, from inferior energy and intelligence, were unable to enter the more highly remunerated occupations. Thus, the very excellence of the Training School would be the means of frustrating its primary intention—that of rearing up a body of accomplished teachers. Until, therefore, the position of the teacher generally, his emoluments, and status, have been placed on a more satisfactory basis than at present, we deem it unadvisable to establish a Training School after the model of those in the mother country, but consider it preferable to continue in force the existing provisional arrangement for the training of teachers.

V.—INSTRUCTION.

COURSE OF SECULAR INSTRUCTION.

60. The course of secular instruction laid down in article 62 of the Regulations is intended (1) to define the subjects that ought, of necessity, to be included in a scheme of primary education for the Colony; and (2) to regulate the teaching, with a view to secure corresponding proficiency in all the branches taught. In the first aspect, it is a guarantee to the public that instruction of the kind needed under the peculiar circumstances of the Colony will really be provided; for, while a teacher is not prevented from introducing other subjects, he is compelled to give sufficient attention to those deemed most useful and appropriate. Regarded from the second point of view, the Course of Secular Instruction is a guide and direction to teachers, both as to the amount of time to be devoted to each subject, and as to the order in which they should successively appear upon the programmes of the various classes. The indirect uses of this regulation are of equal importance. It effectually prevents, for example, the anomalous state of things sometimes observed in schools, when the pupils may be prodigies of proficiency in some branches, while others are wholly neglected. The one-sidedness of such a mental training cannot fail to be injurious to those subjected to it, inasmuch as they are likely to grow up familiar with one department of knowledge only, and both unable and unwilling to apply themselves to the acquisition of learning in any other.

61. The propriety of defining with some fulness and precision of detail the necessary constituents of a public system of primary education has of late years been very generally recognized. The principle has indeed long been acted upon among those nations of the Continent of Europe in which education has made any noteworthy advance; and some of the American States, and Canada, have followed the same course. More recently in England, upon the introduction of what is called the Revised Code, (article 48), an attempt was made to lay down the course of instruction for schools aided by the State. That object has been but imperfectly accomplished however, the framers of the Revised Code having confined their directions to reading, writing, and arithmetic, and having expressed them rather with a view to the guidance of teachers, than as a formal declaration of the necessity of certain branches as part of the school course. In Victoria, the Board of Education have been more successful in this respect, having included in their course all the ordinary school subjects, besides affording substantial encouragement to the teaching of singing and drawing.

62. It seems desirable to notice at this point the bearing upon secondary education of the Course of Secular Instruction. Owing to the early age at which children leave school, it rarely happens that boys remain sufficiently long to receive instruction in advanced subjects. But in some localities, where the population is able to supply a class of persons whose necessities do not compel them to remove their children till they have attained an age beyond the average, and who desire to obtain for them a more extended education, it is possible and desirable to form a class in which the elements of classical and mathematical learning may be studied. In such cases, the Course of Secular Instruction provides for the extended instruction of the pupils in the primary school, and prepares them for advanced teaching in a superior school, when the numbers justify the establishment of a school of that class.

63. The reports of our Inspectors show that teachers generally evince a ready disposition to fulfil the requirements of the Course of Secular Instruction, and that their failure, in some instances, to teach all the prescribed subjects, arises mainly from want of the necessary knowledge or skill. Having been in operation for nearly two years, the course is now more fully understood by teachers. The beneficial influence upon instruction, of working in accordance with a systematically arranged course, is better appreciated, and the difficulties formerly supposed to exist in the way of its successful adoption, have in general passed away.

RELIGIOUS INSTRUCTION.

64. The provision made in the 19th section of the Public Schools Act, by which, in Public Schools, one hour daily has been set apart for the special religious instruction of the pupils, has been taken advantage of in numerous instances; and there appears to be a growing disposition on the part of some of the clergy to use the opportunity thus afforded. It has been found, however, that the hour, from 9 to 10 a.m., devoted to this subject in the Time-table (art. 73 of the Regulations), is inconvenient to many of the clergy located in country districts. The Council has therefore taken into consideration the expediency of so far modifying this regulation, as to admit of the period devoted to special religious instruction being altered in cases where the necessity for such a change is made known.

METHODS.

65. We do not gather from the reports of our Inspectors that any very decided or extensive improvement has been exhibited by teachers as regards the methods adopted in their instruction; nor could such an advance be reasonably expected, if it be borne in mind that many of the teachers have continued to use the same methods through a long period of years, and that few have enjoyed opportunities of becoming acquainted with new and improved modes of tuition, either by means of professional training, or by the observation of persons more experienced in teaching than themselves. With regard to certain radical defects in the methods employed, the Inspectors are substantially unanimous. Referring to the Albury District, Mr. Coburn states—

“One general fault in the mode of teaching is, the neglect of recapitulation of work at frequent and regular intervals; and akin to this, is the lack of examination of pupils both orally and otherwise at stated times. Too much dependence is placed on the visit of the Inspector, as a means of ascertaining the state of attainment and the progress made. Teachers who desire that their pupils should acquit themselves well at inspection should not fail to exercise them in the art of correct and ready answering as often as possible. In all classes, written examinations should be resorted to; and, in the upper classes, these should take as wide a range as possible.”

Similarly, Mr. McIntyre, in his report upon the Goulburn District, remarks:—

“Of the general style of teaching followed in many of the schools, particularly the method of questioning on the ordinary reading lessons, whether the object be to examine or instruct, I cannot speak very highly. The majority of the teachers are, however, willing to do their best, but in many cases they evince but little judgment or discretion in the mode of teaching the different matters they bring before the pupils, and the teaching is often wanting in earnestness and vigour.”

In the Maitland District, the Inspector, Mr. Dwyer, speaking of the defects of method, points out the remedy:—

“In about one-sixth of the schools the methods are from fair to good, in about one-half tolerable, and bad in nearly one-third. My remarks upon method, in the report of last year, continue still applicable to the majority of the schools. It is seldom one meets with genuine method, but it is only fair to state that my opportunities of observing it directly were very few last year, my duties having had reference principally to results. For the most part the methods in use fall under the synthetic type, which, without the
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analysis to which it is correlated, is incomplete, and for children even much less suitable. But whatever the form of the method employed, its application is greatly modified, if not wholly controlled, by other circumstances, among which stand prominently forward the regularity and order of the pupils. In the absence of these, good teaching is powerless; while with them, even indifferent instruction is not ineffectual. They are the groundwork of successful teaching, and to secure them should be the great object of every teacher, as well as of all interested in the work of education. It seems to me, that before method, in the hands of most teachers, can become an intellectual instrument capable of searching thoroughly the minds of youth, a higher range of qualifications will be necessary. It may be true that, for the merely rudimentary education conferred in the majority of primary schools, attainments very little above the small proficiency sought are needed; but even for this humble aim, an enlightened teacher will be able to impart his knowledge more clearly, thoroughly, and expeditiously, than one who is unable to advance further than the elementary stages."

The Sydney Inspectors are perhaps the most precise in their statements:—

"Viewed as a whole, the methods may in point of quality be described as tolerable. Some fall below this mark, but these are practised chiefly either by untrained teachers or by those who have joined the profession late in life. The more noticeable defects in their application are—the questioning is not sufficiently individual or searching, it needs to be marked by greater vigour and earnestness, it does not aim enough at developing the intelligence of the pupils. Vigorous and intelligent questioning appears to us the main essential of any method deserving the name. It is of little use teaching, unless proper precautions be taken to ascertain that the instruction is being received; and the best proof that this is the case is, the ability of the pupils to reproduce readily and correctly the substance of their lessons. Suggestive or mechanical questioning is of doubtful value. It is calculated to mislead both teacher and pupils. The true test consists in putting the questions point-blank, framing them so that they shall appeal to the intelligence of the pupils and necessitate some amount of thinking, and in leaving no room for guesswork. The teacher who examines his work in this way will have little difficulty in discovering whether his teaching is effective or not. Much of the instruction is of small value, not merely in relation to the mode in which it is taught, but also in respect to its haphazard, poor, and scanty character. Too often, teachers neglect to prepare their lessons—an omission most commonly committed by those whose information is the least satisfactory. This want of preparation is usually accompanied by an absence of everything like a proper arrangement of lessons. Both defects are of serious moment, and go far to render sound teaching an impossibility. At the same time, it must be admitted that some advance in the art of teaching is perceptible. Greater energy is infused into the work, a more practical acquaintance with the Council's requirements is evinced, and a disposition to receive information on unknown or doubtful points is very generally apparent."

PROFICIENCY.

66. The proficiency of the pupils in the various subjects of instruction is described in the Inspector's reports. The general tenor of those reports leads to the belief that considerable improvement has been effected since 1867, although no explicit comparison is drawn, except in the case of the Newcastle District. Mr. Allpass states, with reference to the schools under his charge, that "many schools whose classes had last year to be rated as 'below the standard,' have now, through the earnest industry of the teachers, earned a more satisfactory verdict."

VI.—PUPILS.

67. The provision of school buildings and other material appliances of instruction, the appointment of well-trained and efficient teachers, and the framing of a judicious course of instruction, will be productive of little advantage to the work of education, unless children can be brought to attend school with regularity. It has already been stated that a large number of children, estimated at 25,000, are unprovided with the means of education. It may be useful further to inquire to what extent the existing means are availed of by those within whose reach they are placed.

Appendix I.

68. The returns appended hereto show that in Public Schools the average number of scholars upon the roll was 25,735. In Certified Denominational Schools the number was 25,429, and the total 51,164. The number of pupils in daily average attendance was—

In Public Schools	16,993·7	... 66·03 per cent
In Certified Denominational Schools	16,468·7	... 64·76 ,,
Total	<u>33,462·4</u>	... 65·3 ,,

It thus appears that barely two-thirds of the children professing to attend school do so in a regular manner. At the same time, allowance must be made for the derangement of the ordinary school work in the districts near the metropolis, occasioned by the visit of H.R.H. The Duke of Edinburgh to the Colony. This circumstance probably lessened the average attendance, during the first quarter of 1868, by upwards of 3,000. But the permanent causes operating against regular attendance are less felt in the neighbourhood of Sydney, being most powerful in agricultural districts.

69. In Victoria, the percentage of pupils in average daily attendance, to the average number on the rolls, was 75·38 in 1867-68, and the actual attendance given by each child equals 132 school days. Although the percentage in average attendance in this Colony amounted to 65 only, yet the length of each child's attendance compares favourably with other countries. The average number of days spent by each child at school in the several countries mentioned below has been thus estimated:—

Canada (West)...	... ..	96 days.
United States ...	... ..	106 ,,
England...	... ..	129 ,,
Victoria ...	... ..	132 ,,
New South Wales	... ..	155 ,,

When it is remembered that 1868 was a most unfavourable year for school attendance, by reason of the prevalence of drought and sickness, the result here indicated must be regarded as fairly satisfactory.

70. The fact must not be overlooked, however, that nearly 20,000 children are extremely irregular in their attendance at school. Teachers complain that their labours are rendered ineffectual by this evil, and the Inspectors find themselves unable to determine whether the blame for absence of progress among the pupils is to be attributed to the want of skill on the part of their instructors, or to the parents' neglect to send them to school. That the responsibility for the irregular attendance of pupils rests with parents is as clear as the fact that such irregularity exists. But it is not easy to decide whether the pleas set up to justify or extenuate their neglect are valid. The excuses most frequently urged by parents are, the necessity for utilizing their children's labour, and poverty which not only renders them unable to pay the school fee, but also to provide decent clothing. On the other hand, it is affirmed that, in many instances, these are mere pretexts, and that nothing but ignorance, or utter indifference to the value of education, prevents the regular attendance of children at school. For example, Mr. M'Credie (Bathurst District) reports in the following terms:—

“ The regularity of about two-thirds of the pupils in attendance is from fair to good. Many of those, however, who attend school regularly when enrolled, may be said at the same time to be regularly irregular ; that is to say, they attend

attend school regularly at certain seasons, and as regularly absent themselves at others. In agricultural districts, especially among free-selectors, and in mining communities, this continues the bane of our schools, and militates more than all other things combined, against the success of the teacher, who is utterly powerless to interpose between the children and the ignorance, caprice, and cupidity of some parents, and the needy poverty of others who are compelled to employ their offspring at certain seasons in some way or other, to save the cost of labour, or to do something for their own support."

Similar testimony is afforded by Mr. Huffer (Camden District), who remarks:—

"Although the schools are not yet satisfactory in this respect, some improvement has undoubtedly been effected, especially in the regularity of the pupils' attendance, since last inspection. From careful inquiry made at the time of inspection, I ascertained that in a number of the localities there are many children of a school age who were not in attendance at the schools established for them. In a few instances the parents profess to care little or nothing about the education of their children, and in many more instances, though professing to be anxious to send their children to school, they act as though they cared but little with regard to the matter—the children being kept from school for the most frivolous reasons, and no real interest shown in their educational progress."

Mr. M'Intyre (Goulburn District) appears to have formed a widely different opinion. He observes,—

"The irregularity of the children's attendance is often a source of complaint with teachers; but, on the whole, the attendance was tolerably regular for the last quarter of the year, being 70 per cent. daily for the number enrolled. In any individual case, however, it is unquestionable that the degree of regularity greatly depends on the character of the teacher. Excessive irregularity is frequently assigned as the cause of the low condition of a school, but experience teaches that it is generally, in reality, the result of the bad management of a teacher, for both parents and pupils naturally become indifferent when the discipline and instruction are of a worthless character. On the other hand, a good, cheerful, popular school, exerts an attractive influence over the children. They become anxious for learning, are less liable to be kept at home, attend with increased regularity and in greater numbers."

But whatever may be their difference of opinion as to the validity of the reasons assigned to justify irregular attendance, there is a remarkable coincidence in the views of Inspectors as to the remedy. All seem to admit that much can be done by teachers and Local Boards, but that a thorough cure can be effected only by means of a law rendering education compulsory. For example, Mr. Forbes reports:—

"Teachers, it is readily admitted, have many obstacles to the maintenance of effective discipline, but by firmness and consistency on their own part these obstacles may be successfully met and overcome. Even the indifference of parents, their carelessness in the all-important matter of sending their children regularly and punctually to school, and their unreasonable exactions upon their children's time—keeping them at home, often for the merest trifles—may be largely remedied by the prudence and consistent firmness of the teachers. Regularity and punctuality of attendance on the part of the pupils are tolerably reliable indications of the character of the discipline of their schools. They usually accompany each other. Regular scholars are ordinarily punctual."

Mr. Dwyer (Maitland District) states,—

"In about five-eighths of the schools the pupils and teachers are punctual to a satisfactory extent, in one-fourth tolerably so. This is an improvement upon last year's experience. The regularity, too, notwithstanding the serious obstacles by which it is opposed, maintains what may be regarded as a reasonably satisfactory level—being indifferent or bad only in one-

fifth of the schools. It has certainly improved within the year, though still very far from what it ought to be. Without compulsory education, this vital branch of discipline will be best promoted by thoroughly earnest and conscientious teachers, well qualified to impart to their labours an interest sufficiently powerful to attract the children, who would in turn strongly incline the parents to dispense with their services to a much greater extent than at present. Irregularity often arises from the caprice of children—not the will of the parents; and if all schools were conducted by really competent teachers—I mean not alone able to teach, but to exercise withal a wholesome influence on public opinion by their prudence, discretion, intelligence, and zeal—the question of compulsory education would, I think, be considerably narrowed, in a country like this, where the means of living are not, as in some European countries, the all-absorbing topic—the great object in the race of life.”

Mr. Coburn remarks :—

“ Compulsory education, in some shape or another, appears, without doubt, to be the only cure. Still, a good deal may be done by the teacher, in conjunction with the Local Board, to mitigate the evil caused, too often, by the carelessness of the natural guardians of the pupils.”

The opinion of Mr. Huffer points more positively to compulsory education. He states :—

“ Teachers and School Boards, by careful attention to their duties, may, I believe, still further improve the pupils’ regularity, and also induce more parents to send their children to school. I am strongly of opinion, however, that nothing short of an enactment dealing with the question of fees, and introducing the system of compulsory school attendance, would effectually remedy the evils of irregularity and non-attendance.”

Mr. M’Credie is still more emphatic :—

“ In an enactment to secure compulsory attendance seems to lie the only hope of extrication, partial or complete, from the present evils; and to the necessity for this, the public mind seems fast ripening. Earnest, thoughtful men are frequently heard remarking that compulsory attendance and the abolition of school fees are what should be appended to the present system, to complete and perfect the machinery for the education of the Colony. Even in England, educationists are now becoming alive to the necessity for compulsion to attain the thorough education of the people. One says, recently—‘ The Educational Conference at Manchester has already spoken with a clear, a loud, and a convincing voice, as to the compulsion needed; there is no doubt of the need—the only doubt is how to provide for it. There are many and considerable difficulties in the way, but there are none so great as not to be removable by earnest determination, by patient forbearance, and by intelligent devotion to the most important subject which in this century has risen up and taken its rightful place in the minds and hearts of the people of Great Britain.’ Another ventures to predict—‘ that twenty years afterwards, the compelling every parent to take care that his child shall learn to read and write, will be considered (as it now is in Germany) of the same order of importance and necessity as that parents shall clothe and feed their children.’”

Whatever opinions may be entertained as to the propriety of enacting a law to render education compulsory, there can be no doubt that a necessary preliminary to any practical step in that direction would be the division of the Colony into School Districts, and the establishment of a system of local rating for educational purposes. Before imposing the legal obligation to educate children, it would be incumbent upon the framers of the measure to provide the machinery required for supplying the means of instruction throughout the Colony. This work could not be accomplished by any central authority, as the provision in question would be needed in a great number of places

places simultaneously; and it must consequently be thrown upon local organizations, each limited in its sphere of action to the district in which it is instituted. It is further the opinion of the Council that the extension and maintenance of schools cannot be satisfactorily provided for in the future, unless recourse be had to the system of school districts and local rates. Teachers are frequently found to express similar views as to the necessity for rendering education compulsory.

PUNCTUALITY.

71. The further loss of time to pupils, from lateness in arriving at school, is considerable. In most cases the punctuality of the pupils depends upon the teachers. In this particular the school will reflect the teacher's character. The Inspectors generally sustain this view. Mr. Jones, for example, states of the Armidale District:—

“The punctuality of the attendance is in general fair. Where it is good or bad, the prevailing tone of the school is usually of the same character. Where schools are located on the banks of creeks or rivers it is usually faulty, but in some of these cases it might be much improved by teachers of energy, tact, and firmness of purpose. It appears to hold good in the schools of my district, as it does in the schools of Sydney, that where teachers are popular with both pupils and their parents, more particularly so with the pupils, the punctuality is satisfactory. The same remarks apply to the regularity of attendance, though with perhaps less force, the influence affecting it being to some extent peculiar.”

Mr. M'Credie reports to the like effect:—

“Where the evil exists to any great extent, the blame is generally to be about equally divided between the parents and the teacher; the former detaining their children from causes which a little forethought and care might have prevented, and the latter failing to impress the habits of his pupils, from his own want of earnestness and rigid punctuality. The teacher who does not, by example, in every respect, inculcate this habit, need not attempt to do so by precept.”

Mr. M'Intyre also states:—

“In many schools the scholars are unpunctual in the morning. I have inspected some schools where the business, according to the Time-table, commences at 10 o'clock, and the pupils came into school singly, and in groups, up to within a few minutes of 11. Among the many circumstances which are indicative of a badly managed school, the want of punctuality, when allowed to an extreme, is perhaps the most infallible. It is the consequence of indifference and the want of vigilance on the part of the teacher. Children if left to themselves will never be punctual, no matter how late the hour for commencing business. Perhaps the most effectual remedy for late comers is, to detain them in the evening for thirty or forty minutes after school hours. This, combined with the remonstrance of the teacher, never fails to ensure punctuality; but I regret that, in this district, it is not generally practised with sufficient strictness.”

VII.—SUPERVISION.

LOCAL SUPERVISION.

72. In some instances the supervision exercised by Local Boards is of a highly beneficial character. They watch over the prosperity of the school, encourage the teachers, and manifest an intelligent interest in all that concerns the well-being of the pupils. But we regret to report that in a large number of cases a different spirit is manifested;

manifested ; and that some Local Boards evince but little anxiety for the welfare of the schools under their charge. In these cases the degree of interest taken in school affairs ranges from indifference down to positive neglect. We learn from Mr. Huffer's report, for example, that—

“ No marked improvement is yet apparent in the character of the supervision exercised by the School Boards. In a few instances the supervision exercised is really effective, the Boards' duties prescribed by the Regulations being carried out with regularity and painstaking ; but, by a large majority of the School Boards, little or no interest is manifested in the progress and well-being of the schools placed under their supervision.”

Mr. M'Credie speaks in equally unfavourable terms :—

“ With some praiseworthy exceptions, the Local Boards do not appear to take that interest in the schools under their supervision which might reasonably be expected from them. Generally speaking, meetings are seldom held, and very irregular visits are paid to the schools.”

In the Armidale district, Mr. Jones states—

“ Except in a few commendable instances, the local supervision is nominal ; many teachers complaining that the members of Local Boards rarely visit their schools, or hold meetings for the consideration of matters affecting the welfare of them.”

Mr. Dwyer's observations on this point are somewhat more favourable :—

“ The Public School Boards evince, to a partial extent, a tolerable interest in the institutions with which they are officially connected. In many instances the members are not exactly the stamp of men calculated to render beneficial service ; nor are they fitted, either by education or social influence, to improve the character of the schools ; but they are the best that can be got, under the circumstances. The Local Boards of Denominational Schools continue to give, for the most part, a pretty active support to their schools ; but, in all cases, there is generally wanting a systematic procedure. The members visit the schools but seldom, examine very superficially (if at all) the records, and often put their names to documents certifying their correctness, which have afterwards to be returned to the teachers. There is something stultifying in such conduct as this ; and I am confident that, if members knew how frequently they are made to vouch for incorrect figures, they would be more cautious. It would be only right and proper for them to see the books, &c., from which the returns are made out, and satisfy themselves, as they would in ordinary accounts, that every thing was quite accurate. In this respect, indeed, the local supervision is, in all schools, far too lenient, and takes much more upon trust than would be found justifiable in private life.”

In less remote districts the local supervision appears to be more effective. In the Cumberland District, for example, the Inspector reports :—

“ This is a matter of the highest importance to the healthy, successful working of the schools. It is not as yet, almost in any case, so fully realized as it ought to be. Some Local Boards discharge their duty very fairly ; others are rather neglectful. As regards Denominational Schools generally, the clergymen are virtually the Local Boards, in so far, at least, as the supervising of the schools is concerned.”

In the Sydney District the statement of the Inspectors is still more encouraging :—

“ It is gratifying to be able to report that the local supervision of the schools of this district is, in numerous instances, of an active, intelligent, and beneficial character. Most commonly the duties of Local Boards practically devolve upon one particular member ; and whilst we heartily wish it were otherwise, the circumstance need not be taken as evidence that no interest

is

is felt by the rest of the members. One of the principal duties of a Local Board is to make regular periodical visits to the school under its supervision; and thus, by its presence, to encourage pupils and teachers in the important work in which both are engaged. This duty is performed only in few instances. Still, in the main, the good done by the agency of Local Boards during the year has been large and substantial. New buildings have been erected, not a few have been enlarged or repaired, and various other material improvements have been effected. These beneficial results have only been achieved at much personal expense of time, trouble, and money. To those who have been engaged in such self-sacrificing and benevolent labours, too much praise cannot be given. For ourselves, we have experienced a uniform courtesy from members of Local Boards; our suggestions have been received in the best possible spirit, and reasonable effort has been made to give them practical effect. The feeling thus manifested has afforded us much encouragement, and has led us to entertain the belief that our anxiety to improve the condition of the schools under our charge is correctly understood and fully appreciated."

The causes which result in the state of things described in these extracts are not difficult to discover. In the first place, it is impossible, frequently, to obtain the services of persons properly qualified by education and experience to perform the duties expected from those having local oversight. Even in cases where suitable persons can be found, it often happens that they decline to act. The complete occupation of their time in their own business is generally pleaded in excuse for thus deciding; but it is known that the desire to avoid being involved in local disputes and unwillingness to bear the expense inseparable from the office, are not less powerful influences in leading to this result. This last consideration is indeed one that may be urged with much justice. Members of these Boards are often compelled to contribute the whole of the local quota towards the necessary incidental expenditure for the schools under their charge; they feel this to be unjust, seeing that all who derive benefit from a school ought to bear some portion of the cost of its maintenance.

INSPECTION.

73. The staff of Inspectors continues the same as notified in our last Report. We have to record, however, the decease of Mr. Thomas Harris, one of the Inspectors originally appointed by the Council, after a protracted illness, from which he was suffering at the date when that Report was furnished. In general, the Council has seen no reason to alter the favourable opinion formerly expressed as to the ability and fidelity of these officers. The Council is aware that, in some Districts, the duties are so multifarious that they can be discharged only by incessant labour on the part of the Inspectors whose energies are tasked to, perhaps, an unreasonable extent. The continual accessions to the number of schools in operation tend to augment this inconvenience, and to render the proper inspection of all the schools every year still more difficult of attainment. For this reason, the Council has considered it desirable that the staff of Inspectors should be increased at an early date.

74. The general reports furnished by the Inspectors for the year 1868 are for- Appendix J.
warded herewith. These reports exhibit with considerable minuteness the results of the inspection of schools and examination of the pupils. Apart from the more general and obvious reasons for desiring that schools should be thoroughly inspected, the Council has in view several special objects to be accomplished by that means. These are,—1st, to measure the exact proficiency of the scholars in the various subjects taught, and their progress in learning, as compared with the period they have been under instruction;—2nd, to ascertain if the cultivation of the mental faculties receives due attention from teachers, and if the information communicated to the pupils is so digested as to increase the power of acquiring further knowledge;—3rd, to test the accuracy of the school work,
and

and the fidelity with which the instruction has been made to accord with the prescribed guides and the declared intentions of the teachers ;—and, 4th, to enable the Council to gauge the efficiency of the teachers in the practical work of the school. Incidentally, further information is gained respecting the moral training children receive at schools under the Council's supervision. The examinations to which they are subjected reveal indirectly, the extent to which they have acquired habits of obedience and of self-reliance, a love of truth, and a disposition to be open and candid. These qualities are of the utmost importance to the children individually, and to the community of which, it is to be hoped, they will become good and useful members.

75. It is apparent that the object before described can be effected by the employment, as Inspectors, of such persons only as are accustomed to the management of children, conversant with the nature and practice of elementary teaching, and gifted with some power of discriminating between that which is taught with an intelligent aim and mere rote-work. Besides this special preparation, the work of an Inspector seems to us to require peculiar qualifications ; of which, patience, kindness, tact, and readiness of perception, are probably the most important. Even then, the work of examination is difficult, and, in large schools, laborious.

76. The mode of conducting the examination is chiefly by means of oral questioning. This plan possesses the double advantage of occupying less time and of being less severe upon the pupils than a written examination, for which, indeed, a very large proportion are too young. The questions put relate, in general, to the lessons previously given and recorded by the teachers, and such easy deductions from the knowledge thus gained as could be made by children who understood, in a reasonable degree, what they had been taught.

VIII.—FINANCE.

Appendix K.

77. The usual Statement, exhibiting, under the various heads, the receipts and expenditure during the year, is appended hereto. The large number of new schools established in the course of the year, and the various changes which have taken place in the staff of teachers, have caused a considerable augmentation in the necessary expenditure.

78. The item £3,266 18s. 10d., derived from the Church and School Estates Revenue was apportioned, in accordance with instructions received from the Government, equally between Public and Certified Denominational Schools.

79. The total amount of school fees received during the year was £34,109 13s. 6d. and this sum would doubtless have been exceeded had the season been of an ordinarily favourable character.

80. The returns furnished from all schools under our supervision disclose the fact that, during the past year, 8,289 children were instructed gratuitously. Through our Inspectors, inquiries were made in the course of the year in 211 Public Schools, respecting free scholars. Their reports embody the following statistics :—The total number of professed free scholars was 1,073. Of these, 737 were irregularly admitted by teachers on their own authority, 267 by order of the Local Boards, and 54 by special sanction of the Council. As far as the information at their command enabled the Inspectors to judge, they were of opinion that the exemption from payment was justifiable in the cases of 923 children, on the ground of their parents' poverty, though this plea was advanced by 1,037. In addition to the 1,073 children admitted gratuitously, 1,074 others professing to pay, were virtually free scholars, inasmuch as their parents, on various pretexts, withheld payment of school fees. In 947 cases, the plea of poverty was advanced as the reason for non-payment, and the Inspectors considered the plea valid with respect to 696. There can be little doubt that, with the return of favourable seasons and more prosperous times, the number of free scholars would be greatly diminished.

IX.—SUMMARY.

81. Summing up the preceding statements, we observe,—(1) that the means of education have received considerable extension during the period covered by this Report, 136 new schools having been opened in 1868; (2) that some advance has been made in supplying competent teachers, and in improving and testing the qualifications of those already appointed; (3) that the instruction of the pupils has been systematized, and that their proficiency has been advanced, though many defects yet remain to be corrected; (4) that while greater regularity of attendance has been secured to some extent, further inducements beyond those already in force are required to prevent the continued absence of children from school; and, (5) that the local supervision of schools greatly needs improvement, the official inspection being reasonably effective.

We submit this as our Report upon the Public Schools for the Year ending 31st December, 1868; and, in testimony thereof, we have caused our corporate Seal to be affixed hereto, this twenty-fourth day of March, one thousand eight hundred and sixty-nine.

(L.S.)

{	HENRY PARKES, President.
	G. ALLEN.
	W. M. ARNOLD.
	JAMES MARTIN.
	J. SMITH.

W. WILKINS,
Secretary.

APPENDIX A.

RETURN of the Attendance of Children at the Public Schools of New South Wales, as certified by the Public School Boards for the Quarter ending December of the Year 1863, or for the last Quarter in which the Schools were in operation respectively.

Name of School. I.	Number of Children on Rolls.									Average Weekly Attendance.		
	Boys. II.	Girls. III.	Total. IV.	Church of England V.	Roman Catholic VI.	Presby- terians. VII.	Wesley- ans. VIII.	Others. IX.	Total. X.	Boys. XI.	Girls. XII.	Total. XIII.
Aberdeen	35	34	69	42	11	16	...	...	69	19.5	17.3	36.8
Aberglasslyn	32	21	53	24	17	5	2	5	53	17.8	10.4	28.2
Adelong	55	30	85	48	14	14	6	3	85	39.40	17.80	57.20
Albury	138	99	237	113	26	75	19	4	237	109.84	80.87	190.71
Appin	27	24	51	39	9	3	...	...	51	17.5	14.4	31.9
Armidale	69	63	132	62	28	36	6	...	132	54.7	47.7	102.4
Arncliffe	26	15	41	26	2	...	10	3	41	18.1	8.2	26.3
Ashfield	39	29	68	15	2	7	38	6	68	26.5	17.7	44.2
Avisford	7	7	14	3	10	1	...	...	14	4.3	5.1	9.4
Avondale	20	24	44	22	15	...	7	...	44	15.5	19.1	34.6
Balmain	213	156	369	134	37	128	9	61	369	152.8	102.2	255.
Balaranald	15	13	28	15	12	1	...	...	28	12.	10.40	22.40
Bankstown	17	24	41	27	...	4	10	...	41	11.5	14.8	26.3
Bandon Grove	27	22	49	36	1	6	3	3	49	17.1	16.5	33.6
Barrington	18	10	28	8	...	20	...	...	28	8.42	7.24	15.66
Bathurst	118	70	188	29	4	10	137	8	188	88.08	45.17	133.25
Bega	30	25	55	35	5	9	5	1	55	20.46	15.44	35.90
Bendemear	19	16	35	18	4	9	2	2	35	10.1	11.3	21.4
Bendolba	8	9	17	6	4	4	3	...	17	4.78	4.04	8.82
Berkeley	25	15	40	4	17	5	11	3	40	20.1	10.7	30.8
Bingera	14	8	22	18	4	...	...	...	22	10.	8.	18.
Binalong	20	10	30	6	24	...	...	...	30	13.18	5.48	18.66
Binda	4	3	7	...	7	...	...	...	7	4.	2.20	6.20
Bishop's Bridge	29	17	46	1	40	5	...	...	46	22.7	14.8	37.5
Blanney	22	21	43	6	12	19	6	...	43	11.32	12.34	23.66
Black Range	28	24	52	30	14	5	3	...	52	19.91	16.38	36.29
Blue-gum Flat	25	19	44	29	15	...	...	...	44	15.6	15.3	30.9
Bo Bo Creek	16	10	26	19	...	...	7	...	26	7.99	6.41	14.4
Bodalla	15	11	26	20	3	3	...	...	26	9.8	6.	15.8
Bolwarra	21	21	42	6	5	...	21	10	42	14.45	15.40	29.85
Bombala	50	29	79	54	23	...	...	2	79	39.64	22.16	61.80
Booral	19	14	33	8	10	6	5	4	33	14.9	9.4	24.3
Boolong	31	37	68	5	27	29	7	...	68	22.6	27.1	49.7
Boolambayte	21	11	32	16	11	5	...	...	32	16.5	9.	25.5
Botany Road	109	86	195	48	7	13	26	101	195	83.7	57.2	140.9
Botany	55	53	108	42	13	4	39	10	108	37.8	33.9	71.7
Bowral	42	30	72	37	8	...	22	5	72	27.50	20.	47.50
Bourke-street	216	164	380	59	14	14	43	250	380	157.7	119.1	276.8
Bourketown	65	63	128	42	24	21	17	24	128	47.50	43.50	91.
Bowna	12	9	21	8	5	8	...	...	21	8.60	7.50	16.10
Bowenfels	52	20	72	38	13	13	6	2	72	34.40	12.70	47.10
Branxton	19	27	46	29	3	6	8	...	46	14.4	19.07	33.47
Braidwood	69	51	120	44	18	15	42	1	120	51.30	34.10	85.40
Broughton Creek	20	26	46	23	9	14	...	...	46	12.4	18.7	31.1
Brookfield	23	23	46	5	41	...	...	...	46	12.7	11.5	24.2
Bulladelah	8	7	15	13	...	...	...	2	15	6.8	5.4	12.2
Bungowannah	19	14	33	17	3	12	1	...	33	13.79	5.53	19.32
Burrendulla	22	21	43	29	2	...	12	...	43	15.95	14.70	30.65
Cambewarra	20	26	46	14	1	24	7	...	46	14.3	18.3	32.6
Camden	43	34	77	28	7	...	37	5	77	33.4	22.1	55.5
Camperdown	56	42	98	71	5	14	6	2	98	37.6	29.2	66.8
Campsie	15	13	28	14	14	...	...	...	28	9.1	6.8	15.9
Cadia	16	18	34	14	7	...	13	...	34	9.56	11.56	21.12
Carrawa	8	9	17	1	16	...	...	...	17	3.9	3.2	7.1
Cararawell	20	16	36	17	4	9	6	...	36	14.4	11.4	25.8
Carcoar	33	34	67	33	24	8	1	1	67	25.53	22.72	48.25
Castlereagh	9	9	18	9	8	...	1	...	18	4.8	3.6	8.4
Casino	30	29	59	23	23	10	3	...	59	24.6	21.9	46.5
Cawdor	35	29	64	27	4	...	33	...	64	20.2	16.1	36.3
Cessnock	29	33	62	28	34	...	...	...	62	13.	20.6	33.6
Chatsworth Island	16	39	55	8	9	34	4	...	55	10.1	21.3	31.4
Cornish Settlement	13	10	23	3	...	...	20	...	23	7.5	6.5	14.
Clarence Town	39	40	79	38	5	21	10	5	79	29.38	29.88	59.26
Cleveland-street	616	460	1,076	431	173	115	198	159	1,076	449.9	316.1	766.
Coonamble	29	21	50	29	20	1	...	...	50	19.	12.	31.
Currajong	19	11	30	4	2	6	18	...	30	15.80	7.80	23.60
Colyton	18	30	48	22	6	4	14	2	48	14.	22.3	36.3
Collector	15	22	37	14	1	2	18	2	37	8.90	15.90	24.80
Coolangatta	29	28	57	16	31	9	...	1	57	22.8	20.7	43.5
Coorumbong	21	15	36	8	25	3	...	...	36	17.2	13.2	30.4
Cowra	34	37	71	33	24	14	...	...	71	24.30	25.20	49.50
Cooma	25	19	44	38	3	1	...	2	44	20.54	15.91	36.45
Croobyar	47	38	85	37	11	4	25	8	85	35.9	25.6	61.5
Croom Park	12	21	33	7	15	11	...	...	33	4.8	9.2	14.

APPENDIX A—continued.

Name of School. I.	Number of Children on Rolls.									Average Weekly Attendance.		
	Boys.	Girls.	Total.	Church of England V.	Roman Catholic VI.	Fresbyterians VII.	Wesleyans VIII.	Others IX.	Total X.	Boys XI.	Girls XII.	Total XIII.
	II.	III.	IV.	V.	VI.	VII.	VIII.	IX.	X.	XI.	XII.	XIII.
Croki.....	26	36	62	12	3	7	40	...	62	18.78	27.08	45.86
Crudine	14	12	26	18	3	5	...	...	26	10.37	8.77	19.14
Cudgegong	15	12	27	20	7	...	...	...	27	10.8	7.6	18.4
Cullenbone	7	25	32	19	13	...	...	...	32	6	14.50	20.50
Cundletown	28	17	45	28	9	5	3	...	45	21.3	14.12	35.42
Dalton	20	20	40	1	...	...	34	5	40	14.60	15.00	29.60
Dennis Island	22	17	39	6	...	2	31	...	39	13.78	12	25.78
Deniliquin	69	33	102	64	21	17	...	...	102	43.55	19.84	63.39
Dingo Creek	19	13	32	6	12	14	...	...	32	14	10.5	24.5
Dobroyde	22	37	59	31	3	22	...	3	59	15.9	24.2	40.1
Dondingalong	7	14	21	1	5	...	15	...	21	2.6	7.7	10.3
Dubbo	42	40	82	47	19	13	3	...	82	30.07	25.23	55.30
Dumaresque Island.....	15	21	36	16	6	9	1	4	36	7.108	10.347	17.455
Dunmore	43	32	75	37	...	16	22	...	75	29.98	21.69	51.67
Dungog	29	32	61	18	23	16	4	...	61	14.2	17.1	31.3
Eagleton	19	22	41	13	10	16	...	2	41	13.87	16.56	30.43
Eccleston	8	4	12	9	2	1	...	...	12	5.15	3.55	8.7
Eden	29	21	50	21	15	10	...	4	50	23.05	14.22	37.27
Eglinton	19	20	39	20	8	...	2	9	39	13.78	12	25.78
Eling Forest.....	21	15	36	23	3	10	...	...	36	13.54	11.37	24.61
Ellalong	28	18	46	39	3	2	2	...	46	14.08	12.25	26.33
Euroka	20	23	43	3	6	7	27	...	43	15.7	17.5	33.2
Eurobodalla.....	12	13	25	13	...	3	4	5	25	7.30	10.10	17.40
Euston	10	18	28	14	5	7	...	2	28	6.68	12.93	19.61
Evans' Plains	22	21	43	14	17	8	3	1	43	16.20	14.60	30.80
Fairy Meadow.....	53	33	86	24	24	32	5	1	86	32.5	22	54.5
Falbrook	21	25	46	33	7	...	4	2	46	14.2	15.5	29.7
Five Dock	44	32	76	43	25	5	2	1	76	33.9	24.9	58.8
Fishery Creek	31	10	41	6	33	2	...	...	41	22.7	6.8	29.5
Fish River Creek.....	10	21	31	15	5	...	11	...	31	5.27	9.02	14.29
Fort-street	1,068	900	1,968	964	448	188	155	213	1,968	758.9	609.9	1,368.8
Four-mile Creek	15	19	34	11	5	...	18	...	34	12.2	16.4	28.6
Forbes	58	50	108	49	11	16	29	3	108	31.11	23.79	54.90
Freeman's Reach	27	18	45	37	2	...	...	6	45	14.1	11.1	25.2
Ghinni Ghinni.....	23	24	47	14	5	8	20	...	47	15.66	18.3	33.96
Glebe	170	112	282	153	31	34	53	11	282	124.6	68.6	193.2
Glenmore	32	37	69	15	8	5	40	1	69	18.8	22.4	41.2
Gledswood	11	10	21	12	7	2	...	...	21	6.2	5.6	11.8
Glenwilliam.....	14	18	32	20	7	1	4	...	32	10.56	11.14	21.7
Gosford	16	21	37	26	11	...	...	...	37	13.31	16.84	30.15
Gosforth	12	11	23	4	14	...	5	...	23	7.8	9.1	16.9
Goulburn	206	118	324	154	12	54	98	6	324	170.30	86.20	256.50
Grafton	116	104	220	152	21	15	28	4	220	76.4	62.5	138.9
Grafton, South.....	32	36	68	48	9	11	...	...	68	25.2	27.0	52.2
Grenfell	90	60	150	61	20	9	49	11	150	54.40	27.70	82.10
Gulgong	27	24	51	43	2	2	4	...	51	20.9	13.9	34.8
Gundagai	54	58	112	46	30	15	21	...	112	36	38.5	74.5
Gundaroo	17	14	31	19	7	5	...	...	31	14.40	10.20	24.60
Gundurimba	16	19	35	16	14	...	...	5	35	13.5	13.2	26.7
Gunning	38	26	64	32	3	3	26	...	64	21.15	13.77	34.92
Hexham	13	6	19	7	...	5	7	...	19	10.1	4.1	14.2
Hanbury	124	138	262	74	22	34	41	91	262	82.4	84.9	167.3
Hargraves	31	33	64	39	20	5	...	...	64	23.25	25.34	48.59
Hawkesbury, L.	11	17	28	4	...	...	24	...	28	5.9	13.1	19
Hinton	24	20	44	10	2	...	10	22	44	11.85	8.72	20.57
Howlong	29	21	50	29	9	12	...	...	50	14.18	11.84	26.02
Inverell	40	20	60	31	8	21	...	...	60	25.7	12.2	37.9
Iona	19	14	33	14	5	7	5	2	33	11.27	7.89	19.16
Jamberoo	28	15	43	26	2	11	3	1	43	21.5	11.3	32.8
Jamison-street.....	44	34	78	19	...	49	5	5	78	32.6	25.5	58.1
Kangaloon	11	15	26	16	5	5	...	...	26	8.7	7.2	15.9
Kelly's Plains	17	16	33	3	13	3	10	4	33	14.4	10.8	25.2
Kempsey, West	33	25	58	27	5	4	14	8	58	25.04	16.97	42.01
Kiora	18	18	36	8	...	...	28	...	36	15.90	14.10	30
Kirkconnell	26	25	51	31	9	2	9	...	51	19	16.30	35.30
Lake Albert	22	19	41	27	1	6	2	5	41	10.51	11.45	21.96
Lambton	199	201	400	109	48	70	35	138	400	144.46	127.1	271.56
Lawson's Creek	21	20	41	17	24	...	...	...	41	15.25	15.51	30.76
Limckilns	6	5	11	...	2	9	...	...	11	4.80	3.80	8.60
Lithgow Valley	31	41	72	23	23	22	...	4	72	24.35	26.56	50.91
Little River	33	20	53	33	8	7	5	...	53	18.60	12.40	31
Lismore	15	24	39	22	5	7	5	...	39	12.69	17.8	30.49
Liverpool	52	45	97	62	...	24	10	1	97	34.8	31.9	66.7
Llandeilo	17	14	31	28	3	...	...	...	31	11.6	8.1	19.7
Lochinvar	24	19	43	32	4	6	1	...	43	14.3	11.6	25.9
Lowther	13	26	39	4	24	8	3	...	39	8.53	19.68	28.21
Lucknow	21	21	42	13	22	7	...	...	42	12	14.10	26.10
Luddenham	36	41	77	38	16	11	3	9	77	20.9	26.4	47.3
Macdonald River.....	19	13	32	24	2	2	4	...	32	14.5	10.4	24.9
Macdonald River, Upper.....	17	10	27	19	...	...	8	...	27	12.5	6.7	19.2
Macdonald River, Lower.....	16	8	24	19	...	...	5	...	24	10.1	5.5	15.6
Macquarie Plains	21	20	41	7	4	3	27	...	41	12.40	11.80	24.20

APPENDIX A—continued.

Name of School. I.	Number of Children on Rolls.									Average Weekly Attendance.		
	Boys.	Girls.	Total.	Church of England V.	Roman Catholic VI.	Presby- terians. VII.	Wesley- ans. VIII.	Others. IX.	Total. X.	Boys. XI.	Girls. XII.	Total. XIII.
	II.	III.	IV.	V.	VI.	VII.	VIII.	IX.	X.	XI.	XII.	XIII.
Maitland East.....	100	83	183	85	12	32	53	1	183	73·05	54·83	127·88
Main Camp.....	33	29	62	35	10	9	4	4	62	23·27	20·04	43·31
Major's Creek.....	33	28	61	19	27	8	7	...	61	24·73	16·84	41·57
Mangrove.....	15	14	29	5	24	...	...	...	29	12·25	11·79	24·04
Manly.....	40	8	48	12	7	13	1	15	48	30·	5·3	35·3
Marrickville.....	110	50	160	47	19	9	2	83	160	84·6	34·7	119·3
Marshall Mount.....	24	17	41	9	24	...	4	4	41	20·7	13·7	34·4
Marengo.....	24	18	42	27	8	...	7	...	42	15	13·50	28·50
Marchvale.....	20	14	34	17	7	6	...	4	34	9·75	7·35	17·10
Marulan.....	27	27	54	11	35	8	...	...	54	14·80	17·10	31·90
Meadow Flat.....	15	14	29	2	10	3	13	1	29	7·75	8·80	16·55
Menindie.....	19	16	35	22	13	...	...	...	35	15·30	14·06	29·36
Merriwa.....	26	24	50	18	31	1	...	...	50	18·94	18·17	37·11
Meroo.....	16	17	33	3	20	10	...	...	33	10·1	11·8	21·9
Minmi.....	49	29	78	24	13	14	3	24	78	34·76	15·46	50·22
Millbang.....	15	15	30	7	20	...	3	...	30	10·15	9·28	19·43
Mitchell's Creek.....	29	30	59	17	6	12	24	...	59	21·50	17·50	39·
Mount Keira.....	33	24	57	4	32	6	10	5	57	22·1	15·5	37·6
Mount Vittoria.....	37	27	64	55	7	2	...	...	64	29·04	19·59	48·63
Middle River Hill.....	35	27	62	26	15	9	...	12	62	20·60	15·20	35·80
Morpeth.....	104	73	177	67	22	23	51	14	177	79·36	50·55	129·91
Monkerai.....	14	15	29	27	...	...	2	...	29	10·26	9·56	19·82
Mosquito Island.....	18	21	39	24	4	...	...	11	39	16·06	14·83	30·89
Molong.....	46	37	83	53	13	6	11	...	83	32·35	28·60	60·95
Moulamein.....	18	14	32	12	6	11	3	...	32	14·86	11·42	26·28
Moama.....	26	27	53	23	22	...	7	1	53	12·30	12·30	24·60
Monkittiee.....	13	19	32	10	20	2	...	...	32	7·86	13·68	21·54
Mount Macquarie.....	16	20	36	23	13	...	...	...	36	11·38	15·17	26·55
Mudgee.....	111	86	197	77	52	25	43	...	197	70·06	55·80	125·86
Mulgoa Forest.....	41	23	64	23	8	7	26	...	64	24·	18·2	42·2
Murrurundi.....	39	29	68	41	10	9	7	1	68	28·16	21·47	49·63
Murrumburrah.....	13	10	23	11	12	...	...	...	23	5·76	6·40	12·16
Myrtleville.....	15	20	35	5	24	6	...	...	35	11·30	12·70	24·
Narrabri.....	33	25	58	28	19	4	2	5	58	22·114	12·108	34·222
Nelson's Plains.....	27	21	48	17	4	10	14	3	48	19·11	16·53	35·64
Nerrigundah.....	16	23	39	30	...	5	...	4	39	9·91	16·50	26·41
Newtown.....	145	115	260	71	14	9	26	140	260	109·6	77·5	187·1
New Sheffield.....	60	55	115	52	4	30	26	3	115	40·45	30·08	70·53
New Country Flats.....	20	25	45	33	12	...	...	...	45	14·38	17·83	32·21
Newcastle.....	207	117	324	116	4	52	41	111	324	154·	69·4	223·4
North Bulli.....	27	17	44	23	15	3	3	...	44	18·	9·5	27·5
North Sydney.....	15	26	41	20	3	3	...	15	41	7·9	15·6	23·5
Norwood.....	18	21	39	10	10	7	6	6	39	12·95	11·65	24·60
Nowra.....	20	29	49	17	6	16	10	...	49	14·0	22·6	36·6
North Yass.....	13	16	29	11	1	13	2	2	29	5·93	10·13	16·06
Omega Retreat.....	52	51	103	27	6	15	49	6	103	44·8	45·4	90·2
Ophir Road.....	17	15	32	8	3	...	15	6	32	10·35	8·69	19·04
Orange.....	40	20	60	25	6	16	12	1	60	31·68	12·92	44·60
Oswald.....	23	16	39	10	1	...	26	2	39	16·28	10·87	27·15
Oxley Island.....	24	33	57	21	21	7	8	...	57	12·54	18·25	30·79
Paddington.....	234	168	402	182	37	41	42	100	402	158·7	106·2	264·9
Palmer Island.....	17	22	39	12	6	21	...	...	39	10·8	18·	28·8
Panbula.....	13	11	24	8	10	6	...	...	24	5·03	7·12	12·15
Parramatta.....	156	78	234	111	38	4	64	17	234	117·4	57·6	175
Parading Ground.....	17	22	39	14	...	...	25	...	39	13·55	13·73	27·28
Peel.....	12	13	25	25	...	...	...	...	25	8·10	8·90	17·
Pelican Point.....	13	6	19	13	2	4	...	...	19	11·63	3·76	15·39
Peterboro.....	28	20	48	6	30	3	9	...	48	19·6	13·2	32·8
Petersham.....	47	40	87	35	5	4	4	39	87	34·6	24·4	59·
Pennant Hills.....	49	41	90	38	8	1	39	4	90	37·1	29·6	66·7
Penrith.....	64	67	131	60	14	15	42	...	131	41·7	39·7	81·4
Pipeclay Creek.....	27	26	53	27	12	3	8	3	53	18·05	17·53	35·58
Pitt-street.....	93	71	164	31	6	2	16	109	164	69·4	53·6	123·0
Pitt-street South.....	73	50	123	47	9	26	28	13	123	49·6	31·6	81·2
Pitt Town.....	129	115	244	103	27	49	49	16	244	95·8	70·3	166·1
Picton Upper.....	26	20	46	37	8	...	1	...	46	18·8	13·7	32·5
Picton Lower.....	45	43	88	48	27	11	2	...	88	26·8	22·2	49·
Pleasant Valley.....	13	17	30	17	1	...	12	...	30	9·40	11·50	20·90
Plattsburgh.....	61	32	93	20	4	48	5	16	93	39·9	20·2	60·1
Port Macquarie.....	66	34	100	39	17	22	22	...	100	47·8	21·7	69·5
Prospect.....	25	15	40	31	9	...	...	...	40	16·9	9·8	26·7
Purfleet.....	18	18	36	2	...	19	15	...	36	13·	14·	27·
Pymont.....	143	95	238	48	4	158	16	12	238	106·4	69·0	175·4
Pyree.....	52	57	109	19	18	46	26	...	109	31·5	38·	69·5
Queanbeyan.....	46	31	77	45	7	9	12	4	77	34·70	19·30	54·
Raymond Terrace.....	35	20	55	10	...	11	34	...	55	22·5	13·6	36·1
Redbank, Araluen.....	74	67	141	67	17	32	11	14	141	56·16	43·20	99·36
Redbank.....	17	11	28	21	1	4	2	...	28	11·26	6·53	17·79
Richmond.....	58	60	118	42	1	40	35	...	118	42·4	42·4	84·8
Rose Valley.....	18	23	41	9	3	15	7	7	41	12·8	17·8	30·6
Rocky Mouth.....	20	19	39	10	...	21	8	...	39	16·	12·8	28·8
Rocky River.....	24	30	54	35	2	5	12	...	54	11·3	14·2	25·5

APPENDIX.

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APPENDIX A—continued.

Name of School. I.	Number of Children on Rolls.									Average Weekly Attendance.		
	Boys. II.	Girls. III.	Total. IV.	Church of England V.	Roman Catholic VI.	Presby- terians. VII.	Wesley- ans. VIII.	Others. IX.	Total. X.	Boys. XI.	Girls. XII.	Total. XIII.
Rockley.....	13	16	29	19	7	3	...	...	29	9.91	15.90	25.81
Roslyn.....	17	15	32	...	14	17	...	1	32	13.70	11.40	25.10
Ryde.....	162	98	200	124	...	4	64	8	200	77.1	74.1	151.2
Saumarez Creek.....	24	25	49	27	8	11	3	...	49	11.3	13.2	24.5
Seaham.....	24	12	36	5	14	11	...	6	36	15.2	8	23.2
Seven Oaks.....	15	19	34	17	7	2	8	...	34	9.50	9.05	18.55
Scone.....	24	14	38	13	13	12	...	...	38	18.6	10.1	28.7
Scott's Flat.....	33	23	56	20	36	...	...	...	56	18.5	13.7	32.2
Shellharbour.....	39	43	82	24	27	17	8	6	82	27.5	29.1	56.6
Singleton.....	61	59	120	69	...	14	35	2	120	40.2	35.8	76
Smithfield.....	32	33	65	35	10	5	...	15	65	18.6	22.5	41.1
Smith's Flat.....	23	19	42	15	14	13	...	...	42	17.9	14.2	32.1
Southgate.....	17	19	36	17	1	8	7	3	36	11.8	12.2	24
Spring Grove.....	25	28	53	31	11	...	11	...	53	15.51	15.65	31.16
Stony Creek.....	21	14	35	20	12	3	...	...	35	15.5	11.9	27.4
St. Alban's.....	19	14	33	19	4	...	10	...	33	12.7	7.8	20.5
St. Mary's.....	25	20	45	30	5	9	1	...	45	17.5	12	29.5
Stanhope.....	19	22	41	12	19	...	5	5	41	15	12	27
Stockton.....	19	15	34	7	8	12	1	6	34	16.3	10.9	27.2
Strontian Park.....	22	24	46	12	6	14	12	2	46	12.7	16.4	29.1
Sugarloaf.....	13	18	31	16	3	3	9	...	31	9	13.06	22.06
Summerland.....	24	23	47	29	13	...	5	...	47	13.3	13.7	27
Sussex-street.....	88	91	179	107	9	28	18	17	179	50.6	51.8	102.4
Sutton Forest.....	36	36	72	42	20	6	4	...	72	30.49	29.41	59.90
Tambaroora.....	31	35	66	48	9	1	8	...	66	17.45	17.70	35.15
Taralga.....	18	26	44	14	2	15	13	...	44	14.30	19.50	33.80
Taree.....	57	44	101	29	16	33	14	9	101	36.5	29.2	65.7
Tamworth.....	52	48	100	63	22	4	9	2	100	40.18	36.9	77.08
Teralba.....	21	10	31	20	2	9	...	...	31	15.15	6.9	22.05
Tea-pot Swamp.....	14	16	30	8	19	3	...	...	30	9.62	10.49	20.11
Telegerry.....	34	26	60	24	3	12	21	...	60	21.98	18.13	40.11
Tenterfield.....	52	74	126	42	51	5	28	...	126	34.5	45.4	79.9
Thalaba.....	19	18	37	32	4	...	...	1	37	14.68	11.10	25.78
Thurgoona.....	31	31	62	19	32	7	4	...	62	21.24	20.46	41.70
Tinonee.....	24	21	45	20	8	17	...	...	45	19.28	13.73	33.01
Tomago.....	15	20	35	17	3	3	8	4	35	9.75	12.20	21.95
Tomerong.....	20	17	37	12	7	18	...	...	37	12.7	10.9	23.6
Towrang.....	21	19	40	14	...	1	25	...	40	10.40	12.60	23
Tucki Tucki.....	25	28	53	15	6	26	6	...	53	16.6	19.4	36
Tumbarumba.....	21	16	37	26	8	3	...	...	37	13	9.90	22.90
Tumut.....	28	17	45	35	5	5	...	...	45	21.88	10.81	32.69
Ulladulla.....	31	12	43	18	8	9	4	4	43	20	9.2	29.2
Ulmarra.....	37	22	69	40	6	17	...	6	69	25.5	21.7	47.2
Upper Adelong.....	16	9	25	16	9	...	...	...	25	12.80	7.38	20.18
Uralla.....	38	28	66	37	18	11	...	...	66	28.9	19.5	48.4
Vacy.....	13	22	35	30	4	1	...	...	35	10.1	15.3	25.4
Violet Dale.....	23	13	36	15	7	13	1	...	36	15.8	7.8	23.6
Violet Hill.....	32	26	58	15	30	1	12	...	58	22.5	17.5	40
Wagga Wagga.....	90	49	139	83	13	22	21	...	139	61.20	32.99	94.19
Wallgrove.....	16	20	36	12	15	9	...	...	36	11.4	14.0	25.4
Wallalong.....	20	21	41	7	13	2	19	...	41	12.54	15.15	27.69
Wallsend.....	108	100	208	23	19	45	105	16	208	75.3	65.6	140.9
Walcha.....	23	16	39	21	7	11	...	...	39	18.5	13.7	32.2
Wallabadah.....	22	18	40	27	8	5	...	...	40	17.1	15.1	32.2
Wallerawang.....	43	23	66	48	9	1	8	...	66	23.20	14.40	37.60
Waratah.....	30	32	62	31	14	...	8	9	62	21.4	17.3	38.7
Warialda.....	19	10	29	18	11	...	...	...	29	12.8	7.6	20.4
Warren.....	14	22	36	22	2	12	...	...	36	11.70	18.70	30.40
Watson's Bay.....	23	11	34	7	9	...	...	18	34	14.8	7.1	21.9
Watagon Creek.....	12	7	19	9	10	...	...	...	19	6.39	3.41	9.8
Wattle Flat.....	40	57	97	43	44	5	5	...	97	28.51	37.88	66.39
Wauchope.....	15	16	31	6	11	9	5	...	31	9.3	12.1	21.4
Westbrook.....	28	22	50	27	8	1	4	10	50	13.2	10.1	23.3
West Ballina.....	28	20	48	34	12	...	2	...	48	22.9	15.0	37.9
Wellington.....	30	26	56	42	8	6	...	...	56	22.23	17.07	39.30
Wentworth.....	22	16	38	16	4	15	...	3	38	16.9	13.4	30.3
White Rock.....	20	22	42	16	18	7	1	...	42	17.65	16.63	34.28
William-street.....	533	405	938	479	187	75	89	108	938	360.6	268.6	629.2
Wingham.....	24	21	45	22	2	15	...	6	45	18.7	14.2	32.9
Winburndale.....	16	19	35	20	13	2	...	...	35	13.20	12.60	25.80
Wollongong.....	65	52	117	21	24	21	27	24	117	49.9	37.9	87.8
Woodburn.....	11	27	38	11	14	7	6	...	38	4.3	10.9	15.2
Woodford Dale.....	18	22	40	6	6	19	9	...	40	10.8	13.2	24
Wollombi.....	48	43	91	52	31	1	6	1	91	32.61	27.34	59.95
Wolumla, N. Do., S.....	25	23	48	13	34	1	...	...	48	13.90	13.40	27.30
Worragee.....	11	22	33	23	7	3	...	...	33	7.25	15.37	22.62
Worragee.....	18	10	28	9	...	11	5	3	28	11.3	7.3	18.6
Woola Woola.....	24	20	44	14	9	19	2	...	44	16.85	13.78	30.63
Yaypo.....	19	19	38	8	...	30	...	...	38	15.06	13.01	28.07
Young.....	48	26	74	22	19	11	18	4	74	34	17.12	51.12
GRAND TOTAL.....	13,544	11,315	24,859	10,713	4,397	3,584	3,742	2,423	24,859	9,491.104	7,538.738	17,029.842

APPENDIX B.

SCHEDULE of Applications for the establishment of Public Schools, received during the year 1868.

APPENDIX.

Place.	Distance of nearest School.	-Number of Children residing in the Locality.									Number of Children promised to attend.									Number of Parents or Guardians undertaking to send Children.						Council's Decision.
		Boys.	Girls.	Total.	C.E.	R.C.	Pres.	Wes.	Others	Total.	Boys.	Girls.	Total.	C.E.	R.C.	Pres.	Wes.	Others	Total.	C.E.	R.C.	Pres.	Wes.	Others	Total.	
Bobundarah	24	8	6	14	...	...	...	...	...	...	14	10	24	16	4	4	...	...	24	4	1	1	...	...	6	Declined.
Bowling Alley Point	6	35	40	75	45	16	11	...	3	75	37	38	75	43	16	13	...	3	75	12	6	5	...	1	24	Agreed to.
Broken Back	4	32	43	75	20	...	...	55	...	75	24	29	53	11	...	...	42	...	53	4	...	...	14	...	18	Agreed to.
Bulga	9	9	17	26	19	2	...	5	...	26	9	14	23	16	2	...	5	...	23	7	1	...	1	...	9	Declined.
Bulhi	1 1/2	43	59	102	35	12	11	44	...	102	56	46	102	35	12	11	44	...	102	14	5	4	16	...	39	Agreed to.
Burkeville	10	31	23	54	36	1	14	...	3	54	29	24	53	36	1	14	...	2	53	11	1	5	...	1	18	Agreed to.
Burrowa	...	81	61	142	...	...	...	...	...	...	53	27	80	71	2	...	4	3	80	25	1	...	2	2	30	Agreed to.
Coldstream	5	21	14	35	26	2	7	...	...	35	18	12	30	24	...	6	...	30	7	...	2	...	...	9	Declined.	
Coonamble	120	20	20	40	12	16	3	4	5	40	20	16	36	19	17	...	...	36	8	7	...	...	...	15	Agreed to.	
Cudgegong	12	34	29	63	43	20	...	...	...	63	21	12	33	25	8	...	...	33	8	2	...	...	...	10	Agreed to.	
Cumingar	4	18	20	38	16	18	4	...	...	38	17	25	42	13	23	3	3	...	42	4	10	1	1	...	16	Agreed to.
Currajong	25	13	15	28	8	3	...	17	...	28	13	8	21	8	5	...	8	...	21	2	2	...	3	...	7	Agreed to.
Currawang	3	50	62	112	14	30	...	40	4	88	50	38	88	14	28	...	39	7	88	6	9	...	15	2	32	Agreed to.
Dundas	2	...	...	400	...	...	...	...	...	...	36	33	69	38	...	15	13	3	69	14	...	4	3	2	23	Agreed to.
Dural	7	...	...	...	...	...	...	...	...	...	28	20	48	18	...	...	30	...	48	5	...	...	8	...	13	Agreed to.
Eglinton	2 1/2	39	37	76	36	24	6	...	10	76	17	18	35	13	16	...	...	35	6	4	...	...	2	...	12	Agreed to.
Ellalong	8	29	21	50	37	5	6	2	...	50	28	19	47	41	3	2	1	...	47	17	1	1	1	...	20	Agreed to.
Gulgong	...	25	27	52	36	11	1	4	...	52	18	15	33	25	3	1	4	...	33	9	3	1	1	...	14	Agreed to.
Gundaroo	4	17	11	28	13	9	3	...	3	28	24	17	41	21	14	3	...	3	41	8	6	1	...	1	16	Agreed to.
Gundurimba	4	29	33	62	24	19	10	3	6	62	17	12	29	10	5	10	...	4	29	4	3	4	...	2	13	Agreed to.
Guyong	6	38	29	67	37	26	4	...	...	67	36	31	67	38	25	4	...	...	67	12	7	2	...	...	21	Under consideration.
Hay	80	46	41	87	50	22	7	...	8	87	47	40	87	50	22	7	...	8	87	17	7	4	...	3	51	Agreed to.
Hartley	...	18	19	37	16	15	6	...	...	37	9	9	18	12	...	6	...	...	18	6	...	2	...	...	8	Declined.
Hill End	3	56	64	120	73	14	15	5	13	120	28	29	57	38	...	14	2	3	57	13	...	5	1	1	20	Agreed to.
Jamison-street	...	...	...	...	...	...	...	...	...	...	29	23	52	7	...	44	...	1	52	5	...	22	...	1	28	Agreed to.
Jembaicumbene	...	60	100	160	60	65	5	20	10	160	28	27	55	40	4	2	7	2	55	13	2	1	2	1	19	Agreed to.
Kangaroo Valley	8	14	24	38	31	7	...	...	...	38	13	25	38	31	7	...	...	...	38	12	4	...	...	...	16	Agreed to.
Kiora	...	36	39	75	32	11	11	21	...	75	16	11	27	6	...	...	21	...	27	2	...	...	8	...	10	Agreed to.
Kyla	4	20	20	40	40	...	...	...	...	40	18	17	35	28	2	...	...	5	35	13	1	...	...	1	15	Under consideration.
Lane Cove Road	1	40	40	80	59	21	...	...	...	80	34	15	49	38	4	...	...	7	49	14	2	...	...	2	18	Under consideration.
Loowée	12	15	10	25	23	2	...	...	...	25	23	14	37	35	2	...	...	...	37	14	2	...	...	...	16	Declined.
Menindie	200	25	12	37	18	14	1	4	...	37	21	16	37	23	13	1	...	...	37	9	6	1	...	...	16	Agreed to.
Mittagong, Lower	3	41	27	68	43	21	4	...	...	68	21	16	37	20	13	4	...	...	37	11	6	1	...	...	18	Declined.
Mount Vittoria	6	26	23	49	29	12	8	...	...	49	19	18	37	29	...	8	...	...	37	14	...	5	...	...	19	Agreed to.
Mudmelong	5	35	41	76	55	7	9	...	5	76	29	23	52	40	7	...	5	...	52	15	3	...	...	1	19	Under consideration.
Murrumbatman	11	15	18	33	10	...	18	5	...	33	19	11	30	11	...	15	4	...	30	5	...	6	3	...	14	Declined.
Nimitybelle	...	19	12	31	5	23	3	...	...	31	19	13	32	5	24	3	...	...	32	4	12	2	...	...	18	Declined.
Rydal	5	36	30	66	20	15	19	9	3	66	10	9	19	6	10	3	...	...	19	3	4	1	...	...	8	Agreed to.
Rylstone	11	22	39	61	18	18	7	18	...	61	24	38	62	18	18	7	19	...	62	7	5	2	6	...	20	Agreed to.
Saumarez Ponds	4	30	30	60	41	14	...	5	...	60	31	29	60	41	14	...	5	...	60	11	5	...	2	...	18	Under consideration.
Swan Creek	4	19	30	49	24	6	16	3	...	49	19	30	49	24	6	19	...	...	49	7	2	7	...	...	16	Under consideration.
Tarago	15	29	27	56	39	4	10	3	...	56	23	19	42	24	3	12	3	...	42	10	1	4	1	...	16	Under consideration.
Turon, Lower	8	26	17	43	24	19	...	...	...	43	25	14	39	18	21	...	...	...	39	6	7	...	...	...	13	Declined.
Violet Dale	2 1/2	28	24	52	23	10	18	...	1	52	30	23	53	21	11	20	...	1	53	7	3	6	...	1	17	Agreed to.
Wallaby Hill	27	23	16	39	23	...	16	...	...	39	17	8	25	15	...	10	...	...	25	7	...	3	...	...	10	Under consideration.
Windsor	...	250	250	500	...	...	...	...	...	...	92	80	172	88	3	21	43	17	172	35	1	8	11	5	60	Agreed to.
Wolumla, South	6	25	37	62	39	19	4	...	...	62	19	24	43	25	14	4	...	...	43	11	5	2	...	...	18	Agreed to.
Woollahra	1	26	16	42	8	...	2	32	...	42	26	16	42	8	...	2	32	...	42	3	...	...	1	15	19	Declined.
Total	...	1552	1573	3525	1260	553	257	269	106	2445	1254	1061	2315	1236	382	286	299	112	2315	461	147	113	100	44	865	

APPENDIX C.

RETURN of the Attendance of Children at the Provisional Schools of New South Wales, as certified by the Local Committees, for the Quarter ending 31st December of the year 1868, or for the last Quarter in which the Schools were in operation respectively.

Name of School. I.	Number of Children on Rolls.									Average Weekly Attendance.		
	Boys. II.	Girls. III.	Total. IV.	Church of England V.	Roman Catholic VI.	Presby- terians. VII.	Wesley- ans. VIII.	Others. IX.	Total. X.	Boys. XI.	Girls. XII.	Total. XIII.
Ashford	8	12	20	9	5	3	3	...	20	6·9	8·0	14·9
Bamarang	19	19	38	29	4	1	4	...	38	12·4	11·3	23·7
Baulkham Hills	13	13	26	19	5	2	...	...	26	10·	12·	22·
Bangalore	7	11	18	6	...	5	7	...	18	5·91	9·20	15·11
Bergalia	14	19	33	11	16	6	...	...	33	6·92	12·47	19·39
Bomaderry	19	28	47	14	27	3	3	...	47	13·8	22·2	36·
Botany Heads	13	8	21	13	5	...	...	3	21	12·	7·6	19·6
Bourke	9	15	24	10	14	...	...	...	24	4·8	7·8	12·6
Breadalbane	18	13	31	5	26	...	...	...	31	6·93	5·87	12·80
Broughton Vale	13	14	27	19	4	1	3	...	27	11·	12·	23·
Broughton Village	17	17	34	21	6	3	4	...	34	11·2	14·3	25·5
Brownlow Hill	22	18	40	11	10	3	10	6	40	10·3	8·2	18·5
Brungle	8	10	18	2	5	11	...	...	18	5·40	8·20	13·60
Brush Grove	14	17	31	12	11	8	...	...	31	10·8	12·2	23·
Bulga	10	17	27	19	3	...	5	...	27	5·46	12·04	17·50
Bundarra	6	15	21	19	2	...	...	...	21	9·9	11·3	21·2
Bungendore	13	9	22	14	...	4	4	...	22	10·86	7·35	18·21
Bungonia	14	16	30	3	27	...	...	...	30	10·26	10·95	21·21
Burrier	18	10	28	5	3	20	...	...	28	9·6	5·	14·6
Campbell's River	11	9	20	9	8	3	...	...	20	6·25	7·35	13·60
Canoblas	12	12	24	18	2	1	3	...	24	9·6	8·5	18·1
Colo Upper	6	4	10	10	...	...	...	...	10	4·1	3·6	7·7·
Colendina	7	8	15	15	...	...	...	...	15	5·50	6·	11·50
Colville	19	12	31	13	6	12	...	...	31	14·	7·3	21·3
Condobolin	11	14	25	9	13	3	...	...	25	8·60	10·80	19·40
Coolah	17	15	32	12	12	7	...	1	32	11·2	8·2	19·4
Coraki	9	13	22	9	8	1	4	...	22	6·	8·9	14·9
Cordeaux River	11	11	22	7	15	...	...	...	22	8·6	9·9	18·5
Crowther	8	10	18	11	7	...	...	...	18	4·55	6·26	10·81
Darkwater Creek	14	12	26	16	7	...	3	...	26	8·7	6·9	15·6
Fitzgerald Valley	10	5	15	9	1	5	...	...	15	7·20	3·00	10·20
Five Islands	8	12	20	9	8	3	...	...	20	4·61	7·85	12·46
Grabben Gullen	17	19	36	...	36	...	...	...	36	11·75	14·48	26·23
Gresford	18	16	34	11	5	...	18	...	34	10·6	10·1	20·7
Gundaroo	22	15	37	33	4	...	...	...	37	15·30	12·02	27·32
Gilmore, Upper	14	13	27	12	15	...	...	...	27	10·	11·	21·
Huntingdon	10	14	24	9	5	10	...	...	24	2·3	6·8	9·1
Ironbark	16	22	38	23	12	...	...	3	38	12·40	17·40	29·80
Jannung	8	14	22	8	6	3	...	5	22	7·2	10·1	17·3
Karuah Flat	14	8	22	14	1	7	...	...	22	10·15	5·70	15·85
Kayuga	17	16	33	4	...	...	2	27	33	11·4	12·2	23·6
Kenny's Point	15	16	31	1	27	...	3	...	31	13·95	12·90	26·85
Kentucky	9	17	26	9	12	5	...	...	26	6·3	9·9	16·2
Kiandra	22	17	39	22	17	...	...	...	39	16·20	11·20	27·40
Killenamella	18	25	43	...	43	...	...	...	43	13·42	15·83	29·25
Laggan	12	19	31	13	15	3	...	...	31	8·	12·	20·
Lawrence	17	8	25	10	3	12	...	...	25	13·8	5·9	19·7
Mangrove, Lower	12	9	21	16	5	...	...	...	21	10·16	8·58	18·74
M'Kenzie's Creek	16	18	34	...	23	...	11	...	34	6·80	6·00	12·80
Michalago	20	14	34	3	28	...	3	...	34	16·17	11·51	27·68
Millfield	20	16	36	32	3	...	1	...	36	13·	8·9	21·9
M'Donald River	5	15	20	18	1	...	1	...	20	5·	14·2	19·2

APPENDIX C—continued.

Name of School. I.	Number of Children on Rolls.									Average Weekly Attendance.		
	Boys. II.	Girls. III.	Total. IV.	Church of England V.	Roman Catholic VI.	Presby- terians. VII.	Wesley- ans. VIII.	Others. IX.	Total. X.	Boys. XI.	Girls. XII.	Total. XIII.
Merrendee	10	20	30	19	11	...	...	...	30	8·70	14·30	23·00
Macquarie Plains.....	13	8	21	14	2	...	5	...	21	8·90	5·30	14·20
Moorfields.....	10	13	23	11	1	3	8	...	23	7·	9·	16·
Moorwatha	19	6	25	8	7	8	...	2	25	11·58	3·34	14·92
Mount Wills.....	15	18	33	17	6	6	4	...	33	10·2	12·8	23
Mountain Run.....	10	6	16	6	10	...	...	...	16	4·1	2·9	7
Mulwala	10	17	27	12	15	...	...	...	27	7·80	11·40	19·20
Mummell	19	13	32	...	32	...	...	...	32	12·10	10·	22·10
Mundorama Ponds ...	10	5	15	7	1	4	...	3	15	6·05	2·37	8·42
Munmurrabrook	9	14	23	21	2	...	...	...	23	6·95	11·38	18·33
Murrygon	8	13	21	...	...	21	...	...	21	7·2	12·5	19·7
Newington	18	14	32	18	7	2	5	...	32	15·2	8·5	23·7
Newstead	4	13	17	4	...	10	3	...	17	2·50	8·80	11·30
North Rocks.....	9	17	26	19	7	...	...	...	26	5·5	9·7	15·2
Nowendoc.....	10	7	17	11	...	6	...	...	17	8·2	6·6	14·8
Nowra Hill	17	8	25	13	12	...	...	...	25	10·8	6·	16·8
Nubrygyn	6	6	12	11	1	...	...	...	12	5·48	4·08	9·56
Portland Head.....	5	11	16	8	...	...	8	...	16	4·	7·7	11·7
Quorribolong	21	14	35	16	19	...	...	...	35	14·4	10·7	25·1
Redbank	16	12	28	5	4	...	19	...	28	9·5	8·7	18·2
Red Ground	14	20	34	...	34	...	...	...	34	10·32	17·25	27·57
Regentville	6	16	22	7	5	1	8	1	22	3·7	11·3	15·
Rosebrook.....	21	13	34	6	28	...	...	...	34	11·5	9·6	21·1
Rose Hill	14	15	29	18	7	4	...	...	29	13·	11·8	24·8
Rydal	21	21	42	22	14	6	...	...	42	15·	15·70	30·70
Sackville Reach	17	19	36	25	...	2	9	...	36	11·3	13·8	25·1
Saggart Field	10	23	33	6	20	2	5	...	33	8·	16·	24·
Shancamore	16	11	27	12	15	...	...	...	27	8·3	7·	15·3
Six-mile Flat	13	14	27	4	18	4	1	...	27	9·58	11·67	21·25
Sodwalls	22	26	48	19	22	7	...	...	48	8·53	8·11	16·64
Somerville.....	13	11	24	3	21	...	...	...	24	7·5	8·5	16·
South Apsley	13	7	20	14	5	...	...	1	20	4·58	3·40	7·98
Spring Valley	20	22	42	1	41	...	...	...	42	12·	11·50	23·50
Stony Creek	19	17	36	29	3	...	...	4	36	8·25	6·87	15·12
Tarago	21	23	44	28	3	10	3	...	44	14·40	16·50	30·90
Taralla	7	10	17	13	...	...	4	...	17	5·07	6·54	11·61
Ten-mile Creek	11	11	22	5	10	6	1	...	22	11·	11·	22·
Theresa Park	15	12	27	20	1	6	...	...	27	8·8	8·7	17·5
Turee Creek	15	10	25	12	7	1	5	...	25	8·5	6·3	14·8
Tynedale	5	12	17	11	...	...	6	...	17	4·	10·	14·
Underbank	10	12	22	6	4	5	7	...	22	7·1	7·	14·1
Urana	13	8	21	18	3	...	...	...	21	6·50	2·10	8·60
Vittoria.....	12	11	23	...	23	...	...	...	23	6·50	5·20	11·70
Wardell	7	9	16	8	6	2	...	...	16	4·7	6·3	11·
Warwick	11	12	23	6	17	...	...	...	23	7·5	6·2	13·7
Wiseman's Creek ...	15	18	33	...	28	5	...	...	33	9·80	11·50	21·30
Wombat	17	14	31	14	10	5	...	2	31	12·	10·	22·
Woodford Park	6	14	20	...	3	17	...	...	20	6·	14·	20·
Wright's Creek	11	5	16	9	2	...	5	...	16	10·	4·3	14·3
Yamba	4	6	10	10	...	...	...	...	10	4·	6·	10·
Yetman	6	12	18	10	7	1	...	...	18	5·6	7·1	12·7
TOTAL	1,344	1,398	2,742	1,182	1,015	289	198	58	2,742	916·44	966·57	1883·01

APPENDIX D.

SCHEDULE of Applications for the establishment of Provisional Schools, received during the Year 1868.

Name of Place.	Distance of nearest School.	Number of Children residing in the Locality.								Number of Children promised to attend.								Number of Parents or Guardians undertaking to send Children.						Council's Decision.		
		Boys.	Girls.	Total.	C.E.	R.C.	Pres.	Wes.	Others	Total.	Boys.	Girls.	Total.	C.E.	R.C.	Pres.	Wes.	Others	Total.	C.E.	R.C.	Pres.	Wes.		Others	Total.
Adelong Crossing	Miles. 4	21	8	29	18	5	4	2	...	29	12	7	19	12	2	3	2	...	19	7	1	1	2	...	11	Agreed to.
Bamarang	4	17	16	33	16	5	2	10	...	33	11	12	23	16	5	2	...	23	4	2	1	...	...	7	Agreed to.	
Bangalore	4	19	27	46	14	15	9	8	...	46	7	14	21	8	...	6	7	...	21	3	...	3	3	...	9	Agreed to.
Barraba	42	...	...	...	...	...	...	...	...	...	22	19	41	19	10	12	...	...	41	5	3	3	...	...	11	Under consideration.
Baulkham Hills	2	49	56	105	54	25	...	26	...	105	15	12	27	19	4	...	4	...	27	9	2	...	2	...	13	Agreed to.
Boduldura Creek	2½	16	16	32	31	1	...	...	...	32	9	13	22	21	1	...	...	...	22	9	1	...	...	...	10	Under consideration.
Botany Heads	5	20	19	39	32	4	...	...	3	39	16	11	27	19	5	...	...	3	27	7	1	...	2	...	10	Agreed to.
Breadalbane	16	14	15	29	7	22	...	...	...	29	20	17	37	7	30	...	...	...	37	6	12	...	...	...	18	Agreed to.
Brook's Point	4	15	11	26	...	26	...	...	...	26	15	11	26	...	26	...	...	...	26	...	4	...	...	...	4	Agreed to.
Brownlow Hill	3	65	52	117	23	37	9	41	7	117	13	11	24	6	5	...	7	6	24	3	1	...	2	2	8	Agreed to.
Brungle	12	6	9	15	...	5	10	...	...	15	9	11	20	2	6	12	...	...	20	1	2	5	...	...	8	Agreed to.
Bulga, The	13	10	17	27	17	5	...	5	...	27	9	11	20	11	4	...	5	...	20	3	2	...	1	...	6	Agreed to.
Bungendore	...	30	35	65	15	42	4	4	...	65	11	9	20	12	...	4	4	...	20	5	...	1	1	...	7	Agreed to.
Bungonia	9	17	20	37	3	34	...	...	...	37	15	18	33	3	30	...	...	...	33	1	9	...	...	...	10	Agreed to.
Calabash Creek	7	13	10	23	7	16	...	...	...	23	11	4	15	4	11	...	...	...	15	1	7	...	...	...	8	Under consideration.
Campbell's River	6	...	...	...	6	8	...	4	...	18	9	9	18	6	8	...	...	...	18	2	5	...	1	...	8	Agreed to.
Carroll	12	15	16	31	25	3	...	3	...	31	15	16	31	25	3	...	3	...	31	7	1	...	2	...	10	Under consideration.
Collondina	10	8	11	19	16	...	...	3	...	19	11	8	19	16	...	...	3	...	19	4	...	...	1	...	5	Agreed to.
Coolah	8	12	14	26	10	9	7	...	...	26	12	10	22	5	10	7	...	...	22	3	4	2	...	...	9	Agreed to.
Coombing Creek	4	12	23	35	8	10	11	6	...	35	8	17	25	6	7	7	5	...	25	2	3	2	2	...	9	Under consideration.
Cordeaux River	5	16	11	27	7	15	...	5	...	27	17	10	27	7	15	...	5	...	27	3	4	...	1	...	8	Agreed to.
Fish River Creek	6	7	9	16	...	16	...	...	...	16	8	8	16	...	16	...	...	...	16	...	8	...	...	...	8	Agreed to.
Fitzgerald's Valley	9	15	13	28	15	1	9	3	...	28	12	6	18	9	1	8	...	...	18	2	1	2	...	...	5	Agreed to.
Gladesville	2	23	19	42	32	2	4	3	1	42	24	18	42	32	2	4	3	1	42	14	1	2	1	1	19	Declined.
Goonoo Goonoo	15	2	5	7	...	...	...	...	...	7	7	4	11	8	3	...	...	...	11	4	1	...	...	...	5	Declined.
Grabben Gullen	5	18	14	32	...	32	...	...	...	32	22	19	41	...	41	...	...	...	41	...	11	...	...	...	11	Agreed to.
Gresford	11	...	...	...	...	...	...	...	...	...	26	21	47	36	11	...	...	...	47	14	4	...	...	...	18	Agreed to.
Gulgong	7	25	26	51	30	13	4	4	...	51	17	11	28	28	...	...	...	...	28	10	...	...	...	...	10	Agreed to.
Gundaroo	15	22	16	38	33	5	...	...	...	38	17	15	32	24	8	...	...	...	32	9	2	...	...	...	11	Agreed to.
Hill End	3	53	60	113	69	14	15	4	11	113	28	29	57	38	...	14	2	3	57	13	...	5	1	1	20	Declined.
Holdsworthy	1¼	14	18	32	29	2	1	...	...	32	14	18	32	29	2	1	...	...	32	11	1	1	...	...	13	Declined.
Iford	12	15	22	37	15	15	...	7	...	37	11	11	22	3	15	...	4	...	22	2	5	...	2	...	9	Under consideration.
Jereelderie	36	15	9	24	11	6	4	3	...	24	14	6	20	14	6	...	...	...	20	4	3	...	...	...	7	Under consideration.
Karuah Flat	4½	18	6	24	17	4	3	...	...	24	19	5	24	17	4	3	...	...	24	6	2	1	...	...	9	Agreed to.
Kentucky	8	10	16	26	6	13	7	...	...	26	9	13	22	6	9	7	...	...	22	2	4	2	...	...	8	Agreed to.
Kiandra	60	11	22	33	22	7	...	4	...	33	16	7	23	15	4	...	4	...	23	5	1	...	...	1	7	Agreed to.
Kilenamella	15	20	15	35	...	35	...	...	...	35	25	24	49	...	49	...	...	...	49	...	15	...	...	...	15	Agreed to.
Kimbrika	5	22	22	44	...	...	...	...	...	...	12	13	25	4	...	15	4	2	25	1	...	4	1	1	7	Declined.
Limestone Creek	40	13	10	23	13	...	10	...	...	23	10	6	16	8	...	8	...	...	16	4	...	2	...	...	6	Under consideration.
Macquarie Plains	3½	16	10	26	19	1	...	6	...	26	12	6	18	12	1	...	5	...	18	4	1	...	2	...	7	Agreed to.
Major's Plains	8	9	11	20	12	...	8	...	...	20	8	10	18	15	...	3	...	...	18	6	...	1	...	...	7	Agreed to.
Mangrove, Lower	...	13	12	25	20	5	...	...	...	25	13	12	25	20	5	...	...	...	25	7	1	...	...	...	8	Agreed to.
M'Donald River	4	7	14	21	14	6	...	1	...	21	7	14	21	14	6	...	1	...	21	6	1	...	1	...	8	Agreed to.
M'Kenzie's Creek	4	18	21	40	2	25	...	13	...	40	17	21	38	2	25	...	11	...	38	1	8	...	3	...	12	Agreed to.
Merrondee	22	18	24	42	33	9	...	...	...	42	10	16	26	20	6	...	...	...	26	8	3	...	...	...	11	Agreed to.

APPENDIX D—continued.

Name of Place.	Distance of nearest School.	Number of Children residing in the Locality.								Number of Children promised to attend.								Number of Parents or Guardians undertaking to send children.						Council's Decision.			
		Boys.	Girls.	Total.	C.E.	R.C.	Pres.	Wes.	Others.	Total.	Boys.	Girls.	Total.	C.E.	R.C.	Pres.	Wes.	Others.	Total.	C.E.	R.C.	Pres.	Wes.		Others.	Total.	
Michelago	27	19	17	36	...	33	...	3	...	36	26	19	45	5	37	...	3	...	45	2	12	...	1	...	15	Agreed to.	
Millfield	5	28	29	57	52	3	...	2	...	57	19	24	43	43	...	...	...	...	43	13	...	...	...	...	13	Agreed to.
Moonan Brook	30	11	14	25	18	1	6	...	...	25	8	9	17	13	1	3	...	...	17	6	1	1	...	...	8	Under consideration.
Moorwatha	6½	24	15	39	18	2	14	3	2	39	15	6	21	9	3	9	...	...	21	5	2	2	...	...	9	Agreed to.
Mount Pleasant	3	34	17	51	26	6	16	3	...	51	13	10	23	16	2	2	3	...	23	6	1	1	1	...	9	Agreed to.	
Mount Wills	5	14	14	28	22	2	2	2	...	28	13	10	23	18	2	2	1	...	23	7	1	1	1	...	10	Agreed to.	
Mulwala	24	21	17	38	17	16	5	...	...	38	8	16	24	12	12	...	...	...	24	5	3	...	...	...	8	Agreed to.
Mummell	13	25	14	39	...	39	...	...	...	39	19	13	32	...	32	...	...	...	32	...	9	...	...	...	9	Agreed to.
Mundurama Ponds	9	15	10	25	13	5	5	...	2	25	9	10	19	9	...	5	...	5	19	3	...	1	...	3	7	Agreed to.	
Munmurra Brook	8	12	17	29	27	2	...	...	...	29	12	16	28	26	2	...	...	...	28	8	1	...	...	...	9	Agreed to.
Muscle Creek	...	31	22	53	31	16	6	...	...	53	19	13	32	13	13	6	...	...	32	5	7	2	...	...	14	Declined.
Mutton's Falls	7	30	27	57	28	29	...	...	...	57	8	16	24	...	24	...	...	...	24	...	8	...	...	...	8	Declined.
Newstead	6	10	20	30	15	1	11	3	...	30	3	11	14	2	...	9	3	...	14	1	...	4	1	...	6	Declined.	
North Rocks	5	12	16	28	21	7	...	...	...	28	9	17	26	19	7	...	...	...	26	6	3	...	...	...	9	Agreed to.
Nowendoc	50	12	11	23	11	...	12	...	...	23	11	9	20	11	...	9	...	...	20	4	...	2	...	...	6	Agreed to.
Nubrygyn	8½	9	8	17	14	3	...	...	...	17	7	6	13	10	3	...	...	...	13	4	3	...	...	...	7	Agreed to.
Parlour Creek	4	17	19	36	14	22	...	...	...	36	17	19	36	13	22	...	1	...	36	2	5	1	...	...	8	Declined.
Quorrobolong	5	19	15	34	17	...	...	...	...	34	19	15	34	17	17	...	...	...	34	10	5	...	...	...	15	Agreed to.
Regentville	3	21	28	49	9	22	6	12	...	49	10	20	30	9	4	5	12	...	30	4	2	2	5	...	13	Agreed to.	
Red Ground	6	14	13	27	...	27	...	...	...	27	13	14	27	...	27	...	...	...	27	...	7	...	...	...	7	Agreed to.
Rocky Mouth	8	15	15	30	12	6	12	...	...	30	16	14	30	12	6	12	...	...	30	4	2	4	...	...	10	Under consideration.
Rydal	8	27	29	56	32	17	5	...	2	56	10	9	19	6	10	3	...	...	19	3	4	1	...	...	8	Agreed to.
Rydal—No. 6 Section	6	4	17	21	15	6	...	...	...	21	4	17	21	15	6	...	...	...	21	8	5	...	...	...	13	Declined.
Sackville Reach	4	35	26	61	37	5	2	17	...	61	13	5	18	11	...	1	6	...	18	5	...	1	1	...	7	Agreed to.	
Sanérox	7½	22	15	37	16	10	6	5	...	37	12	10	22	7	7	8	...	...	22	3	2	3	...	...	8	Under consideration.
Sherwood	2½	13	19	32	12	9	6	...	5	32	10	14	24	15	3	6	...	...	24	5	2	1	...	...	8	Under consideration.
Six-mile Flat	6	17	15	32	6	26	32	Agreed to.
Sodwalls	9	19	12	31	3	26	2	...	...	31	16	9	25	3	20	2	...	...	25	2	9	1	...	...	12	Agreed to.
Spring Valley	7	24	31	55	2	48	...	5	...	55	20	24	44	...	44	...	...	...	44	...	14	...	...	...	14	Agreed to.
Stony Creek	4	44	25	69	60	3	...	...	6	69	26	17	43	37	...	...	...	6	43	11	...	...	...	2	13	Agreed to.
Summerville	6	15	14	29	10	19	...	...	...	29	17	14	31	10	21	...	...	...	31	2	4	...	...	...	6	Agreed to.
Swallow's Nest	8	16	14	30	8	15	3	...	...	30	15	13	28	6	11	10	1	...	28	2	6	4	1	...	13	Under consideration.
Tarago	15	31	32	63	48	5	7	3	...	63	18	7	25	17	4	1	3	...	25	7	2	1	1	...	11	Agreed to.	
Teesdale	3½	9	12	21	5	5	2	9	...	21	10	7	17	7	4	2	4	...	17	2	2	1	1	...	6	Declined.	
Ten-mile Creek	25	9	12	21	5	11	4	1	...	21	9	12	21	5	11	4	1	...	21	2	6	1	1	...	10	Under consideration.	
Teremiah	7	14	9	23	7	16	...	...	...	23	14	9	23	7	16	...	...	...	23	2	5	...	...	...	7	Under consideration.
Theresa Park	3	39	23	62	54	8	...	...	...	62	19	11	30	27	3	...	...	...	30	9	1	...	...	...	10	Agreed to.
Three-mile Rush	3	25	10	35	14	10	4	4	3	35	21	7	28	9	8	3	5	3	28	4	3	1	1	2	11	Agreed to.	
Tuena	24	17	23	40	26	11	...	3	...	40	9	17	26	13	12	...	1	...	26	6	6	...	1	...	13	Agreed to.	
Turee Creek	12	15	10	25	11	6	3	5	...	25	15	7	22	12	3	3	4	...	22	5	1	1	1	...	8	Agreed to.	
Tynedale	4	14	19	33	21	6	...	6	...	33	15	18	33	21	6	...	6	...	33	7	1	...	2	...	10	Agreed to.	
View Hill	2	20	25	45	32	11	2	...	...	45	7	17	24	20	2	2	...	...	24	4	1	1	...	...	6	Declined.
Vittoria	5	11	9	20	3	17	...	...	...	20	13	13	26	4	22	...	...	...	26	2	8	...	...	...	10	Agreed to.
Warwick	4	20	14	34	3	31	...	...	...	34	9	13	22	3	19	...	...	...	22	1	7	...	...	...	8	Agreed to.
Wiscman's Creek	7	12	15	27	2	15	6	2	2	27	10	11	21	2	13	6	...	...	21	1	3	1	...	...	5	Agreed to.
Wright's Creek	4	11	6	17	10	2	...	5	...	17	10	5	15	8	2	...	5	...	15	2	1	...	1	...	4	Agreed to.	
Yaamba	8	5	7	12	12	...	...	...	...	12	5	7	12	12	...	...	...	...	12	3	...	...	...	...	3	Agreed to.
Total	...	1640	1582	3222	1527	1084	280	257	48	3196	1226	1143	2369	1112	857	229	188	33	2369	411	302	77	49	15	854		

APPENDIX.

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APPENDIX E.

RETURN of the Attendance of Children at the Half-time Schools of New South Wales, as certified by the Local Committees, for the Quarter ending 31st December of the Year 1868, or for the last Quarter in which the Schools were in operation, respectively.

Name of School. I.	Number of Children on Rolls.									Average Weekly Attendance.		
	Boys.	Girls.	Total.	Church of England	Roman Catholic	Presbyterians.	Wesleyans.	Others.	Total.	Boys.	Girls.	Total.
	II.	III.	IV.	V.	VI.	VII.	VIII.	IX.	X.	XI.	XII.	XIII.
Ballalaba	25	34	59	33	14	12	...	...	59	16-90	22-40	39-30
Bolong	12	13	25	16	5	4	...	...	25	9-40	11-30	20-70
Bullamalita	14	21	35	25	10	...	...	...	35	8-13	16-68	24-81
Burra Burra	11	13	24	6	13	...	5	...	24	9-50	12-20	21-70
Burraborang	14	26	40	4	36	...	...	...	40	6-50	11-70	18-20
Carwoola	28	14	42	22	13	2	5	...	42	16-60	9-70	26-30
Cobbora	7	6	13	13	...	...	...	...	13	5-95	4-65	10-60
Crookwell	12	8	20	15	...	...	5	...	20	6-00	5-10	11-10
Fairfield	9	9	18	4	14	...	...	...	18	2-76	2-26	5-02
Harold's Cross	12	17	29	5	20	3	I	...	29	10-20	16-10	26-30
Jamboye	16	23	39	10	26	...	...	3	39	10-65	15-08	25-73
Jingera N.	21	20	41	28	9	4	...	...	41	11-90	14-80	26-70
Neriga	28	20	48	6	42	...	...	...	48	11-18	7-00	18-18
Norongo	19	12	31	19	12	...	...	...	31	16-00	11-20	27-20
Oranmeir	14	13	27	10	17	...	...	...	27	19-08	17-33	36-41
Richlands	8	8	16	12	...	4	...	...	16	6-10	5-70	11-80
Rock View	12	22	34	4	25	...	...	5	34	9-00	13-30	22-30
Wyndham	17	5	22	9	6	7	...	...	22	13-20	4-80	18-00
Wheeny Creek	5	7	12	7	5	...	...	...	12	2-90	3-80	6-70
GRAND TOTAL ...	284	291	575	248	267	36	16	8	575	191-95	205-10	397-05

APPENDIX F.

SCHEDULE of Applications for the Establishment of Half-time Schools, received during the Year 1868.

Name of Place.	Distance of nearest School.	Number of Children residing in the Locality.									Number of Children promised to attend.									Number of Parents or Guardians undertaking to send Children.						Council's Decision.
		Boys.	Girls.	Total.	C.E.	R.C.	Pres.	Wes.	Others	Total.	Boys.	Girls.	Total.	C.E.	R.C.	Pres.	Wes.	Others	Total.	C.E.	R.C.	Pres.	Wes.	Others	Total.	
Adaminaby and	Miles. 15	20	35	17	14	4	...	...	35	2	8	10	10	...	...	...	...	10	5	...	...	...	...	5	Under consideration.
Boconnoc	...	...	...	...	...	...	...	...	...	5	5	10	5	4	1	...	...	10	3	1	1	...	...	5	Agreed to.
Barrett's Creek and	31	8	11	11	...	...	...	...	11	8	3	11	11	...	...	...	...	11	2	...	...	...	...	2	Agreed to.
Coaldale	...	4	9	9	...	...	...	...	9	5	4	9	9	...	...	...	...	9	2	...	...	...	...	2	Agreed to.
Bolong and	15	12	30	20	6	2	2	...	30	7	9	16	12	2	2	...	...	16	5	1	1	...	...	7	Agreed to.
Cook's Vale Creek	...	10	16	26	16	10	...	...	26	11	4	15	7	8	...	...	...	15	3	2	...	...	...	5	Agreed to.
Burra Burra and	3½	7	14	...	8	...	6	...	14	7	7	14	...	8	...	6	...	14	...	3	...	1	...	4	Agreed to.	
Snaphook	...	8	6	14	6	6	2	...	14	9	5	14	6	6	2	...	...	14	2	2	1	...	...	5	Agreed to.
Colo Upper and	15	14	6	20	17	1	2	...	20	14	6	20	17	...	1	2	...	20	6	...	1	1	...	8	Agreed to.	
Colo	...	8	7	15	13	...	2	...	15	8	7	15	13	...	2	...	...	15	4	...	1	...	...	5	Under consideration.
Coolamatong and	25	...	...	20	...	...	...	...	...	10	3	13	8	5	...	...	...	13	3	2	...	...	...	5	Under consideration.
Jejedzrick	...	...	...	18	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Cottawallah and	...	14	12	26	...	...	...	...	...	14	14	28	9	11	...	...	8	28	3	3	...	...	2	8	Declined.
Middle Creek	...	15	12	27	...	...	...	...	...	16	2	18	18	...	...	...	...	18	6	...	...	...	...	6	Agreed to.
Crookwell and	12	14	21	35	24	...	...	11	35	11	9	20	15	...	5	...	...	20	5	...	...	3	...	8	Agreed to.
Laggan	...	18	22	40	28	8	...	4	40	7	13	20	16	...	...	4	...	20	3	...	...	1	...	4	Agreed to.
Harold's Cross and	7	6	8	14	7	Agreed to.
Vernelly	...	6	8	14	9	14	4	1	28	14	14	28	9	14	4	1	...	28	2	3	1	1	...	7	Agreed to.	
Hartley and	8	18	19	37	16	15	6	...	37	9	9	18	12	...	6	...	...	18	6	...	2	...	...	8	Agreed to.
Kanimbla	...	11	9	20	18	...	2	...	20	8	7	15	15	...	...	...	...	15	5	...	...	...	...	5	Agreed to.
Mona Vale and	12	16	13	29	19	10	...	...	29	9	11	20	20	...	...	...	...	20	5	...	...	...	...	5	Agreed to.
Barrenjoey	...	12	3	15	4	10	1	...	15	14	5	19	10	6	3	...	...	19	5	1	2	...	...	8	Agreed to.
Narriga and	...	...	...	...	...	...	...	...	...	13	12	25	9	16	...	...	...	25	4	4	...	...	...	8	Agreed to.
Corang	...	...	...	...	...	...	...	...	...	8	5	13	...	13	...	...	...	13	...	3	...	...	...	3	Agreed to.
Richlands and	6	13	12	25	15	2	8	...	25	10	8	18	11	2	5	...	...	18	2	1	1	...	...	4	Agreed to.
Yelbraith	8	21	12	33	13	...	20	...	33	12	9	21	5	...	16	...	...	21	2	...	3	...	...	5	Agreed to.
Roslyn and	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Woodhouselee	5	11	3	14	11	3	...	...	14	11	3	14	11	3	...	...	...	14	6	1	...	...	...	7	Declined.
Wolumba River, Upper	16	17	10	27	17	8	2	...	27	17	8	25	15	8	2	...	...	25	6	4	2	...	...	12	Agreed to.
Wolumba River, Lower	...	12	14	26	13	7	6	...	26	14	12	26	13	7	6	...	...	26	3	1	1	...	...	5	Agreed to.
Wyndham and	24	12	15	27	12	5	10	...	27	13	14	27	12	5	10	...	...	27	3	1	3	...	...	7	Agreed to.
Burragate	...	11	3	14	4	5	5	...	14	15	3	18	5	7	6	...	...	18	1	1	1	...	...	3	Agreed to.
TOTAL	...	313	284	635	312	131	75	11	15	544	301	219	520	303	125	66	14	12	520	102	34	21	6	3	166	

APPENDIX G.

LIST of Books sanctioned by the Council of Education for use in Public and Denominational Schools, in accordance with the requirements of Article 15, section II, of the Regulations of 27th February, 1867 :—

First Book of Lessons.....	} Published by the Board of National Education in Ireland.
Second Book of Lessons.....	
Sequel No. 1 to the Second Book of Lessons	
Sequel No. 2 to the Second Book of Lessons	
Third Book of Lessons	
Fourth Book of Lessons.....	
Supplement to the Fourth Book of Lessons	
Australian Class Book, parts 1, 2, and 3 ; published by J. J. Moore, Sydney.	
First English Reading Book (in three parts)	} "Constable's Series"; published by J. Laurie, Edinburgh.
Second English Reading Book	
Third English Reading Book.....	
Fourth English Reading Book	
Fifth English Reading Book	

APPENDIX H.

COUNCIL OF EDUCATION.—EXAMINATION PAPERS FOR THIRD CLASS CERTIFICATE.

GRAMMAR.

Three hours allowed for this paper.

*"Whatever blooms in torrid tracts appear
Whose bright succession decks the varied year
Whatever sweets salute the northern sky
With vernal lives that blossom but to die
These here disporting own the kindred soil
Nor ask luxuriance from the planter's toil
While sea-born gales their gelid wings expand
To winnow fragrance round the smiling land."*

- Punctuate the above passage.
- Arrange it in simple prose order.
- Paraphrase it.
- Parse the words in Italics.
- Analyse the last six lines.

ARITHMETIC.

*Three hours allowed for this paper. Female teachers are required to answer the first four questions only ;
Males, the last four.*

- Divide £909000919 11s. into 7777 equal portions.
- How many 5½d. are contained in 503,308,506,002, 27-shilling pieces?
- If 5 oz. and 13 dwts. cost £31 13s. 7½d., what shall I give for 276 lbs. 3 oz. 19 grains?
- What interest would £950 gain in 15 months, if £1,440 gain £60 in 10 months?
- One fifth of a day's work is valued at 6½ shillings, what is the value of $\frac{2}{3}$ of a year's service?

GEOGRAPHY.

Three hours allowed for this paper.

- Give a description of the Rivers of Asia.
- Give a full account of Belgium.
- Describe the culminating points of the New South Wales Ranges, and, in full detail, one section of the dividing chain.
- Give a geographical account of the following productions :—Coffee, Tea, Sugar, Cotton, Currants, Palm Oil, Camphor, Tapioca, Rhubarb.

SCHOOL MANAGEMENT.

Three hours allowed for this paper.

In the first three lines of your answer give Specimens of the Copylines you employ.

- What lessons are best adapted for open classes, a gallery, or regularly arranged desks?
- Describe the appliances you would require and use for teaching children Monosyllabic Reading?
- The ability to give a lesson attractively and fluently is not sufficient to constitute a good teacher.
- How may Simultaneous Teaching be profitably used, and how may it be abused?

SCHOOL BOOKS.

Three hours allowed for this paper. Answer four questions only.

- Describe the contents of the Preface to the Australian Class Book No. 1.
- What errors do you discover in the Lesson—"The Four Points of the Sky," in the Second Book? How would you rectify them?

3. What is stated under the head of "Privations and Natural Defects." Sequel No. 2?
4. Give the substance of the Lesson "Manufacture of Silk." Third Book.
5. What compound words are used in the First Book I.N.B.?

WRITING.

Two hours allowed for this paper.

1. Give specimens of the Copy lines you employ.
2. What characteristics of good writing should be constantly impressed upon children?
3. Shew, as for a Programme, the gradations of writing you would present to a Second Class in its first quarter.

DOMESTIC ECONOMY.

Three hours allowed for this paper.

1. What ready methods are there of purifying water?
2. How is it that Soap, a fatty substance, tends to remove grease stains from clothing?
3. How would you choose a carpet?
4. How should the air in a sick room be kept pure?

VOCAL MUSIC.—TONIC SOL-FA METHOD.

Two hours are allowed for this paper.

1. Why are certain tones of the Scale called *strong*, and others *weak*? By what other terms are the weak tones sometimes distinguished?
2. What is a Tetrachord? Describe the twofold arrangement of the Tetrachords of the Scale, as, *a.* Disjunct, and *b.* Conjunct.
3. In Curwen's "Standard Course" the sixth of the Major Scale is called **Lah**. It is considered preferable to call it **Lay**. State the advantages that are gained by this alteration.
4. Explain the following divisions of the pulse:—

- | | | |
|--------------|----------------|--------------------|
| 1. \| a . a | 2. \| a , a , a | 3. \| a . a . a , a |
| 4. \| a . , a | 5. \| a , a | 6. \| . a , a |
| 7. \| a . , a | 8. \| a , a | |

5. Correct the rhythm of the following tune:—

|	:	:	d	|	d	:	r	:	t	|	-d	:	r	:	m	|	m	:	f	;	m	|	-r	:	d	:	r	
|	d	:	t	:	d	||	:	s	:	s	|	s	:	s	:	-f	|	m	:	f	:	f	|	f	:	f	:	-m
|	r	:	m	:	f.m	|	r.d	:	m	:	-f	|	s	:	l.f	:	m	|	r	:	d	:	—	||				

DRAWING AND PERSPECTIVE.

Time allowed, two hours.

1. Name the different kinds of Drawing, and the uses to which they are applied.
2. Describe the proper position of the pupil for Drawing, and mode of holding the pencil.
3. Describe the use of construction lines.
4. Describe what is Aerial and what is Linear perspective.
5. In Linear perspective, what is the difference between Parallel and Angular perspective?
6. To what points do receding lines converge in both Parallel and Angular perspective?
7. Construct the Elementary Figure, and draw a square in Parallel perspective, marking all the lines and points with their initials.

EXAMINATION PAPERS FOR SECOND CLASS CERTIFICATE.

GRAMMAR.

Three hours allowed for this paper. Write down every question throughout, and give your answers in a full, clear hand.

[*Brother be warned and know that pride
How'er disguised in its own majesty
Is littleness that he who feels contempt
For any living thing hath faculties
Which he has never used The man whose eye
Is ever on himself doth look on one
The least of Nature's works] one who might move
The wise man to that scorn which wisdom
Holds unlawful ever*

- a. Punctuate the above passage.
- b. Arrange it in prose order.
- c. Paraphrase it.
- d. Parse the words in Italics.
- e. Analyse the passage in brackets.

ARITHMETIC.

ARITHMETIC.—(Males.)

Three hours allowed for this paper.

1. 22 square yards: 7 feet: $100\frac{3}{4}$ inches, at £2 1s. $3\frac{1}{4}$ d. per square yard. Practice: Work in two ways.
2. A canal $3\frac{1}{4}$ miles long, $60\frac{3}{8}$ feet wide, and $14\frac{1}{8}$ feet deep, is dug by 119 men in $4\frac{1}{8}$ years, working 10·5 hours daily. How long will it take 150 men to dig a canal $4\frac{1}{2}$ miles long, $19\frac{7}{8}$ feet wide, $12\frac{1}{8}$ deep, working 9·75 hours daily?
3. $\sqrt[3]{31\frac{1}{4}\frac{3}{8}}$.
4. A field whose sides are 380, 420, and 765 yards, is let for £2 15s. per acre. What is the annual rental?
5. The area of a square is 2. What is its side?

ARITHMETIC.—(Females.)

Three hours allowed for this paper.

1. A draper sells goods amounting to £1,900 15s., gaining at the rate of $6\frac{3}{4}$ d. in 2s.; what are his profits for the year, allowing £27 10s. 2d. for bad debts?
2. 43 lbs. 5 ozs. 12 dwts., at £1 0s. $6\frac{3}{4}$ d. per lb. Work in two ways.
3. If three-fifths of a house are worth £90 7s. $6\frac{1}{4}$ d., and improvements are made adding one-ninth to the value of the whole, what would one-eighth of the property be then worth?
4. $17\frac{1}{4}$ lbs. of coffee cost 25·875 shillings, how much may be bought for £3·646875?

GEOGRAPHY.

Four hours allowed for this paper.

1. Describe the Lake Regions of Europe.
2. Give a full account of the Basin of the Ganges.
3. Describe fully the Vegetation of South America—noticing particularly the Slopes of the Andes.
4. Give a description of the Land and Sea Breezes, shewing fully to what extent their influence modifies Australian climate.
5. Describe the principal Commercial Emporiiums of the Pacific.

ART OF TEACHING.

Three hours allowed for this paper.

1. What should be the demeanour and character of a teacher who would secure effective order in his school?
2. How do you provide—I. for classifying pupils judiciously; and, II., for maintaining equality of attainments in a Class?
3. Give notes of an Oral Lesson which is based upon the Analytic Method.
4. What tests do you apply in order to satisfy yourself that your instruction is soundly based?

LESSON BOOKS.

Three hours allowed for this paper.

1. What lessons of a Geological character occur in the Sequel Book?
2. What is said about "Salt," in the Third Book?
3. What are the distinctive features of Book IV?
4. What is stated relative to Superstitions in the Supplement to the Fourth Book?

WRITING.

Two hours allowed for this paper.

1. Give specimens of Copy lines in three hands.
2. What oral instruction in the Art of Writing do you give your pupils?
3. Write an Official Letter to the Council describing the organization of your school.

DOMESTIC ECONOMY.

Three hours allowed for this paper.

1. How may a good wife render her home attractive to her husband?
2. What are the most common modes of adulteration practised in daily food? State the evils which arise from the practice referred to.
3. What are the advantages of cold water bathing?
4. What differences are effected upon animal food in baking, as distinguished from roasting?

DRAWING.

1. What are the different kinds of drawing, and the uses to which they are applied?
2. What is the difference between *Geometrical* and *Perspective* drawings?
3. Describe the proper position of the pupil when drawing.
4. How do you give the appearance of solidity to objects in a drawing?
5. How or by what means would you represent concave, convex, or flat surfaces?
6. Draw in outline a table or any other object. Draw and shade a box with the lid open, a hat, or basin.

Questions

Questions in Perspective.

1. What is the derivation of the word perspective?
2. Define what is meant by aerial perspective, and linear perspective.
3. What is the difference between parallel and angular perspective?
4. Why do objects appear smaller as they recede from us?
5. To what points do receding lines converge in parallel, as well as in angular perspective?
6. Draw a chess board in parallel perspective, and a cube in angular perspective.

VOCAL MUSIC.—TONIC SOL-FA METHOD.

Two hours are allowed for this paper.

1. Describe the mental effects of the tones of the scale, and give the names by which those effects are usually known.
2. Explain the various kinds of measures and their notation; dividing them into *a.* Simple, *i.e.*, those containing one accent; and *b.* Compound, *i.e.*, those containing two or more accents.
3. The times denoted by $\frac{3}{2}$ and $\frac{3}{4}$ both contain six crotchets in a measure. Explain the difference in their rhythm, and their equivalents in the Tonic Sol-fa Notation.
4. Give the rules of finding the place of **Doh** in the staff, from the key signature at the commencement.
5. Translate the following tune into the established notation, the pulse being equal to a crotchet, 1st, in the key of F, 2nd, in the key of A.

$$\begin{array}{l}
 : d' \quad | \quad s : m \quad | \quad r : -.d \quad | \quad d : m \quad | \quad .s : l \quad | \quad d : d \quad | \quad f : -.m \\
 | \quad m : - \quad | \quad r : d' \quad | \quad s : m \quad | \quad r : -.d \quad | \quad d : m \quad | \quad s : l \quad | \quad d : m \quad | \quad r : -.d \\
 | \quad d : - \quad | \quad - : m \quad | \quad f : -.m \quad | \quad f : s \quad | \quad l : s \quad | \quad d' : l \quad | \quad s : m \quad | \quad r.m : s \\
 | \quad l : - \quad | \quad - : d' \quad | \quad s : m \quad | \quad r : -.d \quad | \quad d : m \quad | \quad \widehat{s} : l \quad | \quad d : m \quad | \quad r : -.d \\
 | \quad d : - \quad | \quad - \quad |
 \end{array}$$

ALGEBRA AND GEOMETRY.

Four hours allowed for this paper.

1. $\frac{8x + 5}{14} + \frac{7x - 3}{6x + 2} = \frac{4x + 6}{7}$.
 2. $\left. \begin{array}{l} xy = x + y \\ xz = 2(x + z) \\ yz = 3(y + z) \end{array} \right\}$
 3. By selling an article for £24, I lose as much per cent. as it cost me: what did I give originally?
 4. If from the ends of the side of a triangle, two straight lines be drawn to a point within the triangle, these two straight lines shall be less than the sides of the triangle, but shall contain a greater angle.
 5. If one side of a triangle be produced, the exterior angle is greater than either of the interior and opposite angles.
 6. In any right-angled triangle, the square described upon the side subtending the right angle, is equal to the squares described upon the sides containing the right angle.
- Exercise.*—Should the side of an isosceles triangle be extended beyond the vertex, the exterior angle thus formed is double of either of the angles at the base.

EXAMINATION PAPERS FOR FIRST-CLASS CERTIFICATE.

GRAMMAR.

Four hours allowed for this subject.

*This said he paused not but with venturous arm
 He plucked he tasted me damp horror chilled
 At such bold words vouched with a deed so bold
 But he thus overjoyed Oh fruit divine
 Sweet of thyself but much more sweet thus cropt
 Forbidden here it seems as only fit
 For gods yet able to make gods of men
 And why not gods of men since good the more
 Communicated more abundant grows
 The author not impaired but honored more
 Here happy creature fair angelic Eve
 Partake thou also though thou art
 Happier thou mayest be worthier canst not be*

- a.* Punctuate the above passage.
- b.* Arrange it in prose order.
- c.* Paraphrase it.
- d.* Parse the words italicised.
- e.* Analyse the whole.
- f.* Select the derivative words, and give their roots.

ARITHMETIC.

Three hours and a half allowed for this paper.

1. A quantity of tea is sold for 4s. 2d. per lb. The gain is 10 per cent., and the total gain £12. What is the quantity of tea?
 2. Prove that $\sqrt{3}$ is equal to $\frac{3}{2}$
 3. Required the sum of the infinite series $\frac{1}{3} + \frac{1}{9} + \frac{1}{27}$.
 4. X, Y and Z start equally from the same point, in the same direction, round a tract of land 73 miles in circumference. X's rate is 6 miles a day, Y's 10 miles, and Z's 16 miles. When will they be together again?
- Show the differences between an Arithmetical and a Geometrical Proportion.

GEOGRAPHY—PHYSICAL.

Three hours allowed for this paper.

1. Describe the Prairies of America fully.
2. Give a Description of the Tides.
3. How would you show that the advancement and the pursuits of a people must to a great extent depend upon the physical features of their country.
4. Give a full account of Persia.

GEOGRAPHY—DESCRIPTIVE.

Three hours allowed for this paper.

1. Give a full description of the western slope of N. S. Wales.
2. Describe the manufactures and vegetable productions of Hindostan.
3. Give a full account of Brazil
4. Describe how longitude is ascertained. State the difference of time between Sydney and the other Capitals of Australia.

PRINCIPLES OF TEACHING.

Four hours allowed for this subject.

1. Why is an enlarged course of instruction better suited to the necessities of a Nation than a contracted one?
2. Define precision, as you understand it when applied to a system of School Training; and shew how inaccurate habits may seriously prejudice the prospects of a pupil in any walk of his future life.
3. Describe the period of life at which the Perceptive Faculty is most active; shew how you would develop it, add the subjects you would employ.
4. What evils may accrue to indolent minds from the injudicious use of modern or improved methods of teaching?
5. Describe the whole course of an Object Lesson, as to a Fifth Class, on one of the following:—

“THE DIVING BELL.”
“LIGHT.”

SCHOOL BOOKS.

Three hours allowed for this paper.

1. Describe the contents of Section I., Fourth Book.
2. What lessons on Chemistry are given in the Supplement to the Fourth Book?
3. What lessons on Mechanics are given in the Fifth Book?
4. Describe the contents and the design of the Girl's Reading Book.

WRITING.

Two hours allowed for this paper.

1. Give specimens of all the writing you can teach.
2. What amount of parallelism or relationship exists between Drawing and Writing?
3. Describe the system of Writing advanced in “Morrison's School Management.”

DOMESTIC ECONOMY.

Three hours allowed for this paper.

1. Under what circumstances may presence of mind be valuable in a house?
2. What are the advantages and uses of Salt in the preparation of food?
3. What causes induce Husbands to frequent Taverns?
4. In choosing colours for clothing, what shades are desirable, and what objectionable? Explain why.

ENGLISH LITERATURE.

Three hours allowed for this paper.

1. Why has it been said that the advent of Chaucer constitutes an era in the English Language and Literature.
2. Describe the circumstances and writings which have principally contributed to the settlement of the English Language in its present form.
3. Describe what has been called the "Augustan Age" of English Literature.
4. In what terms does the author of the "Progress of Poetry" describe the Measures of Shakespeare and Dryden?

ALGEBRA.

Four hours allowed.

1. Reduce the following expressions to their simplest forms :—

$$\sqrt{a^3 + 2a^2b + ab^2}, \quad \sqrt{a^3 \sqrt{\frac{c}{a^2 b^2}}}, \quad \sqrt{\frac{\sqrt{10}-1}{\sqrt{10}+1}}$$

2. Solve the equation $ax^2 + bx + c = 0$.
3. Solve the equations $\sqrt{x+11} + \sqrt{x-9} = 10$.

$$\frac{x+4}{x-4} + \sqrt{\frac{x+4}{x-4}} = 12.$$

$$\frac{\sqrt{1+x} + \sqrt{1-x}}{\sqrt{1+x} - \sqrt{1-x}} = \frac{x}{a}.$$

4. Form the equation whose roots are $\frac{3 - \sqrt{5}}{2}, \frac{3 + \sqrt{5}}{2}$.

5. A number consists of three digits. The digits in the tens' place is 3, and that in the units' place is twice that in the hundreds' place. If the order of the digits be reversed, the number is increased by 198. Find the number.

GEOMETRY.

Three hours allowed for the paper.

1. Equiangular parallelograms which have their sides about the equal angles reciprocally proportional are equal.
2. Without assuming Book I, Prop. 32, prove that all the interior angles of any rectilineal figure, together with four right angles, are equal to twice as many right angles as the figure has sides.
3. What kind of triangles are the following, namely :—
 - I. When the sides are as the numbers 3, 4, 5.
 - II. Do. do. 2, 3, 4.
 - III. Do. do. 7, 8, 9.
 - IV. Do. do. 1, 2, 3.
4. Through a given point within a circle, draw the least possible chord.
5. Describe a circle which shall pass through a given point, and touch a given circle in a given point.

APPENDIX I.

ABSTRACT of Returns from Public, Provisional, and Half-time Schools, under the Council of Education.

Quarter ending—	Number of Children on the Rolls.									Average Daily Attendance.			Amount of School Fees paid.	
	Boys.	Girls.	Total.	C. E.	R. C.	Pres.	Wes.	Others.	Total.	Boys.	Girls.	Total.	£	s. d.
March, 1868.														
Public Schools	12,096	9,806	21,902	9,198	4,038	3,246	3,137	2,283	21,902	7,658·65	5,793·61	13,452·26	3,737	7 11
Provisional Schools	558	543	1,101	480	365	142	63	51	1,101	376·56	376·20	752·76	172	17 3
Half-time Schools	169	176	345	152	174	17	2	.....	345	117·30	110·41	227·71	9	18 9
	12,823	10,525	23,348	9,830	4,577	3,405	3,202	2,334	23,348	8,152·51	6,280·22	14,432·73	3,920	3 11
June, 1868.														
Public Schools	12,834	10,506	23,340	9,867	4,166	3,404	3,525	2,378	23,340	8,642·65	6,758·53	15,401·18	4,340	0 4
Provisional Schools	625	604	1,229	520	407	169	84	49	1,229	433·03	431·49	864·52	217	5 10
Half-time Schools	178	158	336	144	166	18	2	6	336	114·15	106·87	221·02	14	6 6
	13,637	11,268	24,905	10,531	4,739	3,591	3,611	2,433	24,905	9,189·83	7,296·89	16,486·72	4,571	12 8
September, 1868.														
Public Schools	13,405	11,063	24,471	10,467	4,350	3,537	3,729	2,388	24,471	9,089·584	7,121·679	16,211·263	4,521	1 4
Provisional Schools	1,100	1,107	2,207	943	803	256	152	53	2,207	784·836	831·91	1,616·746	299	10 7
Half-time Schools	268	252	520	237	233	37	6	7	520	178·74	168·85	347·59	23	0 3
	14,773	12,425	27,198	11,647	5,386	3,830	3,887	2,448	27,198	10,053·16	8,122·439	18,175·599	4,843	12 2
December, 1868.														
Public Schools	13,280	11,075	24,355	10,481	4,256	3,530	3,662	2,426	24,355	9,383·588	7,312·637	16,696·225	4,989	19 4
Provisional Schools	1,273	1,352	2,625	1,147	946	266	212	54	2,625	862·76	954·23	1,816·99	410	1 3
Half-time Schools	256	253	509	227	231	37	6	8	509	177·45	186·2	363·65	30	10 5
	14,809	12,680	27,489	11,855	5,433	3,833	3,880	2,488	27,489	10,423·798	8,453·067	18,876·865	5,430	11 0

7-9

APPENDIX.

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APPENDIX J.

1. Inspector's Report upon Schools in the Albury District.
2. Inspector's Report upon Schools in the Armidale District.
3. Inspector's Report upon Schools in the Bathurst District.
4. Inspector's Report upon Schools in the Camden District.
5. Inspector's Report upon Schools in the Cumberland District.
6. Inspector's Report upon Schools in the Goulburn District.
7. Inspector's Report upon Schools in the Maitland District.
8. Inspector's Report upon Schools in the Newcastle District.
9. Inspector's Report upon Schools in the Sydney District.

ALBURY DISTRICT.—GENERAL REPORT.

INSPECTOR'S REPORT on the Public, Provisional, and Certified Denominational Schools in the Albury District, for the year 1868.

During the months of January, February, and March I was in charge of the Bathurst District ; but, for several weeks of that time, I was suffering from a very severe attack of illness, which completely incapacitated me from performing my duty. From the same cause I was prevented completing my General Report for 1867, until March ; and then the time was too short to permit me to draw up that Report in so complete a form as I could have desired.

I arrived at my head quarters at the end of April, having, in the course of my journey, visited schools in both districts.

Since my arrival, I have, in obedience to the Council's instructions, visited the southern part of the Bathurst District, for the purpose of reporting upon applications for the establishment of schools at Cunningham and Calabash Creek.

In addition to the work of inspection, I have had to conduct examinations of teachers in different parts of the district.

The number of teachers examined during the year is as follows :—Twenty, in charge of schools ; five pupil or candidate pupil teachers ; and three, candidates in the Training and Model School—making a total of twenty-eight examined.

The distance travelled amounts to 2,555 miles.

The number of schools in this district at the close of the year was :—

Twenty Public Schools,
Six Provisional Schools, and
Seven Certified Denominational Schools—

making, in all, thirty-three schools in the district.

During the year the following have been opened :—

Four Public Schools, and
Six Provisional Schools—

making a total of ten schools opened.

The Public School at Wentworth was not open during the last quarter of the year, and was not therefore inspected. The Public School at Menindie was only opened in November, and therefore was not visited. The Public School at Black Range was, after my first visit, converted into a Provisional School, but as it has, in that character, been closed for want of a teacher, it is not included in the Appendix. The C. D. Church of England School at Mulwala was, in July, converted into a Provisional School ; and, under that head, is reported in the Appendix. The Provisional School at Moorwatha and the C. D. Church of England School at Tumut are not in operation.

The applications for a Public School at Lower Adelong and for a Provisional School at Teremiah have not yet resulted in the establishment of these schools. An application for the establishment of a Provisional School at Jereelderie has been reported on ; but at the close of the year no school had been opened in that township.

From the following places inquiry has been made concerning the establishment of schools ; but, at the close of 1868, no tangible results had been brought about :—Hay, Mullengandra, Piney Range, Jindera, and Major's Plains. At all these places schools are required, as they are also at Narrandera and other places on the Murrumbidgee. I hope next year will witness their establishment.

The main causes of the non-establishment of schools at these and at other places, are two : first, a difference of opinion amongst the people as to the kind of school required ; and, second, the difficulty of securing competent teachers—the latter in the case of Provisional Schools.

The number of schools inspected during the year, or rather that part of it spent in this district, has been as follows :—

Eighteen Public Schools,
Five Provisional Schools, and
Eight Certified Denominational Schools,

making, in all, thirty-one schools inspected.

Of these, eight—viz., five Public and three Certified Denominational—were inspected *twice* ; and the rest, *once* each.

The following table shows the kind of visit paid to each class of school.

Nature of Visit.	Class of School.			Total.
	Public.	Provisional.	Cert. Denom.	
For General and Regular Inspection	4	3	2	9
For Regular and Ordinary	5	0	3	8
For Regular	8	1	3	12
For Ordinary	1	1	0	2
For Inquiry only	0	2	0	2

Character of the Inspection.—The schools which received the General and Regular Inspection were, either new schools, or—in the case of the Certified Denominational Schools—those which had not been inspected before, or had been transferred to new buildings.

The

The Regular Inspections were made with the view of ascertaining, amongst other things, the attainments of the pupils. As the latter was the main object of inquiry, this kind of inspection necessitated the direct examination of all the pupils in the whole of the subjects taught; and it occupied the time of the Inspector one or more full days, according to the size of the school. Ordinary Inspections are paid for the purpose of seeing the schools in their every-day aspect. To this end, no notice of the Inspector's visit is sent; nor, in the school, does the Inspector take any share of the school work. His time is spent in observing minutely the method of teaching and the general management, for the purpose of afterwards pointing out to the teacher any defects in the organization, discipline, and instruction that may have been noticed.

Visits of Inquiry are for the object of reporting upon applications for the establishment of schools.

In addition to the above, Incidental Visits have been paid to those schools which lie in, or near, the routes of travel; these have necessarily been brief.

ORGANIZATION.

Sites.—With scarcely an exception, the sites of all the schools are, in every respect, suitable—especially of those recently erected. Gifts of land are sometimes offered by private individuals for new schools; but, as a rule, the Government "School Reserve" is to be preferred as a site.

Buildings.—Of Public Schools, two are very good; four are good; nine are very fair; and four are moderate. Of Provisional Schools, three are very fair; and four are fair. Of Certified Denominational, one is very good; five are fair; and two are used as churches and schools.

Out of twenty Public Schools, six only are vested; and eight only have residences. Of Provisional Schools, four have accommodation, though of a rough kind, for the teacher. Of Certified Denominational Schools, four have residences, but only one of these was originally built for that purpose.

Only half the Public Schools have inscriptions outside, and of these two are incorrect.

The ventilation of the building is too often defective, many of the windows only opening from the bottom.

I am glad to see the Vested Schools are on the increase, since these are always much superior to the others.

Play-grounds.—Of the Public Schools, five only have proper play-grounds; of the Provisional, only one is so provided; and the same may be said of the Certified Denominational Schools. There is, further, almost a total absence of sheds for the protection of the pupils out of doors; and it is very seldom that any attempt is made to plant trees in the space set apart for recreation.

Furniture and Apparatus.—Of the Public Schools, eight are very well provided in this respect; four very fairly, and six moderately so. Of Provisional Schools, one is tolerably well found; the rest have hardly any. Of Certified Denominational Schools, four are very fairly off; and four fairly.

A good many schools have no teachers' desks.

As regards apparatus, most of the schools have very fair stocks; and in a short time all will be supplied. But, on account of the very high rate of carriage, and the difficulty of transport, in the greater portion of this district, considerable delay has occurred in forwarding materials.

Books.—The last remark applies with equal force to these articles. In no instance, however, is the stock so small that the school-work is completely stopped for want of materials. In the greater number of instances, where the supply is small and incomplete, it is so only in articles of very common use and of a fragile nature, and the fault rests more with the teacher than any one else. I am glad to see a better description of copy-book coming into use. This is the only book the pupils are called upon to buy; but, unless proper care is taken by the teacher, a very inferior article will be purchased by some parents.

The Registers.—Statistical and Lesson, are now generally kept with a very fair degree of care, in the Public and Certified Denominational Schools. But, in the Provisional, they are by no means so well kept, owing in a great measure, to their novelty and number. A good deal of the Inspector's time is taken up at his first visit to these schools in explaining the nature and use of these documents.

DISCIPLINE.

Punctuality.—As regards this part of discipline there is still much to be desired, especially in the purely country schools; even after making all due allowances for the want of, as well as for incorrect, time-keepers. Every school ought to be furnished with a bell, so hung as to be heard a long way off. From the absence of such, I found, in two schools, common cattle-bells had to be used. A clock is a very useful thing after the pupils have come together; what is generally wanted is the means to summon them. A teacher who is himself of punctual habits, can, however, do much to secure the same conduct in his pupils, even without the appliances just named.

Regularity.—Irregularity of attendance militates, to a greater degree perhaps than anything else, against the general progress of the pupils. And while one is fully convinced of the chief causes of irregular attendance, the remedy for this evil is unfortunately, at present, beyond the power of application. Compulsory education, in some shape or another, appears, without doubt, to be the only cure. Still, a good deal may be done by the teacher, in conjunction with the Local Board, to mitigate the evil caused too often by the carelessness of the natural guardians of the pupils. The number of pupils in the schools at the dates of inspection was as under:—

Pupils.	Public.	Provisional.	Certified Denominational.	Total.
On the Rolls	1,105	140	373	1,618
Present	906	120	285	1,311

The proportion given above is not that usually known as the "Average Attendance," as, in these instances, the pupils were (so to speak) summoned to attend.

Cleanliness.—The Ordinary Inspections, being paid at unexpected times, are the best tests of this part of discipline. Taking the results given by these as fair specimens, I am glad to be able to speak in favourable terms of the schools. Of course there are degrees of cleanliness and neatness which vary with the personal habits of the teacher as a rule; but, having had no cause of complaint against either teacher or children—except on two occasions—as regards untidiness, I think the result may be considered very favourable. And this estimate must be understood to refer, not only to the state of the person and dress, but also to that of the room and its furniture. There is, however, one matter which, in too many instances, has been overlooked; and that is, the untidy way in which slates are cleaned.

Order.—In ten Public Schools the order was very good; in five, very fair; in three, tolerable. Of the Provisional Schools, three were in fair order; the rest, only tolerable. Of Certified Denominational Schools, three were in very fair; the others in tolerable order. The size and shape of the room and furniture have considerable influence upon the order, so that, in some of the schools just reported as inferior in this respect, the fault does not wholly rest with the teachers. In too many instances, however, there is an absence of *thoroughness* in the order, the minor points being almost entirely neglected. In a few cases also, the pupils were permitted to assemble and to be dismissed, outside the school, in a disorderly fashion.

Government.—

Government.—As an almost universal rule, physical force is only used in governing when all other means have failed, and it is extremely rare to find the government unduly harsh. The Punishment-books, which I believe to be trustworthy records, do not show that extreme measures have been adopted, except the offences have been very flagrant. This book, however, is not kept in about one-third of the schools.

INSTRUCTION.

Classification.—Three of the Public Schools have, in each, four classes; eleven have three in each, and four two only in each. Of Provisional Schools, four have three classes in each, two have two each, and the rest consist of one each only. Of the Certified Denominational Schools, one has four classes, the rest three, in each.

Two of the Public Schools have double departments, namely, Albury (Model), Primary and Infant Departments; and Wagga Wagga, which has separate departments for the boys and girls. All the other schools are of one department each.

The classification of the pupils is not in all cases based, as it should be, strictly on the "Standard of Proficiency." In a few instances, the wishes of the parents have been studied; in others, pupils are found in higher or lower classes than is right. No gross example of bad classification was, however, found; and, where errors and oversights had been brought to light by inspection, they were rectified at the time or immediately afterwards.

Subjects.—With the exceptions named below, all the prescribed subjects have been taught.

It will be seen that Special Religious Instruction is given in one school only—the Model School at Albury. Here, the clergymen of the Church of England and the Presbyterian denominations attend every week for this purpose. In the greater part of the district, however, it is impossible that, at present, this kind of teaching can be attempted, owing to the want of authorized instructors.

Drawing is practised in four Public Schools, on paper as well as slates. Needlework ought to be taught wherever the teacher is a married man; but, in the cases given below, it is not so taught. The chief cause of this is the absence of residences within convenient distance of the school.

Singing is not taught at	7	Public,	4	Provisional,	5	C. D. Schools;	total,	16
Drawing is not taught at	4	"	4	"	4	"	"	12
Object Lessons are not taught at	0	"	3	"	3	"	"	6
Needlework is not taught at	3	"	0	"	0	"	"	3

The Tonic Sol-fa System of singing is taught in three Public Schools only; Special Religious Instruction in one Public School only; *extra* subjects, such as Latin, Algebra, Book-keeping, &c., in three Public Schools.

Occupation.—"Time-tables" and "programmes" of lessons are found in all the Public and Certified Denominational Schools, with one exception. In Provisional Schools they are being introduced.

As regards the construction of these documents, I may state that, in general, a fair degree of care has been displayed by the teachers. But, in respect of appearance, these documents are not uniformly attractive. Printed forms are, however, coming into use; and, therefore, one may look for an improved style in this respect. Of the skill shown in the distribution of the time and lessons in these important documents, there is, of course, a marked difference in favour of the trained teacher. But, taken as a whole, these forms may be considered as showing signs of attention and effort on the part of the teacher. In the programmes, however, some of the subjects (*e. g.*, Writing and Arithmetic) are not set down in sufficient detail.

Method.—It is here that, in a very marked degree, the benefit derived from a course of training is made manifest. As the following table shows, the classification obtained by the majority of the teachers of this district is not very high; and, as the practical skill of the teacher determines, to a large extent, the position thus taken, it follows that more than one-half of those placed in charge of schools under my supervision have not yet reached even a fair position in this respect. Further, as oral teaching is the chief means used for conveying instruction, the difficulty of attaining skill in the "art of communicating" is enhanced. It is, however, pleasing to find those teachers who have not had the advantage of being trained endeavour, by study and practice, to improve themselves. Many of these have availed themselves of the liberality of the Council, in granting aid for the purchase of teachers' text-books, to secure manuals of method and school management. One general fault in the mode of teaching is the neglect of recapitulation of work at frequent and regular intervals; and, akin to this, is the lack of examination of pupils, both orally and otherwise, at stated times. Too much dependence is placed on the visit of the Inspector, as a means of ascertaining the state of attainments and the progress made. Teachers who desire their pupils should acquit themselves well at inspection, should not fail to exercise them in the art of correct and ready answering as often as possible. In all classes, written examinations should be resorted to; and, in the upper classes, these should take as wide a range as possible.

Classification of Teachers and Assistants in the Albury District.

Section of Class.	Class I.	Class II.	Class III.	Not Classed.
A.	...	...	13	...
B.	1	2	3	9
C.	...	...	7	...

Reading.—One-fifth of the pupils examined were classed as good, one-seventh as tolerable to moderate, the rest as fair to very fair.

A very common fault is an indistinct articulation. This may be traced, in a great degree, to the fault of the teachers in standing too near their pupils, and in constantly referring to the text book in the hands of the class during these lessons. By reversing these practices, I believe the enunciation of the pupils would be much improved. I also find the aspirate too often abused; and the names and uses of the marks of punctuation are not invariably known. Increased attention is being paid to the development of the meaning of the words and sentences read; but the cultivation of a good expression is too often neglected. Another common mistake is the neglect to teach with sufficient care the elements of this subject. It is a great mistake to suppose that it is lost or ill-spent time which is bestowed upon the junior pupils. The mode of holding the books is also open to objection in some schools.

Writing.—Of those examined, one-fourth are reported as good, an equal number as tolerable or moderate, and one-half as fair or very fair. Elsewhere I have noticed the improved style of copy-book coming into use. Before, however, the slate-writing can be reported as good or very fair throughout, more attention will have to be given to it in several schools. In forming the letters on paper, and especially in text-hand, there is a lack of evenness of thickness in the down strokes, which spoils the appearance of the copy. There is also, amongst the girls, too great a use of what is called the "ladies'" hand—small, angular, and too often illegible in its character. In teaching the elements, there is too little oral instruction and an insufficient use of the black-board. Occasionally too, the slates of the first class are not ruled or are improperly ruled.

Writing

Writing from *Dictation* is very fairly done in the majority of instances; but the revision of these exercises is not, in several schools, sufficiently rigid in character, and, as the consequence, very much of the benefit of the lesson is lost. The practice of writing from *Memory* is pretty generally adopted. It is, however, too often restricted to the reproduction of prose, and confined to the upper class or classes; while, as an exercise in composition, it does not take a high rank.

Arithmetic.—Of the pupils examined, about one-eighth passed as good, less than one-half as fair or very fair, and the remainder as tolerable or moderate. From this it is evident that this subject is not so well taught as it should be, or as some of the others are. And, as the only means provided for teaching it are the black-board and abacus, it is apparent that these are either not used or not well used. I believe a defective method of teaching to be the principal cause of this falling off. There is amongst the pupils a want of intelligent knowledge of its first principles, and a lack of readiness in the application of the same. The *rationale* of the work done can seldom be obtained, and, less often, readily and clearly. In slate-work, there is too frequently a want of neatness as well as expedition.

Notation, which is set relatively high in the "standard," requires much more attention in the majority of schools. *Mental Arithmetic* is also, in general, greatly neglected. I do not mean that it is not attempted, but that these attempts are unsystematic and feeble. I trust teachers will give much more attention to so important a branch of this subject during the new year.

Grammar.—One-fifth of those presented for examination passed as good, one-half as from fair to very fair, and the rest as tolerable or moderate. Coupling the acknowledged difficulty of teaching this subject with the fact of the low classification of many of the teachers, the results obtained may be regarded as fairly satisfactory. But, with increased opportunity of teaching, greater knowledge will be expected. There is frequently a very great degree of vagueness in the knowledge of the technical definitions, which is a fertile source of blundering in the higher stages of this subject. The knowledge of the higher branches—Analysis and Composition—is by no means great or general. In the Provisional, and in three of the Certified Denominational Schools, these branches are either untaught or nominally taught only.

Geography.—Out of the pupils examined in this subject, about one-fifth passed as good, one-fourth as tolerable to moderate, and the rest as fair or very fair. This subject being more easily taught and illustrated than the preceding one ought to have produced higher results. But, in several of the schools, there were either no maps or one or two only, at the date of inspection; and, with these means of learning absent, no other result could be expected in the majority of cases. The maps supplied are found to be excellent in design and execution. In the second class, where the rudiments are learned, the line of study laid down in the "standard" has not, in all cases, been strictly followed; and, in the higher classes, the knowledge acquired is too often superficial and unintelligent. Map-drawing is not so extensively practised as it should be. In six schools, however, it is done both on paper and slates.

Object Lessons.—Of the pupils examined, one-fourth passed as good, the bulk as fair or very fair, and one-ninth as tolerable or moderate. This, however, is to be regarded as referring to the acquisition of information on specified subjects, rather than taken as a proof of an extensive cultivation and development of all the intellectual powers of the pupils. To produce the latter result, requires, on the part of the teacher, considerable skill in method. The subjects chosen for these lessons do not always accord with those prescribed; but, in general, the variation is due to the want of suitable diagrams. The reproduction of these lessons in writing is attempted in many schools; but, regarded as an exercise in composition, with only moderate results.

Singing.—Of the pupils taught this subject, the same proportions passed as in the preceding one. Vocal music is not, in the great majority of the schools, taught by note; and, therefore, the numbers given in the table below must, for the most part, be taken to represent those singing by ear only. The "Tonic Sol-fa" notation has been introduced, at present, into three schools only; and, in these, the pupils are not far advanced. A few attempts have been made to teach by the old notation, but with only slight success. As has been stated, this subject is not attempted in sixteen schools; but I hope the number will be very greatly reduced before another Report shall be due.

Drawing.—Of those examined, one-sixth passed as good, one-twentieth as tolerable or moderate, and the majority as fair or very fair.

Although it is taught in a larger number of schools, yet fewer pupils learn it than the preceding subject. Slates are used, in practising, in almost all the schools. The authorized manuals on this subject are so good that a moderate degree of skill on the part of the teacher ought to ensure high results.

Scripture Lessons.—Of the pupils studying these (that is, those of the Third and Fourth Classes), one-half passed as good, one-sixth as tolerable to moderate, and the rest as fair or very fair.

Owing to the absence of books in new schools, the number of the pupils reading these lessons—namely, those in Public and Provisional Schools only—is not so large as it ought to be. In several schools, also, the books had only recently arrived. In a few schools, the pupils of the second class voluntarily took this subject. Greater prominence should be given to the New Testament Lessons.

Needlework.—I have already stated the number of schools where this subject was not taught as required. In all these, however, it is now begun, or is about to be. I am glad to say the Model School is distinguished—as it should be—for the quality of its needlework. The Public School at Moulamein is also to be highly spoken of in this respect; and, the more so, as excellence has here been attained under adverse circumstances. In both schools, as is generally the case, plain needlework very properly obtains the larger share of the attention of teachers and pupils.

The following is the Table of Attainments referred to in speaking of the several subjects of instruction :—

Subjects.	Good.	Fair to Very Fair.	Tolerable to Moderate.	Total.
Reading :—				
Monosyllables	68	408	141	617
Easy Narrative	86	226	17	329
Ordinary Prose	86	160	23	269
Writing :—				
On Slates only	99	291	205	595
On Paper	209	319	76	604
Arithmetic :—				
Simple Rules	46	494	359	899
Compound Rules	47	165	6	218
Higher Rules	59	33	0	92
Grammar :—				
Elementary	55	167	94	316
Advanced	80	136	80	296
Geography :—				
Elementary	78	142	98	318
Advanced	46	178	48	272
Object Lessons	272	658	122	1,052
Singing	199	452	88	739
Drawing	70	335	22	427
Scripture Lessons	132	86	40	258

CONCLUSION.

Having been placed in charge of this district for part of the year only, I am somewhat at a disadvantage in attempting an estimate—at any rate, from a comparative point of view—of the year's work. I believe, however, I am justified in saying that, considering the physical nature of the district, the scattered nature and the sparseness of the population, the work of education has made, and is making, fair progress.

The Teachers (as well as the schools) are placed, for the most part, at a disadvantage, from the causes just named; and hence, there is little opportunity for social intercourse and mutual professional benefit. One very powerful means for improvement is thus shut out from the majority of them. Of the manner in which they have done their work, often under considerable disadvantages, a very favourable opinion can, on the whole, be given; and their readiness to receive and act upon hints for the improvement of their schools merits the same degree of praise.

Of the manner in which the *Local Boards* have performed their duty, I am not in so good a position to judge as if I had been longer in the district. With the important exception of regular and frequent visitation of the schools under their supervision, the Members of these Boards have, however, shown considerable interest in the cause of Public Education.

J. COBURN,
Inspector of Schools, Albury District.

Albury, 27 January, 1869.

APPENDIX.

DETAILED Statement of the Condition of the Schools inspected.

PUBLIC SCHOOLS.

ALBURY (Model—Vested) :—Visited, 14th to 18th September.

Numbers present at inspection :—Boys, 113; girls, 86; total, 199.

To complete the organization, a play-shed and some desks for the infant department are required. The discipline throughout is very effective. With the exception of the Tonic Sol-fa System, all the prescribed subjects are taught; and, in addition, Latin, algebra, and book-keeping. The teaching is earnest and skilful, and the attainments are very satisfactory. The school is quite worthy of its name.

ADELONG (Non-vested) :—Visited, 3rd and 4th August.

Numbers present at inspection :—Boys, 46; girls, 19; total, 65.

A large room in the building formerly used as the Hospital is occupied by the school. The supply of furniture is insufficient; but, in other respects, the organization is very fair. The discipline is too lax, and the teaching-power weak. The method is crude; and the results obtained range, in general, from tolerable to fair. Singing and drawing are not taught.

ADELONG, UPPER (Vested) :—Visited, 5th August.

Numbers present at inspection :—Boys, 15; girls, 7; total, 22.

A very neat and well-furnished room has been occupied since July. The room and its contents are very neat. The discipline and organization are very good. The instruction is well regulated, and very creditable results have been obtained under somewhat unfavourable circumstances. Singing is not taught.

BALRANALD (Non-vested) :—Visited, 19th November.

Numbers present at inspection :—Boys, 13; girls, 11; total, 24.

The premises are incomplete, as regards residence, furniture, fences, and out-offices. The pupils are orderly, neat, and clean; and they attend regularly. In the general management there is a want of spirit. The attainments range from fair to very fair. Singing and needlework are not taught.

BOWNA (Non-vested) :—Visited, 2nd September.

Numbers present at inspection :—Boys, 16; girls, 12; total, 28.

The room is suitable; but the organization is incomplete, from want of furniture. The attendance is very fluctuating, owing to the proximity of a rival school. In the discipline and the method there is a want of life, on the teacher's part. The demeanour of the scholars is pleasing; and, considering the irregular attendance, very fair progress has been made. No singing is taught.

BUNGOWANNAH (Non-vested) :—Visited, 24th September.

Numbers present at inspection :—Boys, 18; girls, 11; total, 29.

The building—a Wesleyan Chapel—has recently been put into good repair, and furnished for teaching. There are, however, neither residence nor out-offices. The pupils are orderly and attentive; but their attendance is very irregular. The method is earnest and fairly skilful, and the general results are satisfactory.

DENILQUIN (Vested) :—Visited, 26th to 28th September.

Numbers present at inspection :—Boys, 43; girls, 18; total, 61.

The building has been repaired, at considerable expense; and the organization is almost complete. The discipline is uneven; but it is, on the whole, fairly satisfactory. The great majority of the pupils are very young. The method is quiet but effective. In the upper classes the attainments are generally satisfactory; but the lower classes require more direct teaching from the head master. Algebra is taught to a few.

EUSTON (Non-vested) :—Visited, 23rd November.

Numbers present at inspection :—Boys, 8; girls, 17; total, 25.

The building is suitable, but it is very scantily furnished; and is not provided with suitable out-offices. There is no residence attached. The discipline is very fair, and the pupils are very clean and neat in person and dress and regular in their attendance. The method is fairly skilful, and the attainments are satisfactory. Needlework is not taught.

GUNDAGAI (Vested) :—Visited, 20th and 21st July.

Numbers present at inspection :—Boys, 23 ; girls, 32 ; total, 55.

The school and residence are in need of repair, and new out-offices require to be built. In the matter of the classification of the pupils, the organization is faulty. Since the last inspection, another teacher has been appointed, and the attendance has greatly increased. The demeanour of the pupils is fairly satisfactory. There is a good prospect of success now offered.

HOWLONG (Non-vested) :—Visited, 23rd September.

Numbers present at inspection :—Boys, 24 ; girls, 16 ; total, 40.

A more suitable building is much needed. The organization is very fair, and the discipline is mild yet sufficiently firm. The instruction is in general well-regulated, and the attainments are reasonably satisfactory. Drawing is not taught.

LAKE ALBERT (Non-vested) :—Visited, 25th August.

Numbers present at inspection :—Boys, 16 ; girls, 17 ; total, 33.

The building is only a temporary one ; a contract has been entered into for putting up a Vested School. The organization is as good as the size and shape of the schoolroom and furniture permit. The discipline is too lax ; but the method is cheerful and very fairly intelligent. On the whole, the results are creditable.

MOAMA (Non-vested) :—Visited, 3rd November.

Numbers present at inspection :—Boys, 22 ; girls, 23 ; total, 45.

The room is too small to be well adapted for teaching in. The organization is good, and the pupils are kept in good order although there is too little drill. The method indicates that the teacher wants to be trained ; but, considering this drawback, the general results obtained are praiseworthy. Singing and drawing are not taught.

MOULAMEIN (Vested) :—Visited, 16th November.

Numbers present at inspection :—Boys, 16 ; girls, 13 ; total, 29.

A few minor repairs are necessary, and the inscription should be altered. The organization is good, and the discipline is effective—the pupils rendering a willing obedience. The instruction is well regulated, and the state of the attainments is reasonably satisfactory. Singing is not taught.

THURGOONA (Non-vested) :—Visited, 3rd September.

Numbers present at inspection :—Boys, 22 ; girls, 24 ; total, 46.

The building is quite unsuited to its present purpose. A new school and residence are, however, being built. Considering the size of the room and the rough nature of the furniture, the organization and discipline are worthy of great praise. The tone of the school is pleasing, and the state of the attainments is satisfactory.

TUMBABUMBA (Non-vested) :—Visited, 10th December.

Numbers present at inspection :—Boys, 12 ; girls, 11 ; total, 23.

The building is not well adapted to its present purpose—being small, and, in other respects, inconvenient ; efforts, however, have been made to build a better school, with a residence attached. The school has only been in operation a short time. The discipline is imperfect, the method fair, and the attainments range from tolerable to fair.

TUMUT (Non-vested) :—Visited, 27th July.

Numbers present at inspection :—Boys, 14 ; girls, 10 ; total, 24.

Since the inspection better premises have been taken and occupied. The organization is now good. The pupils are clean, neat, and very orderly. The instruction is well regulated, and the attainments are in a satisfactory state. There is, in the new building, every chance of success. Singing and drawing have not yet been taught.

WAGGA WAGGA (Vested) :—Visited, 12th to 14th August.

Numbers present at inspection :—Boys, 76 ; girls, 46 ; total, 122.

In both departments the organization is good, but the room occupied by the boys is much too small for the average number in attendance. Repairs, also, are required to the building. A new schoolroom for the boys is greatly needed. The discipline, in both departments, is good. Under the present teacher and assistant, the school has considerably improved, as regards numbers—and in other respects. The attainments are, in general, very satisfactory. Latin and algebra are taught to a few.

PROVISIONAL SCHOOLS.

BRUNGLE :—Visited, 30th July.

Numbers present at inspection :—Boys, 8 ; girls, 9 ; total, 17.

The building is moderately well suited to its purpose, and it is fairly fitted up. The teacher has only just taken charge. He seems to be painstaking and intelligent, but he has not been trained. Very fair discipline is kept. There is a reasonable prospect of success for the school.

COLLENDINA :—Visited, 4th December.

Numbers present at inspection :—Boys, 7 ; girls, 8 ; total, 15.

A neat wooden structure has just been put up ; but it is not quite completed. Proper furniture is much needed. The pupils are orderly and generally attentive, but not as the result of any particular system of government. The instruction is not skilfully given, and the attainments are very meagre.

GILMORE, UPPER :—Visited, 6th August.

Numbers present at inspection :—Boys, 13 ; girls, 12 ; total, 25.

The building is rather small ; but otherwise it is suitable. The shape and the position of the furniture are not good. The pupils are clean, and they are well-behaved. Considering the teacher has not been trained, and the school only opened a short time, the attainments are very creditable. An effort will be made to convert this into a Public School.

MULWALA :—Visited, 22nd October.

Numbers present at inspection :—Boys, 8 ; girls, 9 ; total, 17.

This school was reduced from a Certified Denominational (C.E.), on account of its small attendance. The building is a good one ; but there is hardly any furniture in it. The organization is very imperfect ; and the discipline is faulty, the manners of the pupils being rough. The method is defective ; the teacher was never trained ; and the attainments are only moderate.

TEN-MILE CREEK :—Visited, 12th December.

Numbers present at inspection :—Boys, 11 ; girls, 9 ; total, 20.

This school has been opened a few weeks only. The room is of fair size and shape, but the walls are out of order. The teacher is possessed of considerable intelligence, and is a fair disciplinarian. The tone of the school is pleasing.

URARA :—Visited, 28th August.

Numbers present at inspection :—Boys, 11 ; girls, 8 ; total, 19.

The room used at present is exceedingly small and inconvenient. The stock of books, &c., is sufficient, but furniture and apparatus are wanted. The teacher is new to this kind of work, but he is zealous and painstaking. The appearance and manners of the pupils are pleasing, but their attainments are moderate.

ARMIDALE DISTRICT.—INSPECTOR'S GENERAL REPORT FOR 1868.

THE early part of the year was occupied in my duties as Assistant Inspector of the Sydney District, and in others relating to the Goulburn District. On the 31st March the Armidale District was assigned to me ; but it was not till the 7th of May that I could begin the work of inspection proper, the mean time being occupied in clerical work and in removing my family to Armidale. The subsequent part of the year was distributed as follows :—Inspection of schools, 57 days ; travelling, 52 days ; special inquiries, 11 days ; clerical work, 66 days ; examination of teachers, 15 days ; Sundays (34) and holidays (4), 38 days.

At the close of the year 1867 there were 53 schools in operation—of which 31 were Public, 6 Provisional, 8 Church of England, 2 Roman Catholic, 4 Presbyterian, and 2 Wesleyan. During this year 4 Public and 10 Provisional Schools have been established ; the Wauchope Presbyterian School has become Public, and the Huntingdon one Provisional ; the Church of England Schools at Goonoo Goonoo and Gunnedah, and the Presbyterian one at Wallaby Hills, have been closed ; and the Public School at Rocky River, as well as the Roman Catholic one at Gunnedah, re-opened. Applications, also, for the establishment of a Public School at Swan Creek and of Provisional ones at Coldstream and Blackman's Point have been dealt with ; and others for Provisional Schools at Barraba, Carroll, Limestone Creek, Rocky Mouth, Sherwood, Sancroix, and Yarrowell, and for Half-time Schools at Wollumban and Beechworth, are under consideration. Inquiries have also been made throughout my district respecting the supply of the means of education. Visits have been paid to some places, and correspondence held with teachers about others where schools of some kind are wanting ; but the results in most instances have not been satisfactory, the usual replies to my inquiries being, either that the roads, particularly in the eastern river districts, are too impracticable, and the distances of families too great, or that parents are too poor, indifferent, or wanting in unanimity of action to render the establishment of schools possible. Whatever truth there may be in these alleged difficulties, I am disposed to think that in many instances they may be overcome in a year or two by the establishment of Half-time Schools, which appear at present to be little understood. As regards the plea of poverty, I think, also, that when people are really too poor to give money towards the erection of a schoolhouse, they may be induced to give its equivalent in materials, providing the Council is willing to supplement it by the usual amount of aid.

69 schools have been in operation, 55 the whole year, and the remaining 14 a few months only. Of these, 60 have been visited for purposes of inspection. The schools at Ashford, Yamba, Palmer's Channel, Gunnedah (R.C.), Violet Dale, and Wallaby Hills were not in existence when I visited their districts ; those at Bingera and Huntingdon were not visited for want of opportunity, nor that of Nowendoc because it was placed on my list of schools too late in the year. Several visits of an incidental character have also been made, some schools being visited two or three times, according as opportunity offered.

The character of the school sites has been estimated with special reference to their healthiness, freedom from floods, and accessibility to the bulk of the population. In the first particular, the sites of all the schools are suitable, and in the second only two are indifferently so. As regards their accessibility, 35 are good, and the remaining 25 tolerable to moderate ; but the latter are with few exceptions as well chosen as the physical circumstances of the eastern river districts will admit.

The schoolhouses, viewed in relation to the accommodation they afford, as well as to their appearance and material conditions, vary much in character—from the well-designed brick edifice at Uralla to the dilapidated slab hut at Woodford Dale. Of the 60 buildings inspected, 8 are of brick or stone, 33 of weatherboard, and 19 of slabs. In most respects, those of brick or stone are suitable ; but those of weatherboard, though generally affording the requisite accommodation, are somewhat defective in appearance and structure : some requiring fire-places, others an external coat of paint, and most of them lining inside—which last defect if remedied would give the schoolrooms a neater appearance, and add, moreover, to the convenience of the teacher in his orderly arrangement of the maps, diagrams, &c. With one exception, the slab structures are occupied as Public or Provisional Schools, and are in many instances very inferior.

45 teachers out of 60 are provided with residences, which are usually of the same varying character as that of the schoolhouses to which they are generally attached. Of these, 10 are good, 21 fair, and 14 moderate or indifferent, among which last there are some of a very wretched description. In general, the teachers keep their houses in fair tenantable order ; but very few attempt to set them off with trees or flowers.

Though all the schools in my district have more or less land available to the children for recreation, yet only 35 out of the 60 inspected have properly fenced-in playgrounds, and of these 9 require clearing of long grass, stumps, or fallen timber. In no instance can I point to a school whose playground is provided

provided with a weather-shed, which is really a desideratum in the north-eastern and western parts of my district; and there is only one case of a school being provided with a lavatory. The character of the out-offices in general is not pleasing, too many of them being defective in accommodation, arrangement, material condition, or cleanliness.

The Public Schools are in general adequately supplied with good furniture. In twenty-three of them the supply is good; in six fair; and in those of Wardell, Wauchope, Rocky River, Dondingalong, Tucki Tucki, and Woodford Dale, moderate. In several instances, however, the desks are not secured to the floor, and in three only are they placed on gradient platforms—which arrangement I consider to be well suited for securing effective teaching and discipline. In the Provisional and the Denominational Schools the character of the fittings as to their arrangement, quantity, and quality, is less satisfactory. Of the former, it is good in two, fair in three, and moderate in seven; and of the latter, good in three, fair in seven, and moderate in three.

As regards books and apparatus, the condition of all the schools has much improved during the year, there being now but few which have not a sufficiency of material appliances to meet existing requirements.

In three-fourths of the schools the records are kept with neatness and accuracy; in the rest, with varying degrees of inefficiency, arising more from neglect and carelessness than from ignorance.

The following tabular form exhibits the Material Condition of the Schools:—

	CLASSER OF SCHOOLS.																	
	Public.			Provisional.			Church of England.			Roman Catholic.			Presbyterian.			Wesleyan.		
	Good.	Fair.	Mode-rate.	Good.	Fair.	Mode-rate.	Good.	Fair.	Mode-rate.	Good.	Fair.	Mode-rate.	Good.	Fair.	Mode-rate.	Good.	Fair.	Mode-rate.
Sites	21	14	...	5	7	...	5	3	...	1	1	...	1	...	...	1	1	...
Schoolhouses	14	14	7	1	3	8	5	2	1	...	2	...	1	...	...	1	1	...
Teachers' Residences	10	11	14	...	3	9	...	5	3	...	...	2	...	...	1	...	2	...
Play-grounds	6	16	13	...	...	12	3	2	3	...	...	2	1	...	...	...	1	1
Out-offices	8	4	23	...	...	12	1	4	3	...	1	...	...	1	...	...	1	1
Furniture	23	5	7	2	4	6	2	5	1	...	2	...	1	...	...	...	1	1
Books and Apparatus ...	14	14	7	...	5	7	3	4	1	...	2	...	...	1	...	1	1	...
Records	29	2	3	5	4	2	4	1	3	1	...	1	...	...	1	1	1	...

The punctuality of the attendance is in general fair. Where it is good or bad the prevailing tone of the school is usually of the same character. Where schools are located on the banks of creeks or rivers, it is usually faulty; but in some of these cases it might be much improved by teachers of energy, tact, and firmness of purpose. It appears to hold good in the schools of my district as it does in the schools of Sydney, that where teachers are popular with both pupils and their parents, more particularly so the pupils, the punctuality is satisfactory. The same remarks apply to the regularity of attendance, though with perhaps less force, the influences affecting it being to some extent peculiar. It appears from the school returns that 76 per cent. of the 4,134 pupils enrolled during the year, and 69 per cent. of the 3,176 during the last quarter of it, attended regularly; and I think that the mean of these two percentages may be taken as an estimate for a fair attendance, for in the best managed schools the percentage varies from 80 to 90, whilst in those of the worst description, from 50 to 60.

The following tables exhibit, for each class of schools, the numbers and ages both of the pupils on the roll and of those present on the day of inspection; also, the numbers and religious denominations of those on the roll during the last quarter of the year.

Numbers of Pupils enrolled on the day of examination:—

Schools.	Totals.		7 years and under.		8 years.		9 years.		10 years.		11 years.		12 years.	
	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.
Public	1011	920	484	403	141	112	114	97	85	94	73	82	114	132
Provisional	130	141	67	71	18	17	10	13	13	12	8	5	14	23
Denominational	347	333	166	139	39	47	41	35	35	25	33	25	33	66
Totals	1488	1394	717	613	198	176	165	145	133	131	114	112	161	221

Numbers of Pupils present on the day of examination:—

Schools.	Totals.		7 years and under.		8 years.		9 years.		10 years.		11 years.		12 years.	
	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.
Public	803	694	381	306	114	84	94	60	61	71	57	67	96	106
Provisional	93	90	48	49	13	6	7	11	8	8	7	4	10	12
Denominational	279	263	135	114	31	40	31	24	27	18	22	22	27	45
Totals	1175	1047	564	469	158	130	132	95	96	97	86	93	133	163

Name of Schools.	Numbers on the Rolls.								
	Boys.	Girls.	Total.	C.E.	R.C.	Pres.	Wes.	Others.	Total.
Public	1082	1019	2101	997	412	398	253	41	2101
Provisional	155	195	350	166	80	69	35	...	350
Denominational	371	354	725	347	223	58	85	12	725
Totals	1608	1568	3176	1510	715	525	373	53	3176

The condition of the schools, as regards cleanliness of appearance, is in general satisfactory, but is rather less so in point of neatness. A few of them exhibit both qualities in a high degree, and are valuable proofs of what painstaking teachers can achieve even amidst difficulties which less industrious and persevering ones consider impracticable. It is gratifying to state that there are only two or three schools particularly untidy, and in these the teachers are also untidy in their own persons, thus adding to the truth of the adage—"As is the teacher so is the school." The character of the schools in respect of both neatness and cleanliness may be stated thus:—Public—12 good, 18 fair, 5 moderate; Provisional—3 good, 2 fair, 5 moderate; Denominational—6 good, 4 fair, 3 moderate.

The discipline, though less satisfactory in respect of order than of cleanliness, is in a fair degree healthy. An apparent reason for this falling off is that some of the teachers have not had the advantages of training or of witnessing the working of efficient schools. Want of training, however, fails as an excuse for teachers neglecting to comply with the simple details of school management clearly defined in the Council's Regulations; it may excuse a teacher's ignorance of school technicalities, but not his negligence of the prescribed Time-table. The reason is, moreover, rendered somewhat nugatory by the case of those schools whose teachers, though untrained, are deserving of commendation for the pleasing tone of their discipline. My experience during the year has confirmed me in the opinion, that many teachers fail to reach that attainable high standard of discipline, by not perseveringly attending to its minor details. They seem either not to see clearly, or not to have an abiding consciousness of the important bearing such details have upon the results of their teaching and moral training of the pupils. This is more or less apparent in the school arrangements and the conduct of the pupils, defects in which particulars are not unfrequently passed unnoticed, for either the apparatus and furniture are not so conveniently and tastefully arranged, and the school operations so orderly and punctually conducted as they ought to be, or the pupils not sufficiently orderly in their movements and attitudes, diligent in their work, and polite in their manners. As regards discipline, the schools may be arranged as follows:—

Public	10 good, 19 fair, 5 moderate.
Provisional	2 " 4 " 5 "
Denominational	4 " 7 " 2 "

The classification of the pupils, in accordance with their intelligence and attainments, and the standard of proficiency, is carried out with fair success in most of the schools. Fair, however, is too low an estimate for a matter of such importance, and one that might be characterized as good if teachers would but exercise more patience, judgment, and firmness. In still too many schools are the classes fruitlessly cut up into sections, and the pupils too hastily removed from one to the other. Instances sometimes occur where the first class consists of three sections, and the second class of two, thus making, with the third class six divisions, to each of which the teacher is supposed to give equal shares of his attention; but I have reason to think that the share which falls to the lowest sections is small indeed. In some schools again there seems to be an unwise anxiety on the part of the teachers to regard babies as boys, and boys as youths. This is shown in the tender years of some of the pupils in the higher classes, where they have been placed for mere mechanical proficiency in one subject or another. For example, I have seen two children of five and six years of age reading the Fourth Book, in company with boys of eleven and thirteen years of age, and when questioned on the subject matter they displayed a total ignorance of the commonest terms. Such an example is an extreme one, but it serves to show how far a teacher's judgment may err in a matter of such importance. The hasty removal of children from class to class is moreover unwise in this respect; it serves to mislead parents as to the real capabilities of their children, who, in consequence, are taken from school earlier than is prudent, both as regards their prospects in life and the educational prospects of the next generation. The character of the schools, in respect of classification, is as follows:—

Public	10 good, 18 fair, 5 moderate.
Provisional	0 " 6 " 4 "
Denominational	2 " 7 " 4 "

As regards the subjects of instruction, Reading, Writing, and Arithmetic are taught in all the schools, Grammar and Geography in all but one. The other prescribed subjects do not receive the same amount of attention, owing either to the negligence of some teachers, in respect of the Object Lessons and Scripture Lessons, to alleged want of capacity of others in singing and drawing, or to the unmarried condition of others as regards sewing. The number of schools in which these subjects are not taught may be shown as follows:—Object Lessons, 8; Singing, 27; Drawing, 15; Scripture Lessons, 8; and Sewing, 12. Of the extra subjects, Geometry is taught in three schools, Latin in two, and Algebra in one.

Except in four instances the instruction is regulated by the prescribed forms of time table and programme of lesson, and, except in twelve, it is registered daily, in two of which it is registered monthly, and in one weekly. The time table is an index of the teacher's ability of regulating the business of his school, and requires in its construction the exercise of patience and good judgment. There are, however, comparatively few good time tables in the schools of my district, those that are defective showing either that the work of the school does not move smoothly or quietly, that each class is not profitably occupied, and does not receive during the day its due amount of direct instruction from the teacher, or that each subject of instruction does not receive that degree of attention due to its importance. In the construction of programmes, however, the teachers in general are more successful, those who fail, doing so by using dots or ditto's in lieu of systematising the course of instruction under the heads more particularly of Arithmetic, Grammar, Geography, and Object Lessons. As far as I have had opportunities of judging, these documents appear to be faithfully observed, except in a few instances where I have visited schools incidentally, I have found the teachers not strictly adhering to the time table. There is one defect, however, I desire to direct particular attention to, and that is, that teachers, in too many instances, do not exercise sufficient taste in framing, or care in preserving them. The character of these documents in the various schools is shown as follows:—

Public	10 good, 17 fair, 7 moderate.
Provisional	0 " 4 " 4 "
Denominational	1 " 10 " 1 "

The

The character of the instruction is the least satisfactory feature of the schools in my district. The results of the examination show that there are too many children possessing but a moderate and even small proficiency in the subjects taught. The defect is no doubt due in some measure to the irregularity of the attendance, but more particularly to defects in the teaching. There are obvious signs that the lower classes have not received their due share of the teacher's attention; and that the teaching in the upper classes has been mechanical and ineffective. The attention of the children in general is fair; but the answering is, in many instances, partial and defective in intelligence, being sometimes even wild. The character of the teaching has shown itself, also, in the lessons given before me by the teachers. Too many of them have been defective in matter and method,—in the matter as regards its fulness and arrangement, and in the method as regards the teacher's powers of sustaining the undivided attention of his pupils, and of presenting to them a clear, practical, or scientific view of the subject in hand, with a due regard to the exercise of their faculties of observation and understanding. Though it is true that several teachers have not been trained to their profession, yet the examples of a few of them convince me that if the rest would but prepare their lessons, and study more the few excellent treatises on school management, they would, by the exercise of energy and perseverance, achieve higher results in their schools.

The quality of the reading in one-half of the schools varies from fair to tolerable; and in the other half from moderate to small. I have heard very few examples of intelligent and expressive reading—few teachers seeming to aim at higher results than fluency and correctness of pronunciation. Where the reading is fluent it is frequently defective as regards clearness, sharpness, and neatness of articulation, and sentence after sentence is read with little regard to pause, emphasis, or modulation. These defects more or less characterize the reading in all the schools, and will continue to do so until teachers give greater attention to it in the lower classes, and treat it more as an art than a mere exercise,—as an art requiring for its cultivation not only practice, but judicious instruction and the presentation of good models. The pupils in general pass a creditable examination in oral spelling; but they display but a moderate acquaintance with the meaning of words, or with the subject matter of the reading lessons. The character of the reading in all the schools may be stated as follows:—

Public	21	fair to tolerable,	14	moderate to small.
Provisional	4	"	6	"
Denominational	5	"	8	"

The writing is fairly satisfactory, being good in ten schools, fair in thirty-seven, and moderate or indifferent in eleven. As a rule, both teachers and parents attach more importance to this subject of instruction than they do to any other. With a few exceptions, where blank books are used, copy-books with head-lines are used in the upper classes of all schools; but there are instances here and there where pupils are unprovided with them on account of the poverty or indifference of their parents. Teachers in many instances have complained to me of the difficulty of procuring good copy-books, those to be obtained at country stores being both high in price and at the same time of an inferior description. In the lower classes slates are used; but they are not always ruled with indelible lines, as they ought to be. The individual method of teaching writing is the one that prevails in most schools—few teachers appearing to understand the advantages or the method of teaching it collectively, by setting progressive copies on the blackboard and accompanying them at intervals by remarks of an explanatory character. As in the reading, so in the writing—the lower classes receive less attention than the upper. This is not only unjust, but unwise, inasmuch as teachers entail upon themselves the trouble of eradicating (if they can do so) the careless habits in the latter that have been contracted in the former. Another mode of teaching writing is by the dictation lesson, which is also the most effective mode of teaching spelling as well, as means of cultivating the intelligence of children; for I have invariably found proficiency in this subject accompanied by proficiency in others. But it is of little advantage to the teacher if he does not correct the mistakes in spelling and writing, which few teachers appear to do, judging from the moderate results of the examination in this particular. In consideration, however, of teachers having to supervise the work of three classes, I have recommended them to occasionally vary the form of the lesson, by allowing the children to write from memory what has been given them to learn at home during the week—such as short interesting stories or pieces of poetry, the names of articles of food, dress, or household furniture, garden produce, implements, or operations, &c.; for experience proves that such exercises are not only interesting to children, but are also instrumental in awakening their intelligence and forming in them habits of observation and inquiry. The character of the writing in all the schools is as follows:—

Public	5	good,	27	fair,	3	moderate or bad.
Provisional	3	"	2	"	5	"
Denominational	2	"	8	"	3	"

With a view of testing the soundness of the teaching in arithmetic, I have invariably dictated questions of a simple practical character, in addition to others of a more routine description; and where I have found classes in the higher rules, I have taken them back to the more elementary ones, and proceeded upwards till I found it useless to proceed farther. I may remark, also, that all the classes have been examined in notation and numeration. The results of the examinations prove that the teaching is neither sufficiently practical nor effective: for in one school only is it good, and in fifteen fair, whilst in forty-two it varies from moderate to indifferent. They also prove that it is neglected in the lower classes, where it ought to be more efficient, and which neglect accounts for the failures in the upper. Notation is taught with fair success in the better class of schools; but only indifferently in those of inferior description, in which I have not unfrequently found third class pupils unable to write correctly numbers of three or four figures. In the third classes of thirty-three schools I find that 26 per cent. of the pupils failed in writing 1010 correctly, 46 per cent. 10,050, and 70 per cent. 1,070,006. As regards slate arithmetic, the teaching in most of the schools is neither rational nor practical. The memory is cultivated at the expense of the understanding, rules taking precedence of first principles, and the abstract of the concrete. Teachers also fail to apply the rules they teach, by not giving their pupils sufficient practice in calculation relating either to the school or play-ground, home or store, farm or station; for I have found fourth class pupils working sums in fractions, 60 per cent. of whom failed to solve an ordinary question involving compound addition and subtraction; and of the third class children, in eighteen schools, 89 per cent. failed to solve a question involving simple subtraction and addition. Again, in the third class of ten schools, 79 per cent. of the pupils failed to solve a question in subtraction where the lesser number was placed above the greater; and other examples might be adduced to show how little the intelligence of the children is exercised. The character of the arithmetic in all the schools is as follows:—

Public	1	good,	12	fair,	22	moderate.
Provisional		"	2	"	8	"
Denominational		"	1	"	12	"

Grammar is taught in all the schools but one, with degrees of efficiency varying from fair to failure. It receives greater attention in Public Schools than it does in Provisional or Denominational. Similar defects characterize the teaching of it as of arithmetic. It is not made sufficiently subservient to securing intelligent writing or reading, for I have frequently found third class children unable to point out the relations of such words as relative pronouns, prepositions, or participles. In the second, and even third class, children not unfrequently give correct definitions of the parts of speech, but fail to give examples of them—a common error being for children to present you with a slate, book, or pencil as examples of a noun, which they had just previously described as a name. Want of precision in the teaching

is also shown in the defects that characterize the spelling of grammatical terms. Analysis, though so valuable as a means of securing intelligent reading, does not receive that attention it deserves, few teachers appearing to deal with it practically and effectively. Except in a few Provisional and Denominational Schools, composition is taught with fair success; but I think that the exercises in it might be made more practical by giving the elder pupils more practice in writing letters, bills, receipts, and descriptions of matters of juvenile local interest. The condition of the schools, as regards the instruction in grammar, is as follows:—

Public.....	1 good, 13 fair, 21 moderate.
Provisional.....	2 " 7 "
Denominational.....	2 " 11 "

Geography is taught in all the schools but one; fairly in twenty-one; and moderately or indifferently in the rest. I must remark, however, that it is taught satisfactorily in the third classes of a few schools, but not so in the second, on which account I have been able to describe such schools as good in this particular. I must remark also, that the teachers of Provisional and Denominational Schools teach it less effectively than those of Public Schools. The second classes in general have but a moderate knowledge of their own localities, and but vague notions of the uses of maps, few teachers appearing to follow the effective method of drawing on the blackboard and explaining plans of the school or surrounding country. The third classes also give evidence of defective teaching, for they frequently show signs of inability to answer questions without wistfully glancing at the map, and display a better knowledge of distant countries than of their own. Exercises in map drawing from sight or from memory are given in very few schools, which is to be regretted, on account of the beneficial effects they have upon the minds of children. The character of the instruction in geography as given in the various schools is as follows:—

Public.....	17 fair, 18 moderate.
Provisional.....	2 " 7 "
Denominational.....	2 " 11 "

Object Lessons receive tolerable attention in most of the schools, but only so far as the communication of information is concerned, for many of the teachers have not a clear apprehension of their utility as means of cultivating the intelligence of children, or of training them to habits of observation and inquiry. The object lesson proper is given in few schools, those usually given being either picture lessons or lessons on some remote object that appeals more to the mental vision of the pupils than to their perceptive faculties. Pictures are useful and even sometimes necessary, but they are after all mere substitutes for real objects, with which they are unable to compete in commanding the interest, attention, and mental activity of children. Many teachers also fail in the proper mode of giving the lessons, whether they be on pictures or remote objects; for they either show a feeble command of their subject and want of energy and liveliness in their manner, or they fail to give that due admixture of questioning, explanation, and illustration the lesson requires in order to be effective. The character of the instruction in object lessons as given in the various schools is as follows:—

Public.....	20 fair, 12 moderate, 3 failure.
Provisional.....	3 " 3 " 4 "
Denominational.....	5 " 7 " 1 "

Singing is practised in thirty-one schools, in eight of which it is taught from musical notation. With a few commendable exceptions, the proficiency attained in this subject is nominal. Some teachers, failing to appreciate its high importance as a humanising agency, pay little attention to it; while others, who appear to be anxious to introduce it into their schools, offer the feeble excuse that they are unable to teach it for want of an ear for music, thus assisting to perpetuate a fallacy which they ought to feel professionally bound to ignore. I feel it desirable also to mention, that a few teachers are under the impression that third class teachers are not expected to teach music, because it is not an essential subject in their own examinations. The character of the singing in the various schools is as follows:—

Public.....	5 fair, 16 moderate, 14 failure.
Provisional.....	3 " 7 "
Denominational.....	3 " 4 " 6 "

Drawing is taught with average tolerable efficiency in forty-two schools, many teachers of which testify that their pupils in general manifest a lively interest in its exercise, which fact alone renders it a matter of regret that it is not taught in the schools generally. Similar remarks apply to this subject as to singing, as regards the excuses of teachers not teaching it. The character of the drawing in the various schools is as follows:—

Public.....	3 good, 18 fair, 6 moderate, 8 failure.
Provisional.....	1 " 2 " 7 "
Denominational.....	2 " 5 " 5 " 1 "

Sewing is taught in four-fifths of the schools with average tolerable efficiency; the remaining one-fifth of them being in charge of unmarried male teachers. The time devoted to it is from three to six hours a week. The needlework exhibited in some of the schools was of a plain and useful character, whilst in others it consisted chiefly of bead or wool mats, book-marks, crochet, and other work of a fancy description. As far as I could judge from the specimens of sewing, and the replies of teachers to my inquiries, the teaching appeared to be defective in not being sufficiently systematic. The character of the sewing in the various schools is as follows:—

Public.....	3 good, 19 fair, 11 moderate, 2 failure.
Provisional.....	2 " 1 " 7 "
Denominational.....	6 " 4 " 3 "

The number of teachers exclusive of six pupil teachers employed in the schools was seventy-one, distributed and classified as follows:—

	Classes I.		II.		III.		Probationary.
	A.	B.	A.	B.	A.	B.	
Public.....	2	1	1	17	8	6	6
Provisional.....				2	2		13
Denominational.....			2	1	4	4	1

The incomes of teachers are derived from two sources: from the Council, in the form of fixed salaries regulated according to classification, and from the school fees of the pupils, which are regulated in many instances by the School Boards with the sanction of the Council. The maximum average and minimum incomes of those teachers whose schools have been open the whole year, may be shown as follows:—

	Maximum.			Average.			Minimum.		
	£	s.	d.	£	s.	d.	£	s.	d.
Public.....	243	6	10	117	10	9	66	0	0
Provisional.....	85	10	0	54	4	0	40	0	6
Denominational.....	179	5	2	114	17	8	78	12	0

Many

Many of the teachers complain greatly of the inadequacy of their incomes; some alleging that they find it impossible to keep out of debt, even in providing themselves and their families with the necessaries of life. They complain that the school fees are not only low and precarious, but that some parents will not pay in accordance with their means, and that others will only pay in produce, which they rate higher than its market value; and they further complain of receiving no allowance in consideration of the high prices of goods, which, on account of high rates of land carriage, are 50 or 100 per cent. in advance of those current in Sydney.

In general the teachers are persons of good moral character. I found them courteous, willing to receive recommendations, and ever ready to facilitate the discharge of my duties. With few exceptions they evince an earnest desire to discharge their duties to the best of their abilities.

Except in a few commendable instances, the local supervision is nominal, many teachers complaining that the members of Local Boards rarely visit their schools, or hold meetings for the consideration of matters affecting the welfare of them.

J. S. JONES,
Inspector of Armidale District.

CENTESIMAL ESTIMATE of the Proficiency of Pupils.

First Classes. Average ages—Boys, 7·6 years; Girls, 7·8 years.

	Public.			Provisional.			Church of England.				Roman Catholic.				Presbyterian.				Wesleyan.				
	630			90			180				54				14				35				
	Good to very fair.	Fair to tolerable.	Moderate to small.	Failure.	Good to very fair.	Fair to tolerable.	Moderate to small.	Failure.	Good to very fair.	Fair to tolerable.	Moderate to small.	Failure.	Good to very fair.	Fair to tolerable.	Moderate to small.	Failure.	Good to very fair.	Fair to tolerable.	Moderate to small.	Failure.			
Reading—																							
Enunciation	3	38	44	15	60	38	2	29	71	...	...	73	27	...	...	100	...	...	...	22	78	...	...
Spelling	14	60	11	15	11	62	25	12	78	10	...	73	27	...	100	...	...	...	...	22	78	...	...
Meaning of words	4	27	53	15	45	53	2	...	33	67	...	...	73	27	...	100	...	...	...	22	78	...	...
Knowledge of subject	4	52	29	15	45	53	2	...	34	66	...	...	73	27	...	100	...	...	...	100	...	...	...
Writing—																							
On slates	11	44	39	16	32	32	46	29	20	51	...	52	21	27	...	100	...	...	...	22	78	...	...
Dictation .....	...	22	47	31	11	28	8	18	24	21	37	15	58	27	...	100	...	...	...	22	78	...	...
Arithmetic—																							
Notation	9	35	46	10	24	22	12	24	72	4	52	21	27	...	100	...	...	...	...	100	...	...	...
Slate work	1	19	52	28	37	33	30	12	70	18	...	52	48	...	100	...	...	...	...	160	...	...	...
Object Lesson																							
...	4	38	48	10	13	28	59	12	51	37	...	100	...	...	100	...	...	...	...	100	...	...	...
Singing																							
...	19	35	46	...	...	...	100	28	25	47	...	100	...	...	100	...	...	...	...	100	...	...	...

Second Classes. Average ages—Boys, 8·3 years; Girls, 9·1 years.

	Public.			Provisional.			Church of England.				Roman Catholic.				Presbyterian.				Wesleyan.				
	478			58			102				18				9				20				
	Good to very fair.	Fair to tolerable.	Moderate to small.	Failure.	Good to very fair.	Fair to tolerable.	Moderate to small.	Failure.	Good to very fair.	Fair to tolerable.	Moderate to small.	Failure.	Good to very fair.	Fair to tolerable.	Moderate to small.	Failure.	Good to very fair.	Fair to tolerable.	Moderate to small.	Failure.			
Reading—																							
Enunciation, &c.	47	53	...	...	35	45	...	...	100	...	...	100	...	...	...	100	...	...	...	30	70	...	...
Spelling	26	84	10	...	5	90	5	24	36	40	...	100	...	...	...	100	...	...	...	70	30	...	...
Meaning of words	10	34	56	...	...	27	73	...	12	88	...	...	100	...	...	100	...	...	...	100	...	...	...
Knowledge of subject	16	54	30	...	41	59	...	10	14	76	...	38	62	...	100	...	...	...	...	100	...	...	...
Writing—																							
Copies	21	56	20	...	39	43	18	13	83	4	...	62	38	...	...	100	...	...	...	70	30	...	...
Dictation	17	8	70	...	5	10	34	24	44	32	...	62	38	...	...	100	...	...	...	30	70	...	...
Arithmetic—																							
Notation	10	18	67	...	5	12	17	...	84	16	...	100	...	...	...	100	...	...	...	70	30	...	...
Slate work	3	14	79	...	4	...	9	13	71	16	...	62	38	...	...	100	...	...	...	100	...	...	...
Grammar—																							
Definitions	2	40	50	...	8	28	34	...	13	85	2	...	100	...	...	100	...	...	...	100	...	...	...
Parsing	2	54	36	...	8	28	34	...	13	85	2	...	100	...	...	100	...	...	...	30	70	...	...
Geography—																							
Locality	8	40	52	...	12	50	38	...	20	80	...	100	...	...	...	100	...	...	...	100	...	...	...
Uses of map	8	6	81	...	5	...	62	...	100	...	...	...	100	...	...	100	...	...	...	100	...	...	...
Definition	12	50	38	...	28	34	38	...	18	87	...	...	32	68	...	100	...	...	...	100	...	...	...
Object Lesson																							
...	18	41	33	...	8	28	12	...	41	57	2	...	32	68	...	100	...	...	...	100	...	...	...
Singing																							
...	38	28	34	...	...	...	100	...	29	23	48	68	...	32	...	100	...	...	...	...	...	...	100
Drawing																							
...	17	34	14	35	10	...	90	13	10	55	22	...	100	...	...	100	...	...	...	30	...	70	...

Third Classes. Average ages—Boys, 11·1 years; Girls, 10·2 years.

	Public.			Provisional.			Church of England.				Roman Catholic.				Presbyterian.				Wesleyan.				
	343			35			54				25				10				14				
	Good to very fair.	Fair to tolerable.	Moderate to small.	Failure.	Good to very fair.	Fair to tolerable.	Moderate to small.	Failure.	Good to very fair.	Fair to tolerable.	Moderate to small.	Failure.	Good to very fair.	Fair to tolerable.	Moderate to small.	Failure.	Good to very fair.	Fair to tolerable.	Moderate to small.	Failure.			
Reading—																							
Enunciation, &c.	61	39	...	...	5	45	50	...	42	10	90	...	64	36	64	...	100	...	...	...	100	...	...
Spelling	29	64	7	...	31	51	18	...	58	31	69	...	36	36	100	...	100	...	...	...	42	58	...
Meaning of words	48	52	...	...	11	25	64	...	31	50	50	...	100	64	64	...	100	...	...	...	42	58	...
Knowledge of subject	19	56	25	...	14	22	64	...	50	50	50	...	36	64	64	...	100	...	...	...	42	58	...
Writing—																							
Copies	43	57	...	...	34	65	...	...	38	62	...	...	64	36	...	...	100	...	...	...	58	42	...
Dictation	33	44	23	...	37	20	28	15	31	69	...	...	100	...	...	...	100	...	...	...	100	...	...
Arithmetic	43	23	34	...	48	8	44	...	25	75	...	100	...	...	...	...	100	...	...	...	100	42	58
Notation	3	42	50	5	2	12	88	...	100	...	...	...	100	...	...	...	100	...	...	...	42	58	...
Slate work	3	42	50	5	2	12	88	...	100	...	...	...	100	...	...	...	100	...	...	...	42	58	...
Grammar—																							
Accidence	8	35	57	...	2	65	33	...	8	92	...	...	100	...	...	...	100	...	...	...	100	...	...
Parsing	16	33	51	...	11	54	35	...	50	50	...	...	100	...	...	...	100	...	...	...	100	...	...
Analysis	13	16	39	32	15	85	...	...	50	22	28	...	100	...	...	...	100	...	...	...	100	...	...
Composition	13	43	21	23	14	22	64	...	64	18	18	...	100	...	...	...	100	...	...	...	100	...	...
Geography	5	47	43	5	14	48	38	...	100	...	...	...	100	...	...	...	100	...	...	...	42	58	...
Object Lesson	53	41	16	10	22	16	62	...	31	51	18	...	100	...	...	...	100	...	...	...	100	...	...
Singing	27	34	39	...	100	...	...	...	50	50	...	...	100	...	...	...	100	...	...	...	...	...	100
Drawing	7	49	18	26	3	...	69	...	11	62	27	...	30	34	...	36	100	...	...	...	42	...	58
Scripture	20	25	4	51	2	28	11	59	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...

Fourth Classes. Average ages—Boys, 11·4 years; Girls, 11·4 years.

	Public.			Provisional.			Church of England.				Roman Catholic.				Presbyterian.				Wesleyan.				
	46						7																
	Good to very fair.	Fair to tolerable.	Moderate to small.	Failure.	Good to very fair.	Fair to tolerable.	Moderate to small.	Failure.	Good to very fair.	Fair to tolerable.	Moderate to small.	Failure.	Good to very fair.	Fair to tolerable.	Moderate to small.	Failure.	Good to very fair.	Fair to tolerable.	Moderate to small.	Failure.			
Reading—																							
Enunciation	42	58	...	...	...	...	...	...	100	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Spelling	42	58	...	...	...	...	...	...	100	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Derivation	42	58	...	...	...	...	...	...	100	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Knowledge of subject	42	58	...	...	...	...	...	...	100	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Writing—																							
Copies	42	58	...	...	...	...	...	...	100	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Dictation	42	58	...	...	...	...	...	...	100	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Arithmetic	42	58	...	...	...	...	...	...	100	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Notation	42	58	...	...	...	...	...	...	100	...	...	...	...	...	...	...	...	...	...	...	...	...	...
On slate	42	58	...	...	...	...	...	...	100	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Grammar—																							
Accidence	42	58	...	...	...	...	...	...	100	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Parsing	42	58	...	...	...	...	...	...	100	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Analysis	42	58	...	...	...	...	...	...	100	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Composition	42	58	...	...	...	...	...	...	100	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Geography	42	58	...	...	...	...	...	...	100	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Object Lesson	42	58	...	...	...	...	...	...	100	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Singing	42	58	...	...	...	...	...	...	100	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Drawing	42	58	...	...	...	...	...	...	100	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Geometry	42	58	...	...	...	...	...	...	100	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Latin	42	58	...	...	...	...	...	...	100	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Algebra	42	58	...	...	...	...	...	...	100	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Scripture Lessons	42	58	...	...	...	...	...	...	100	...	...	...	...	...	...	...	...	...	...	...	...	...	...

ARMIDALE DISTRICT.

DETAILED Statement of the Condition of Public Schools inspected in 1868.

ARMIDALE :—Visited, 1st and 2nd September, 1868.

Numbers at the examination :—Boys, 61 ; girls, 56 ; total, 117.

1. The building is, on the whole, in good condition. The schoolroom is well furnished, but is too small for the numbers in attendance. Accommodation for boarders is needed. The organization is good. 2. The moral character of the school is good. 3. The prescribed subjects are taught; the teaching is painstaking and well regulated, and the methods are applied with intelligence and effect. 4. The average proficiency and mental culture of the pupils are fair.

BALLINA :—Visited, 10th November, 1868.

This school was temporarily closed when I visited the district.

1. Repairs to the schoolhouse and fence are needed; otherwise, the organization is fairly satisfactory. 2. As regards neatness and cleanliness, the appearance of the schoolroom is not satisfactory. 3. The prescribed subjects are taught, except singing, and the lesson documents fairly arranged.

BENDEMEER :—Visited, 10th and 11th June, 1868.

Numbers at the examination :—Boys, 16 ; girls, 16 ; total, 32.

1. The material condition of the building is good, but the schoolroom is rather small, and the out-offices not decently arranged. The supply of furniture and apparatus is adequate. The organization is fair. 2. The moral character of the school is, in general, pleasing. 3. The prescribed subjects are taught, and the lesson documents and classification carefully arranged. The teaching is tolerably intelligent, but is wanting in energy and vivacity. 4. The proficiency of the first class is moderate; that of the second and third classes, tolerable.

BINGERA :—

This school was not visited for want of opportunity.

CASINO :—Visited, 27th November, 1868.

Numbers at the examination :—Boys, 27 ; girls, 26 ; total, 53.

1. Repairs are needed to the roof; otherwise, the material condition of the building is satisfactory. The organization is fair. 2. The moral character of the school is passable. 3. The prescribed subjects are taught with tolerable skill, but the classification is defective, and the teaching not equally distributed. 4. The proficiency of the pupils ranges from small to very fair.

CHATSWORTH ISLAND :—Visited, 13th October, 1868.

Numbers at the examination :—Boys, 11 ; girls, 32 ; total, 43.

1. The buildings have been recently erected, and are suitable in design and accommodation. The school is well furnished, and adequately supplied with apparatus. The organization is good. 2. The moral character of the school is pleasing. 3. The prescribed course of instruction is followed, and regulated with fair skill. The teaching is painstaking, and fairly effective. 4. The attainments of the pupils are reasonably satisfactory.

DONDINGALLONG :—Visited, 8th December, 1868.

Numbers at the examination :—Boys, 3 ; girls, 5 ; total, 8.

1. The building is unsuitable, being a small, low slab hut, badly lighted and furnished. The playground is not enclosed, and the out-office is in bad condition. The organization is indifferent. 2. The pupils are irregular in their attendance, and the discipline is somewhat injudicious; otherwise, the moral aspect of the school is fairly satisfactory. 3. With the exception of singing, drawing, and object lessons, the prescribed subjects are taught. The instruction is tolerably well regulated, but is deficient in earnestness and intelligence. 4. The attainments and mental culture of the pupils are but moderate.

EUROKA :—Visited, 10th December, 1868.

Numbers at the examination :—Boys, 18 ; girls, 16 ; total, 34.

1. The schoolhouse and residence need painting, the playground clearing of fallen timber, and the out-offices arranging more suitably; otherwise, the organization is tolerable. 2. The moral aspect of the school is pleasing. 3. The prescribed subjects are taught, except singing. The lesson documents and classification are arranged with fair skill, and the teaching is painstaking and tolerably effective. 4. The general proficiency of the pupils is tolerably satisfactory.

NORTH GRAFTON :—Visited, 21st and 22nd September, 1868.

Numbers at the examination :—Boys, 64 ; girls, 53 ; total, 117.

1. The material condition of the schoolhouse and residence is unsatisfactory. The schoolroom is too small, and, moreover, badly lighted and ventilated; the playground is not fenced in, and the out-offices are not suitably arranged. There is a good supply of working materials, but the furniture, though sufficient, is in keeping with the school building. 2. The discipline is defective in minor details; otherwise, the moral aspect of the school is healthy and fairly satisfactory. 3. The prescribed subjects are taught, and the lesson documents are arranged with intelligence, but the classification is somewhat defective. The teaching is painstaking, and fairly effective. 4. The proficiency of the pupils ranges from moderate to fair.

NORTH GRAFTON (Infants) :—Visited, 25th December, 1868.

Numbers at the examination :—Boys, 25 ; girls, 13 ; total, 38.

1. The schoolroom is suitable, but not sufficiently clean and orderly; the organization in other respects is fair. 2. The moral character of the school is fair. 3. The instruction is suitable, intelligently regulated, and tolerably effective. 4. The average proficiency of the pupils is tolerable.

SOUTH

SOUTH GRAFTON :—Visited, 23rd September, 1868.

Numbers at the examination :—Boys, 32 ; girls, 18 ; total, 50.

1. The building is small, and its material condition is not sufficiently satisfactory. The organization is, in other respects, tolerable. 2. The pupils are irregular in their attendance ; otherwise, the moral character of the school is pleasing. 3. The prescribed course of instruction is followed, and intelligently regulated ; and the teaching is painstaking and tolerably skilful. 4. The proficiency of the pupils is tolerable.

GUNDARIMBA :—Visited, 4th November, 1868.

Numbers at the examination :—Boys, 16 ; girls, 18 ; total, 34.

1. The building is too small, and also defective in structure ; the organization in other respects is passable. 2. The moral character of the school is, on the whole, pleasing. 3. The prescribed subjects are taught, except object lessons, singing, drawing, sewing, and the Scripture lessons. The classification is judicious, but the teaching, though fairly intelligent, is not properly regulated, there being no programmes or registers of lessons. 4. Considering the ages of the pupils, and the recent establishment of the school, the attainments and mental culture, though barely tolerable, are reasonably satisfactory.

INVERELL :—Visited, 24th June, 1868.

Numbers at the examination :—Boys, 23 ; girls, 9 ; total, 32.

1. Repairs to the schoolhouse and residence are needed ; otherwise the organization is fair. 2. The moral character of the school is tolerably satisfactory. 3. The prescribed subjects are taught, except drawing and singing. The instruction is imparted with fair skill, but with lack of animation and energy. 4. The average proficiency of the pupils is fair.

KELLY'S PLAINS :—Visited, 7th May, 1868.

Numbers at the examination :—Boys, 14 ; girls, 18 ; total, 32.

1. The schoolhouse and residence are in fair material condition, but the play-ground needs fencing and clearing. The difficulty of procuring water is greatly felt by the teacher. The inscription "Public School," has not yet been placed over the door of the schoolhouse. In other respects the organization is fair. 2. The general appearance and behaviour of the pupils are creditable, but the character of the attendance is unsatisfactory. The moral tone of the school is, in general, fair. 3. The prescribed subjects are taught, except the Scripture lessons. The lesson documents and classification are fairly arranged, and the teaching is characterized by industry, energy, and tolerable ability. 4. The proficiency of the pupils is tolerable.

WEST KEMPSEY :—Visited, 8th December, 1868.

Numbers at the examination :—Boys, 27 ; girls, 21 ; total, 48.

1. The material condition of the buildings, and the supply of material appliances, are fairly satisfactory. The arrangement of the out-offices is defective. The organization is fair. 2. As regards the attendance, appearance, and behaviour of the pupils, the moral character of the school is fair. The movements of the pupils require to be more strictly regulated. 3. The prescribed subjects are taught with fair skill and efficiency. 4. The attainments and mental culture of the pupils are fair.

LISMORE :—Visited, 23rd and 24th November, 1868.

Numbers at the examination :—Boys, 14 ; girls, 20 ; total, 34.

1. This school is in good material condition, and is well found in furniture and apparatus. The organization is good. 2. The discipline is lax, and the character of the pupils for politeness of manners and diligence is only moderately satisfactory. The school operations are conducted with insufficient order and punctuality. The moral character of the school is not pleasing. 3. The prescribed subjects are taught ; the classification is on the whole judicious, and the lesson documents are constructed with fair skill, but do not appear to be punctually followed. There is a lack of earnestness, energy, and animation in the teaching. 4. The general proficiency and mental culture of the lower classes are moderate, and of the third class, fair.

MACLEAN :—Visited, 14th October, 1868.

Numbers at the examination :—Boys, 18 ; girls, 14 ; total, 32.

1. The school building needs painting ; otherwise, its material condition is good. The schoolroom is too small, and is, moreover, badly ventilated. There is a fair supply of apparatus, but additional furniture is needed. The organization is tolerably satisfactory. 2. The moral character of the school is tolerable. 3. The prescribed subjects are taught, with the exception of singing, needlework, and the Scripture lessons. Though the classification is tolerably judicious, the teaching is unsystematic and deficient in power and intelligence. 4. The general proficiency of the pupils is moderate.

NARRABRI :—Visited, 3rd and 4th June, 1868.

Numbers at the examination :—Boys, 32 ; girls, 16 ; total, 48.

1. The school is conducted in a small, badly furnished, and unsuitable slab building ; but a superior brick schoolhouse and teacher's residence are in course of erection. There is an adequate supply of working materials, but the organization is only moderately satisfactory. 2. The pupils are neat and clean, but neither quiet, orderly, nor sufficiently diligent. Their regularity and punctuality of attendance is not satisfactory. The present moral character of the school is moderate ; but it is just to the teacher to mention, that the school has been but recently established. 3. The instruction is, for reasons just given, of an elementary character. The classification is too minute to be effective, and the teaching, though regulated by fairly arranged lesson documents, is deficient in energy and skill. 4. The proficiency of the first class is small, and of the second and third classes, moderate.

PALMER'S ISLAND :—Visited, 12th October, 1868.

Numbers at the examination :—Boys, 12 ; girls, 21 ; total, 33.

1. The building is suitable, but requires painting. The playground is not fenced in, nor provided with out-offices. Additional furniture is needed. The organization is moderate. 2. The discipline is lax, the schoolroom is rather untidy, and the school operations are not conducted with promptness, order, or quietness.

quietness. The behaviour of the pupils is passable, their appearance respectable, but the punctuality of their attendance unsatisfactory. The moral character of the school is moderate. 3. The prescribed subjects not taught are, sewing and singing, and small attention has been given to Scripture lessons. The classification is defective, the instruction is not properly regulated, and the teaching is only moderately intelligent and effective. 4. The proficiency and mental culture of the pupils are moderate.

PORT MACQUARIE (Boys) :—Visited, 2nd December, 1868.

Number at the examination :—Boys, 51.

1. The schoolhouse, teacher's residence, and out-offices are badly in need of repairs. Additional furniture is required; otherwise, there is an ample supply of working materials. The organization is tolerably satisfactory. 2. The moral character of the school is fair. 3. The prescribed subjects are taught; the classification and lesson documents are arranged with fair skill; and the teaching, though defective in the first-class, is, in the upper classes, painstaking and respectable. 4. The proficiency of the first class is moderate, and that of the second and third classes, fair.

PORT MACQUARIE (Girls) :—Visited, 3rd December, 1868.

Number at the examination :—Girls, 23.

1. This school, like the boys' school, is conducted in a spacious, well lighted and ventilated room, formerly used as a sick ward of a military hospital. A book-press and additional working materials are needed. 2. The moral character of the school is pleasing. 3. The instruction is well-regulated, and the prescribed subjects are taught with pleasing energy and fair efficiency. 4. The proficiency of the pupils is fair.

ROCKY RIVER :—Visited, 11th July, 1868.

No examination was held, on account of the recent re-opening of the school. Numbers on the roll :—Boys, 19; girls, 25; total, 44.

1. The schoolhouse is in a dilapidated condition, the playground is not fenced in, and the furniture is both scanty and very unsuitable. A new and suitably furnished building is badly needed.

SAUMAREZ CREEK :—Visited, 8th May, 1868.

Numbers at the examination :—Boys, 17; girls, 16; total, 33.

1. The schoolhouse and teacher's residence need painting, and the playground clearing of standing timber. The supply of furniture and apparatus is suitable and adequate. The organization is fair. 2. The moral aspect of the school is pleasing. 3. The prescribed subjects are taught with praiseworthy earnestness and tolerable efficiency; the classification is arranged with fair skill, and the lesson documents are neatly and intelligently constructed. 4. The average proficiency of the pupils is tolerable.

SEVEN OAKS :—Visited, 14th December, 1868.

Numbers at the examination :—Boys, 12; girls, 16; total, 28.

1. The building and teacher's residence are in fair condition, but they require painting to preserve them from the weather. There is a good supply of furniture and apparatus. The organization is fair. 2. The moral character of the school is fairly satisfactory, as regards the appearance and behaviour of the pupils, but unsatisfactory as regards their attendance. 3. With the exception of singing, the prescribed subjects are taught, and the instruction is regulated with fair ability. Tolerable practical skill is exhibited in the teaching. 4. The average proficiency of the pupils is tolerable.

SMITH'S FLAT :—Visited, 28th September, 1868.

Numbers at the examination :—Boys, 23; girls, 14; total, 37.

1. This school is in good material condition, and is well supplied with educational appliances. The playground needs fencing in, and the schoolroom lengthening, to admit of a proper arrangement of the furniture. 2. The moral character of the school is pleasing. 3. The prescribed subjects are taught, the instruction is well regulated, and the teaching is characterized by pleasing earnestness, diligence, and fair ability. 4. The average proficiency of the pupils is respectable.

SOUTHGATE :—Visited, 20th October, 1868.

Numbers at the examination :—Boys, 22; girls, 19; total, 41.

1. This school is conducted in a very suitable and well-furnished building, attached to which is a comfortable teacher's residence. The playground needs stumping; otherwise, the organization is good. 2. The pupils are fairly regular and punctual in their attendance; but, though clean and decently attired, they are not properly regulated in their conduct, the younger ones being particularly restless and inattentive. The school operations are carelessly conducted. 3. The instruction is elementary, and is neither properly regulated nor in strict accordance with the standard course. The teaching is mechanical, and only moderately effective. 4. The average proficiency and mental culture of the pupils are moderately satisfactory.

STRONTIAN PARK :—Visited, 19th October, 1868.

Numbers at the examination :—Boys, 19; girls, 20; total, 39.

1. The building is unsuitable for school purposes as regards size, form, and structure. The furniture is defective in quantity and quality, but the supply of apparatus adequate. The organization is moderately satisfactory. 2. The character of the attendance is unsatisfactory, and the appearance of the schoolroom untidy; otherwise, the moral character of the school is pleasing. 3. The prescribed subjects are taught, except singing. The classification and lesson documents are arranged with fair skill. Sufficient attention is not given to the first class; otherwise, the teaching is painstaking and tolerably intelligent and effective. 4. The average proficiency of the pupils is passable.

SUMMERLAND :—Visited, 15th December, 1868.

Numbers at the examination :—Boys, 20; girls, 20; total, 40.

1. The building is in need of repairs; the slabs have shrunk, and the roof admits the rain. A verandah is much needed. There is a fair supply of furniture and apparatus; but the diagrams are worn

and dirty. The organization is tolerably satisfactory. 2. The appearance and behaviour of the pupils are respectable; but the character of their attendance is unsatisfactory. The school operations are conducted with fair decorum. The prevailing tone of the school is, on the whole, pleasing. 3. The prescribed subjects are taught, except the Scripture lessons. Sufficient attention is not given to the work of the first class; otherwise, the instruction is regulated with fair skill. Tolerable intelligence and skill are exhibited in the teaching. 4. The proficiency of the first class is moderate, and of the second and third classes, tolerable.

TAMWORTH :—Visited, 23rd May, 1868.

Numbers at the examination :—Boys, 54; girls, 36; total, 90.

1. Though in good material condition, the school building is not large enough. The playground requires to be kept in better order, and the out-offices to be more suitably arranged. The supply of furniture was inadequate at the date of inspection, but the defect has since been remedied. There is a fair stock of the necessary material appliances. The organization is fair. 2. The moral character is, on the whole, satisfactory. 3. The prescribed subjects are taught, except singing. The instruction is regulated with fair skill, but the teaching, though painstaking, is deficient in elasticity and efficiency. 4. The average proficiency of the pupils is barely tolerable.

TENTEFIELD :—Visited, 3rd July, 1868.

Numbers at the examination :—Boys, 38; girls, 46; total, 84.

1. This school is conducted in a good wooden building, and is well organized. The building and adjacent teacher's residence require painting, to check further injury from the weather. 2. The moral character of the school is very fair; the discipline, though defective in minor details, is healthy; and the appearance and conduct of the pupils pleasing. 3. The prescribed subjects are taught, except singing and drawing. The classification and lesson documents, though in some particulars defective, are, in general, intelligently arranged. The teaching is conducted with earnestness and fair efficiency. 4. The average proficiency of two lower classes is tolerable, and of the upper class, fair.

TUCKI TUCKI :—Visited, 5th November, 1868.

Numbers at the examination :—Boys, 22; girls, 23; total, 45.

1. This school is conducted in a small, dilapidated, ill-furnished building, with bark roof, pervious to the rain, and wooden shutters instead of glazed windows. The organization is bad. 2. The pupils are irregular in their attendance; and, though clean and decent in appearance, are not properly regulated in their behaviour and movements. The schoolroom is neither clean nor orderly, and the school operations are not performed with sufficient quietness and order. The moral tone of the school is not pleasing. 3. The prescribed subjects are taught, except drawing and the Scripture lessons; but the lesson documents are defective, and the teaching is mechanical and moderately effective. 4. The proficiency of the first class is small, and of the second and third classes, moderate.

ULMARRA :—Visited, 30th September, 1868.

Numbers at the examination :—Boys, 23; girls, 23; total, 46.

1. The school is in good material condition, and is well found in material appliances. 2. The moral character of the school is, on the whole, pleasing. 3. The prescribed subjects are taught, except singing; and the instruction is regulated and imparted with fair skill and efficiency. 4. The average proficiency of the pupils is fair.

URALLA :—Visited, 13th May, 1868.

Numbers at the examination :—Boys, 27; girls, 12; total, 39.

1. A first-class schoolhouse, with attached teacher's residence, has been recently erected, and furnished with the necessary material appliances. The organization is good. 2. The moral character of the school is, in most respects, pleasing. 3. The prescribed subjects are taught with tolerable skill and results. 4. The proficiency of the pupils is passable.

VIOLET DALE :—Visited, 13th February, 1869.

This school being newly established, the buildings only were inspected.

1. The building is a small slab structure, in need of repair. The playground also requires fencing clearing, and furnishing with out-offices. Material appliances are adequately supplied, and the lesson documents are skilfully arranged. The teacher's residence is singularly wretched in condition and accommodation.

WALCHA :—Visited, 15th May, 1868.

Numbers at the examination :—Boys, 17; girls, 13; total, 30.

1. The building needs repairing, and the schoolroom keeping in cleaner and better order. The arrangement of the out-offices is objectionable. There is a fair supply of material appliances. The organization is, on the whole, fair. 2. The character of the pupils, as regards their attendance, appearance, and conduct, is fairly satisfactory; and the discipline, though defective in minor details, is fairly effective. The moral character of the school is passable. 3. The prescribed course of instruction is followed, and is regulated with fair skill. The teaching is marked by fair intelligence and skill, but deficient diligence. 4. The average attainments of the pupils are tolerable, and their mental culture moderate.

WALLABADAH :—Visited, 29th May, 1868.

Numbers at the examination :—Boys, 16; girls, 14; total, 30.

1. The slabs of the schoolhouse and teacher's residence need to be refitted, and the playground to be fenced in and provided with water and an additional out-office. The school is supplied with the requisite material appliances, and has been suitably furnished since the date of inspection. 2. The moral tone of the school is good. 3. The prescribed subjects are taught, the classification is intelligent, and the lesson documents are arranged with very fair skill. The teaching is painstaking, and the results reasonably satisfactory, considering the recent establishment of the school. 4. The average proficiency of the pupils is tolerable. Arithmetic, singing, and geography need more attention.

WARIALDA :—

APPENDIX.

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WARIALDA :—Visited, 22nd June, 1868.

Numbers at the examination :—Boys, 12 ; girls, 5 ; total, 17.

1. The appearance and condition of the premises are not satisfactory, repairs to the roof and chimneys being much needed. There is a reasonable supply of apparatus, but the desks are unsuitable in design and arrangement. 2. Though clean and reasonably well-behaved, the pupils are unpunctual. The discipline, as regards the orderly performance of the school operations and appearance of the schoolroom, is moderately satisfactory. 3. The prescribed subjects are taught, with the exception of singing, drawing, and needlework. The teaching is fairly regulated, but its results are only moderate, the methods being too mechanical, and deficient in energy. 4. The average proficiency of the pupils is moderate.

WAUCHOPE :—Visited, 4th December, 1868.

Numbers at the examination :—Boys, 6 ; girls, 11 ; total, 17.

1. The building is constructed of 8-feet slabs, which, having shrunk, require refitting. The desks, seats, and flooring are rude and unsuitable. The organization is bad. 2. The moral character of the school is moderately satisfactory. 3. The subjects not taught in accordance with the Standard Course are singing, drawing, and object lessons. The teaching is feeble, mechanical, and unsatisfactory in its results. The programmes of lessons are not properly made out, the time-table is partially observed, and both lesson registers and fee account book are not kept. 4. The average proficiency of the first and second classes is small, and of the third class, moderate.

WOODFORD DALE :—Visited, 16th October, 1868.

Numbers at the examination :—Boys, 11 ; girls, 11 ; total, 22.

1. There is an adequate supply of apparatus ; but, as regards the dilapidated and ill-furnished condition of the schoolhouse, as well as the absence of playground and out-offices, the organization is bad. A new building and teacher's residence are, however, near completion. 2. The moral character of the school is, under the circumstances, respectable. The regularity and punctuality of the attendance need improving. 3. Singing and drawing are not taught ; otherwise, the prescribed course of instruction is observed. The teaching is painstaking and fairly effective. 4. The attainments range from moderate to fair.

DETAILED STATEMENT of the condition of Provisional Schools inspected in 1868.

ASHFORD.

This school was not open at the time of my visit to the district.

BRUSHGROVE :—Visited, 7th October, 1868.

Numbers at the examination :—Boys, 11 ; girls, 12 ; total, 23.

1. The building, though small, is in good condition, and adequately furnished. There is no enclosed playground, and not sufficient out-office accommodation. The organization is tolerable. 2. The pupils are pleasing in their appearance and behaviour, but only moderately punctual in attendance. The moral aspect of the school is very fair. 3. The prescribed subjects are taught, with the exception of singing and drawing. The teaching is painstaking, but only moderately effective. 4. The attainments and mental culture of the pupils are moderate.

BUNDARRA :—Visited, 15th June, 1868.

Numbers at the examination :—Boys, 13 ; girls, 12 ; total, 25.

1. The teacher pays rent for the unsuitably small and furnished room the school is conducted in. The organization is moderate. 2. The moral character of the school is reasonably satisfactory. 3. The instruction is confined to reading, writing, and arithmetic, none of which are efficiently taught. No lesson documents are in use. 4. The proficiency of the pupils is small.

CORAKI :—Visited, 6th November, 1868.

This school was not examined, on account of its recent establishment.

1. The building is a good slab structure. The playground is not yet fenced in, nor provided with out-offices. The supply of material appliances is adequate for present requirements.

DARKWATER CREEK :—Visited, 15th December, 1868.

Numbers at the examination :—Boys, 6 ; girls, 6 ; total, 15.

1. The school is conducted in a small dilapidated slab hut. Out-offices and additional furniture are needed. The supply of apparatus is tolerably sufficient. The organization is indifferent. 2. The moral aspect of the school is moderate. 3. The prescribed subjects are taught, except drawing, sewing, and the Scripture lessons. The Standard Course is not strictly followed, and the instruction is regulated and imparted with but moderate efficiency. 4. The proficiency of the pupils is low.

HUNTINGDON.

This school, though in operation, was not inspected for want of opportunity.

KENTUCKY.

This school was not in operation at the date of my visit to the district.

LAWRENCE :—Visited, 15th October, 1868.

Numbers at the examination :—Boys, 15 ; girls, 7 ; total, 22.

1. The school is conducted in a dwelling-house, and is adequately supplied with material appliances. The playground needs fencing in and furnishing with better out-offices. The organization is tolerable. 2. The moral character of the school is pleasing. 3. The prescribed subjects are taught, except sewing and singing. The classification is defective ; otherwise, the instruction is tolerably satisfactory. 4. The proficiency of the pupils is fair.

REDBANK :—Visited, 4th December, 1868.

Numbers at the examination :—Boys, 11 ; girls, 8 ; total, 19.

1. The schoolhouse is built of slabs, all of which require refitting. There is no playground or out-offices, and the schoolroom is neither adequately furnished nor orderly kept. The supply of apparatus is tolerable.

tolerable. The organization is in general unsatisfactory. 2. The moral character of the school is moderately satisfactory. 3. The prescribed subjects are taught, except singing, sewing, and the Scripture lessons. The classification is judicious; but the lesson documents are defective, and the teaching is but moderately skilful. 4. The average attainments and mental culture of the pupils are moderate.

ROSE HILL :—Visited, 26th November, 1868.

Numbers at the examination :—Boys, 14; girls, 15; total, 29.

1. The school is held in a dwelling-house part of which is occupied by the teacher. The school-room is too small for the proper arrangement of the furniture, a fair supply of which, as well as apparatus, is provided. The organization is moderate. 2. The moral character of the school is pleasing. 3. The prescribed subjects are taught, except singing, sewing, Scripture lessons, and object lessons. The teaching is painstaking and tolerably skilful. 4. The proficiency of the pupils is fair.

TYNEDALE :—Visited, 9th October, 1868.

Numbers at the examination :—Boys, 4; girls, 10; total, 14.

1. This school is conducted in the kitchen of a stockman's hut, with no other furniture than a few forms and a table. A more suitable building is, however, in course of erection. The organization is indifferent. 2. Though not properly regulated in their movements, the pupils are tolerably well behaved, besides being clean and decently attired. In other respects the moral aspect of the school is not satisfactory. 3. The instruction is very elementary and is not regulated by the prescribed lesson documents. The methods are mechanical, and the teaching apparently desultory. 4. The proficiency of the pupils is moderate.

WARDELL :—Visited, 9th November, 1868.

Numbers at the examination :—Boys, 3; girls, 4; total, 7.*

1. There is a tolerable supply of apparatus, but in all other particulars the organization is bad. 2. The character of the attendance is unsatisfactory; otherwise, the moral aspect of the school is tolerable. 3. The prescribed subjects are taught, except singing and drawing, but the instruction is regulated and imparted with but moderate ability. 4. The proficiency of the pupils ranges from small to tolerable.

WOODFORD PARK :—Visited, 9th October, 1868.

Numbers at the examination :—Boys, 7; girls, 10; total, 17.

1. The material condition of the building is tolerable; but the schoolroom, besides being small, is badly lighted and ventilated; and the playground is neither fenced in, nor provided with out offices. There is a sufficient supply of apparatus; but additional furniture is needed. The organization is moderate. 2. There are no school records to indicate the character of the attendance. The moral character of the school is moderate. 3. The only subjects taught are reading, writing, and arithmetic. There are no lesson documents; the classification is very injudicious; and the teaching is unskilful. 4. The attainments and mental culture of the pupils are low.

YAMBA.

This school was not in operation when I visited the district.

YETMAN :—Visited, 18th May, 1868.

Numbers at the examination :—Boys, 6; girls, 6; total, 12.

1. There is a tolerable supply of apparatus; otherwise, the organization is indifferent. 2. The pupils are clean and well-behaved. In other respects the moral character of the school is barely satisfactory. 3. The prescribed subjects are taught, except singing, drawing, and sewing. The teaching is moderately skilful. 4. The proficiency of the pupils is moderate.

BATHURST DISTRICT.

INSPECTOR'S Report upon the Schools in the Bathurst District, visited during the year 1868.

FOR the first three months of the year I continued in charge of the Albury District, from which I was then removed to Bathurst. It will, therefore, be understood that my work in this district began on the 1st April, 1868, since which time I have been constantly engaged in its inspectoral duties.

I.—GENERAL DETAILS.

To give an idea of the extent of country placed under the charge of the Inspector of the Bathurst District, it may not be out of place to remark that it stretches to the following places in the directions stated :—East, to One-tree Hill (Mount Vittoria); north, to Mudgee and Guntawang; north-west, to Bourke, on the Darling; west, to Condobolin, on the Lachlan; and south, to Binalong, in the neighbourhood of Yass.

With a district so extensive, and containing within it so many schools, the inspection of each school can only take place once a year, however desirable it may be to pay more frequent visits. The number of schools of various kinds in the district on the 1st April, 1868, was as follows :—

Public Schools	53
Provisional Schools	13
Half-time Schools	2
Denominational Schools	25
Total	93

Of these, four schools—two Provisional and two Half-time Schools—were transferred to the Maitland District; three Public Schools were closed from insufficient attendance; and three Denominational Schools—Burrowa, C.E.; Cudgegong, C.E.; and Currajong, Wes.—have ceased to exist as such, the two latter being now in operation as Public Schools, and steps being taken by the inhabitants to replace the first-mentioned by a Public Vested School.

At the close of the year, there were, on the list of schools, the following :—

Public Schools	59
Provisional Schools	24
Half-time Schools	2
Denominational Schools	22
Total	107

The

* NOTE :—The small attendance was owing to wet weather.

APPENDIX.

The following Table will give a comparative view of the Numbers enrolled at the dates given, and the Increase that has taken place in the number of Scholars :—

Date.	Public and Provisional Schools.	Denominational Schools.	Totals.	Increase.
Quarter ending Dec., 1867	2,766	1,501	4,267	...
" " Mar., 1868	2,773	1,515	4,288	21
" " June, 1868	3,114	1,639	4,753	465
" " Sept., 1868	3,454	1,582	5,036	283
" " Dec., 1868	3,462	1,683	5,145	109

It appears, therefore, that the increases at the close of the quarters ending March, June, September, and December, 1868, were respectively 21, 465, 283, and 109—making a total increase during the year, of 696 in Public and Provisional Schools, and of 182 in Denominational Schools, or 878 in all.

The amount of work done throughout the year is exhibited generally in the following statement :—

Number of Schools inspected	87
" Pupils enrolled	4,500*
" Pupils present	3,438*
" Visits of Inspection	93
" " Inquiry	38
" Special Investigations	8
" Teachers and Pupil Teachers examined	48
" Reports, Memoranda, &c.....	1,043
" Miles travelled	4,164

The table subjoined contains a List of the Schools not inspected during the Year, together with the cause of such non-inspection :—

Name of School.	Kind.	Cause of Non-inspection.
Bourke	Prov.	Unable to reach it before the close of the year.
Canoblas	Prov.	Insufficient time.
Colville	Prov.	Closed when visiting the locality.
Cudgegong	Pub.	Not in operation under the Council at the time of my visit.
Eglinton	Pub.	New school—opened towards the close of the year.
Fitzgerald Valley	Prov.	New school.
Ilford	Prov.	Do.
Ironbarks	Prov.	Closed for the Christmas Vacation, before reaching it.
Lagoon	Prov.	New school.
Mackenzie's Creek	Prov.	Do.
Merrendee	Prov.	Do.
Mundorama Ponds	Prov.	Do.
Nubrygyn	Prov.	Do.
Stony Creek	Prov.	Do.
Three-mile Rush	Prov.	Do.
Vittoria	Prov.	Insufficient time.
Wiseman's Creek	Prov.	New school.
Warren	Pub.	Unable to reach it before the Christmas Vacation.
Windeyer	Pub.	Closed.
Young, C. E.	Den.	Closed at the time of my visit.

Twenty schools; therefore, now in operation, were not inspected during the year, the majority of them being new schools which were opened after my visit to the various localities in which they are situated.

For the detailed statement as to the condition of the schools inspected, Annex F may be consulted.

II.—CHARACTER OF INSPECTION.

The Inspections were principally of two kinds, General and Regular, there being none of the Ordinary kind, and only eight schools incidentally inspected and reported upon. In all new schools, and in those that had not been reported upon during the previous year, the inspection was of the general kind. During inspections of this nature, much greater minuteness is observed in inquiring into the organization, discipline, and instruction, than in those styled Regular, the object being to collect data from which to form an opinion of the school in all its various aspects. As, however, I had only visited a few of these schools during 1867, it became necessary, for my own information and guidance, to make careful inquiries even when *nominally* inspecting under the Regular form. Really, therefore, the examination under both forms has been similarly careful and rigid. It is much to be regretted that the present size of this district, and the number of schools therein, entirely preclude inspections of the ordinary kind, "which are designed to exhibit the school in its ordinary state, and thus to afford the Inspector an opportunity of estimating the teacher's practical skill, and of assisting him with advice and direction." During general and regular inspections, the Inspector must himself examine all the classes; but, in those of the ordinary kind, the teacher carries on the usual routine of the school in his presence, thus affording him an opportunity of observing defects of method and manner in the general management of the school. To make up somewhat for this want, I have usually called upon the teacher to take a class for a short time during the inspection.

III.—ORGANIZATION.

ANNEX B may be consulted for a general view of the organization of the schools in this district. As there arranged, the remarks on this subject fall under the following headings :—

Situations.—Of the schools inspected, seventy-four range from fair to good. In general, care has been taken to select the school sites, so as to be convenient to the majority of the people, easily accessible in all seasons, and healthy as well as pleasant. Some of the schools occupying bad positions are conducted in premises not originally built for school purposes.

Buildings.—

* NOTE.—For an explanation of the apparent discrepancy between the numbers given above and those entered as enrolled and present in Annex A, see Annex F under Winburndale Public School.

Buildings.—About two-thirds of the Public, and nearly the same number of the Denominational School buildings, are from fair to good. The Vested buildings are generally of a superior kind. Some of the Vested, *wooden*, buildings, however,—such as those at Dubbo, Hargraves, and Wattle Flat,—are falling into decay, and need replacing. The majority of the inferior buildings are Non-vested. Two Denominational Schools—Wellington R.C., and Sofala C.E.—are in urgent need of new premises.

Two-thirds of Public Schools, and about the same number of Denominational Schools, are supplied with teachers' residences, some of which, however, are very inferior. The majority of Public Schools, without residences, being Non-vested, it is difficult to remedy this defect.

Provisional Schools, in respect of buildings, are only moderately satisfactory.

Playgrounds.—Rather over one-third of the playgrounds are in an unsatisfactory condition. A large playground, properly enclosed and suitably furnished, is invaluable to a careful and judicious teacher, and no school can be considered completely organized without it. The Bathurst Public and Roman Catholic Schools cannot be said to have any playgrounds—very serious defects in such important schools.

Playground superintendence is, so far as my observation goes, not attended to as it ought to be. More careful attention should be given to the children when out of school, so as to check improprieties of language and behaviour; prevent rude, noisy, and boisterous play; and to inculcate habits of mutual respect and forbearance, and a constant regard for the rights and feelings of others. Much too, might be done by judicious planting and laying out of the ground, to make it pleasing to the eye, and fitted to cultivate a taste for neatness and beauty in the minds of the pupils. Every teacher should strive to make the surroundings of his school as attractive as possible, and something might be done in country districts by School Boards to promote this desirable end. The cost would be small; the pleasure afforded to all concerned, great.

Furniture.—The furniture of twenty Public and nine Denominational Schools, is from tolerable to indifferent. In many it is unsuitable in kind and quality, and often insufficient and badly arranged. In several schools—Non-vested, Public, and Denominational—the desks are fastened to the walls, and the children, of course, seated with their backs to the teacher—a most objectionable position. Heavy, clumsy, double desks, too, are occasionally seen, at which the pupils sit face to face, enjoying mutual sly peeps and grimaces at each other, while they play at tapping their toes together underneath. It is to be hoped that such furniture and such arrangements may speedily disappear. In Provisional Schools, the furniture is, for the most part, clumsy and unsuitable.

Apparatus.—The supply of apparatus in the large majority of schools, whether Public or Denominational, is reasonably satisfactory. A few of the more recently established schools need black-boards, and several require diagrams.

Books.—In only eight schools was there any particular deficiency of books, and the want has since been supplied in the usual way by requisition. Sufficient care does not seem to be taken in some schools to prevent waste of books and apparatus. In connection with this, it may be as well to remark that many teachers appear erroneously to think that they have a right to demand two shillings per head for their average attendances, when applying for books and apparatus, although they are distinctly informed that "no articles should be applied for but such as are absolutely necessary for the efficient conduct of the school." Considerable trouble, annoyance, and waste of time have been caused by inattention to this matter.

Registers.—The ordinary School Records, in nearly all cases, are satisfactorily kept. Except in Provisional Schools, and in two Non-vested Public Schools the teachers of which had no experience in keeping these registers, there was not much fault to be found. The School-fee Account Book is kept by some teachers in so slovenly and careless a manner, that one cannot but question its faithfulness as a school record, and more careful attention is needed by some to the entries in the Lesson Register, which are *now made daily*. The advantage of this register is beginning to be felt and acknowledged by earnest and thoughtful teachers, though some still fail to appreciate its utility.

IV.—MORAL CHARACTER OF SCHOOLS.

Regularity.—The regularity of about two-thirds of the pupils in attendance is from fair to good. Many of those, however, who attend school regularly when enrolled, may be said at the same time to be regularly irregular; that is to say, they attend school regularly at certain seasons, and as regularly absent themselves at others. In agricultural districts—especially among free-selectors, and in mining communities—this continues the bane of our schools, and militates, more than all other things combined, against the success of the teacher, who is utterly powerless to interpose between the children and the ignorance, caprice, and cupidity of some parents, and the needy poverty of others who are compelled to employ their offspring at certain seasons in some way or other to save the cost of labour, or to do something for their own support. In an enactment to secure compulsory attendance seems to lie the only hope of extrication, partial or complete, from the present evils; and to the necessity for this the public mind seems fast ripening. Earnest, thoughtful men are frequently heard remarking that compulsory attendance, and the abolition of school fees, are what should be appended to the present system, to complete and perfect the machinery for the education of the Colony. Even in England, educationists are now becoming alive to the necessity for compulsion, to attain the thorough education of the people. One says, recently—"The Educational Conference at Manchester has already spoken with a clear, a loud, and a convincing voice as to the compulsion needed. There is no doubt of the need. The only doubt is how to provide for it. There are many and considerable difficulties in the way; but there are none so great as not to be removable by earnest determination, by patient forbearance, and by intelligent devotion to the most important subject which, in this century, has risen up and taken its rightful place in the minds and hearts of the people of Great Britain." Another ventures to predict—"that twenty years afterwards, the compelling every parent to take care that his child shall learn to read and write will be considered (as it now is in Germany) of the same order of importance and necessity as that parents shall clothe and feed their children."

Punctuality.—In sixty-seven schools the punctuality is from fair to good. In the majority of schools, therefore, there is no particular ground for dissatisfaction under this head. Where the evil exists to any great extent, the blame is generally to be about equally divided between the parents and the teacher; the former detaining their children from causes which a little forethought and care might have prevented, and the latter failing to impress the habits of his pupils through his own want of earnestness and rigid punctuality. The teacher who does not by *example*, in every respect, inculcate this habit, need not attempt to do so by *precept*.

Cleanliness.—There is little to complain of under this head in regard to the pupils, who—especially the girls—are almost always cleanly in person and dress. In one school only I had to send some of the children to the creek near by, to wash themselves before they could be permitted to enter. Some teachers, however, seem to forget that schoolrooms need sweeping, and furniture dusting *daily*; and that maps, diagrams, and windows require weekly attention. Cobwebs in corners and on windows, dusty maps, and notched and ink-stained desks tell tales. Some provision too should be made for ensuring habits of cleanliness among the children; in fact, no school should be without its bucket, basin, soap, and towel.

Order.—This is a most important feature in the discipline of a school, and without it little progress will be made. Depending as it does not merely on the organization but more especially on the personal and moral qualities of the teacher, it varies accordingly. In regard to the organization, it

supposes

supposes a proper arrangement of desks, apparatus, books, and working materials; and in the teacher vigilance, firmness and decision, and energy of character. There should be on the part of the pupils uniformity of movement, promptitude in obeying commands, a respectful demeanour, and sustained attention to work. The school operations should be carried on with *quiet* energy, and everything planned by the teacher to *prevent* disorder and noise, the faintest symptoms of which should at once be checked. "The hum of business," as some one has called it, indicates often anything but work; it is, in fact, a cover for idleness, inattention, and all kinds of disorder.

Government.—In a majority of the schools, corporal punishment is only resorted to in extreme instances, after other milder forms of punishment have proved useless in accomplishing the desired effect. Moral influence is, therefore, generally adopted as the rule of government, but with the rod in view as a salutary ultimatum in desperate cases. Such cases, however, rarely occur when the teacher possesses tact, judgment in discriminating the various dispositions and tempers of his pupils, and firmness and decision of character. The man of strong will and resolution, who pursues an even and consistent course, from day to day, in the discipline of his school, will have comparatively little trouble; while he who is vacillating and "infirm of purpose"—now holding the reins with a slack hand, and anon with a tight grasp—will ever have difficulty in the management of his school; in fact, such a person has mistaken his vocation in becoming a teacher. Spasmodic government will never produce good effects.

V.—INSTRUCTION.

Classification.—In sixty-five of the schools the classification varies from fair to good. Many teachers do not give sufficient attention to this important point in securing effective teaching. In general the number of classes is limited to three, but too little thought is given to placing the pupils in classes suitable for them. In classifying judiciously, the age and mental capacities of the pupils require consideration, besides the attainments necessary for each class as prescribed by the Council's "standard of proficiency." In some schools there is a tendency to subdivision of classes, which should be avoided as dissipating instead of concentrating the teaching power. The fault of promoting children prematurely in obedience to the wishes of parents continues to some extent. I cannot but remark that the teacher who yields to such influences is usually found weak in that self-respect, and moral force and energy of character, the want of which is nearly always apparent in his school. In a few instances, I have found, on the other hand, pupils detained in a class for months after they were clearly ready for promotion, *that the class might stand a good examination when the Inspector came, and some of them be beyond the "standard."* Remark on this is superfluous.

Occupation.—The arrangements made for the occupation of the pupils fall next to be considered in connection with the instruction. Under this is included the construction of "time-tables" and "programmes" for the several classes. The former should only be drawn up as occasion may require, but the latter must be framed at the beginning of every quarter. By the "time-table" the work should be so arranged as to give constant employment to the children—to apportion the time duly among the various subjects, according to their relative importance—and to alternate the lessons, so that the change from one to another shall take place at regular intervals. It should also arrange that the alternation of subjects may be agreeable and stimulating to the pupil, and that the teacher's time may be equitably allotted to each class. Almost all the schools in the district are furnished with a time-table of some description. In two instances, at least, I found time-tables suspended which had neither been written nor constructed by the teachers themselves, one of which was evidently more for ornament than use.

Some improvement is observable in the construction of "programmes," which now generally enter much more fully and explicitly into detail than formerly. Still, there are some who appear to have little idea of their object or bearing. One person was decidedly disappointed when he found that the programmes which he had been at such pains to copy from those of a neighbouring teacher would not always do. On the whole, however, there is an improvement in this matter.

Methods.—In about two-thirds of the schools the methods are of a suitable kind, but they often fail from the want of skill or energy in their application. To know good methods is one thing; to apply them with efficacy is another and a totally different thing. Some men will talk intelligently of analysis and synthesis, and the subjects or class of children for which each is more particularly fitted, who fail in producing satisfactory results. Hence, even in trained teachers, there is a wide diversity in the success of the same methods. However good in itself, knowledge of methods, if not associated in the teacher with energy and animation in imparting instruction, will be productive of but small results. All methods should be carefully tested by constant and vigorous examination, and by frequent reproduction and repetition of previous work.

VI.—PROFICIENCY.

For the general proficiency in the ordinary subjects, the tables under Annex E may be consulted.

Reading.—Judging from results, this subject does not, on the whole, appear to be well taught. The reading, generally speaking, is such as to afford but small pleasure to the listener, who, if trusting to his ear alone, will often have difficulty in understanding the passage read. The faults lie in the tone being too low and monotonous; in inattention to the pauses, and in consequent hurrying; and in a mumbling, indistinct enunciation. Sufficient care is not taken to enunciate each word before that which follows it is attempted; and the final consonants and syllables of words are, hence, often dropped, and words combined in pronunciation which ought to have a clear separate utterance. Such faults are to be found in mere mechanical reading; and when we rise a step higher, and look for taste, feeling, and expression, dissatisfaction cannot but be felt at the proficiency. It is rare indeed to hear a passage read thoroughly well, with distinct enunciation, correct pausation, clear emphasis, and suitable intonation and expression. The fault rests with the teacher, and I believe the root of the evil is the imperfect manner in which the First and Second Classes are taught. When the habit of firm, deliberate, distinct reading is not formed at the outset, it is seldom afterwards acquired. If specimens of good reading were frequently presented as models to the pupils, considerable improvement would probably be effected; and to do this thoroughly, previous study, and careful practice of the passage are necessary. This, combined with systematic explanation of the words, phrases, and general subject matter of the lesson, could not but produce good effects. When the importance of good reading is considered, whether as a mental discipline, or the source of future pleasure to its possessor, it is surely worth while expending some pains upon it.

Writing.—Beginners are taught to write on slates, and afterwards introduced to writing in copy-books. The teaching of this subject would be more successful than it is, if pains were bestowed by teachers in the selection of suitable words, phrases, or short sentences, and in strict supervision of the actual work. To set the pupils of a first class to imitate the copy on the black-board, without insisting on uniformity of size, slope, and distance, is not likely to produce good writing, though it may give employment and keep the pupils quiet, which is often the main object kept in view. The writing in copy-books is, on the whole, better than that on slates. The following are some of the faults which it is desirable to give attention to: blotting, writing and drawing figures on the covers of the books, writing too much and too fast, and, generally, slack supervision. The engraved head-lines in some copy-books are often very unsuitable. Where the teacher sets his own copies on the black-board or in the copy-books, geographical words or sentences are usually employed. One good plan is to select such head-lines from the geography of the current quarter.

Arithmetic.—Arithmetic is generally taught orally from the black-board, though some teachers continue to use books. Defects in the proficiency attained in this subject are generally found to arise from inattention to one or more of the following points:—Hasty and meagre explanation of principles; scanty illustration

illustration on the black-board ; the neglecting to give a large number of varied practical questions ; and the want of regular and frequent recapitulation. Regular revision might, for example, take place on Fridays. In some schools the children are not so well grounded in the tables as they ought to be. Mental arithmetic is, on the whole, not well taught. The exercises given are too much confined to the routine of prices of dozens, &c., which, with a little practice, becomes almost a mechanical exercise. As in slate work, the questions should be as much varied as possible. Rapid exercises in the simple and the compound rules should be given as frequently as practicable. Until this is done in a more thorough and effective manner than at present, the utility of mental arithmetic, in stimulating and strengthening the mental powers, cannot be seen or appreciated.

Grammar.—This subject is also taught orally, with the aid of the black-board, and in connection with the Reading Lessons. As may be seen from the Annex, the proficiency of only a small percentage of the pupils can be considered good. Generally speaking, the parsing and accidence range from tolerable to fair. In the higher classes a great deal of time is wasted by making the pupils parse each word in succession, instead of selecting words which illustrate peculiarities of idiom and syntax. To make advanced children parse "a," "an," "the," "and," &c., over and over again, as they occur, is a senseless, parrot repetition, which will certainly do little to invigorate the mental faculties. The higher parts of grammar—analysis and composition—are the most defectively treated ; in a few schools only is the proficiency attained therein respectable, while in some they have scarcely been attempted. Composition is rarely taught as an art, the common exercise in it being the reproduction of object or other lessons, which the pupil is left to do as he can.

Geography.—The elementary parts of this subject are far from being well taught ; it is generally thought sufficient to get the children to repeat by rote the common definitions, with occasional illustrations from the map. In several cases, where excellent illustrations were at hand in the vicinity of the school, I found the children knew nothing of them ; for instance, the pupils of a school situated near a creek could not tell on which bank they were, or point out examples before their eyes of peninsula, basin, watershed, &c. Teachers would do well to take pains in this matter ; it would make their teaching natural, and interesting alike to themselves and their pupils. An occasional out-door lesson would be all that would be necessary. No text-books are used in teaching this subject, the necessary information being imparted by the teacher, with the aid of the black-board.

Object lessons are generally attended to ; but, in the majority of cases, not in such a way as to produce the effects for which they are peculiarly suited. Their aim is not sufficiently understood, and consequently the mode of treatment is not intelligently adapted to secure that end. The children are told what ought to be elicited from them by judicious questioning ; and thus their minds are crammed, while their thinking powers are left unexercised. It may be said generally, that drawing and music are efficiently taught in only a few of the schools in this district. In a considerable number the former is taught, but only with moderate success.

Teachers.—The following table will show the number of teachers employed in the Public and Denominational Schools in this district. In addition to these, there are the teachers of Provisional Schools and six pupil teachers.

Class I.		Class II.		Class III.			Pro- bationers.	Total.
Section A.	Section B.	Section A.	Section B.	Section A.	Section B.	Section C.		
.....	1	1	10	26	19	14	13	84

In the majority of schools, the teachers are respectable persons, and are earnest and diligent in the discharge of their duties. In nearly every instance, I found them willing to receive and carry out suggestions for the improvement of their schools.

Local supervision.—With some praiseworthy exceptions, the Local Boards do not appear to take that interest in the schools under their supervision which might reasonably be expected from them. Generally speaking, meetings are seldom held, and very irregular visits are paid to the schools.

J. M'CREDIE,

Inspector, Bathurst District.

Bathurst, 8th February, 1869.

ANNEX A.
ATTENDANCE OF PUPILS.
Public Schools.

TABLE showing the Numbers and Ages of Pupils enrolled at the date of Examination.

Pupils.	7 years and under.	8 years.	9 years.	10 years.	11 years.	12 years and over.	Totals.
Boys enrolled	673	183	159	157	108	205	1,485
Girls do.	542	144	140	134	109	230	1,299
Totals of Boys and Girls enrolled	1,215	327	299	291	217	435	2,784

TABLE showing the Numbers and Ages of Pupils present at the date of Examination.

Pupils.	7 years and under.	8 years.	9 years.	10 years.	11 years.	12 years and over.	Totals.
Boys present	532	141	121	113	78	126	1,111
Girls do.	422	110	102	94	74	172	974
Totals of Boys and Girls present	954	251	223	207	152	298	2,085

APPENDIX.

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Provisional Schools.

TABLE showing the Numbers and Ages of Pupils enrolled at the date of Examination.

Pupils.	7 years and under.	8 years.	9 years.	10 years.	11 years.	12 years and over.	Totals.
Boys enrolled	42	9	11	9	5	11	87
Girls do.	46	15	12	6	1	9	89
Totals of Boys and Girls enrolled	88	24	23	15	6	20	176

TABLE showing the Numbers and Ages of Pupils present at the date of Examination.

Pupils.	7 years and under.	8 years.	9 years.	10 years.	11 years.	12 years and over.	Totals.
Boys present	29	3	6	7	2	5	52
Girls do.	33	12	7	2	2	8	64
Totals of Boys and Girls present	62	15	13	9	4	13	116

ATTENDANCE OF PUPILS.

Denominational Schools.—Roman Catholic.

TABLE showing the Numbers and Ages of Pupils enrolled at the date of Examination.

Pupils.	7 years and under.	8 years.	9 years.	10 years.	11 years.	12 years and over.	Totals.
Boys enrolled	188	40	37	22	25	48	360
Girls do.	240	48	39	43	32	77	479
Totals of Boys and Girls enrolled	428	88	76	65	57	125	839

TABLE showing the Numbers and Ages of Pupils present at the date of Examination.

Pupils.	7 years and under.	8 years.	9 years.	10 years.	11 years.	12 years and over.	Totals.
Boys present	138	34	33	16	18	36	275
Girls do.	195	41	31	32	27	57	383
Totals of Boys and Girls present	333	75	64	48	45	93	658

Church of England.

TABLE showing the Numbers and Ages of Pupils enrolled at the date of Examination.

Pupils.	7 years and under.	8 years.	9 years.	10 years.	11 years.	12 years and over.	Totals.
Boys enrolled	144	45	31	22	21	48	311
Girls do.	147	33	32	26	15	42	295
Totals of Boys and Girls enrolled	291	78	63	48	36	90	606

TABLE showing the Numbers and Ages of Pupils present at the date of Examination.

Pupils.	7 years and under.	8 years.	9 years.	10 years.	11 years.	12 years and over.	Totals.
Boys present	122	43	28	17	18	36	264
Girls do.	118	24	25	21	10	36	234
Totals of Boys and Girls present	240	67	53	38	28	72	498

Bathurst Presbyterian School.

TABLE showing the Numbers and Ages of Pupils enrolled at the date of Examination.

Pupils.	7 years and under.	8 years.	9 years.	10 years.	11 years.	12 years and over.	Totals.
Boys enrolled	10	5	1	1	5	4	26
Girls do.	23	1	2	4	2	4	36
Totals of Boys and Girls enrolled	33	6	3	5	7	8	62

TABLE showing the Numbers and Ages of Pupils present at the date of Examination.

Pupils.	7 years and under.	8 years.	9 years.	10 years.	11 years.	12 years and over.	Totals.
Boys present	9	3	1	1	4	4	22
Girls do.	22	1	2	4	2	3	34
Totals of Boys and Girls present	31	4	3	5	6	7	56

TOTALS OF ALL DENOMINATIONAL SCHOOLS.

Enrolled.

Pupils.	7 years and under.	8 years.	9 years.	10 years.	11 years.	12 years and over.	Totals.
Boys enrolled	342	90	69	45	51	100	697
Girls do.	410	82	73	73	49	123	810
Totals of Boys and Girls enrolled	752	172	142	118	100	223	1,507

Present.

Pupils.	7 years and under.	8 years.	9 years.	10 years.	11 years.	12 years and over.	Totals.
Boys present	269	80	62	34	40	76	561
Girls do.	335	66	58	57	39	96	651
Totals of Boys and Girls present	604	146	120	91	79	172	1,212

TOTALS OF ALL SCHOOLS INSPECTED.

Enrolled.

Pupils.	Schools.	7 years and under.	8 years.	9 years.	10 years.	11 years.	12 years and over.	Totals.
Boys enrolled.	Public	673	183	159	157	108	205	1,485
	Provisional	42	9	11	9	5	11	87
	Denominational	342	90	69	45	51	100	697
	Totals	1,057	282	239	211	164	316	2,269
Girls enrolled.	Public	542	144	140	134	109	230	1,299
	Provisional	46	15	12	6	1	9	89
	Denominational	410	82	73	73	49	123	810
	Totals	998	241	225	213	159	362	2,198
Totals of Boys and Girls enrolled.. }		2,055	523	464	424	323	678	4,467

APPENDIX.

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Present.

Pupils.	Schools.	7 years and under.	8 years.	9 years.	10 years.	11 years.	12 years and over.	Totals.
Boys present.	Public	532	141	121	113	78	126	1,111
	Provisional	29	3	6	7	2	5	52
	Denominational	269	80	62	34	40	76	561
	Totals	830	224	189	154	120	207	1,724
Girls present.	Public	422	110	102	94	74	172	974
	Provisional	33	12	7	2	2	8	64
	Denominational	335	66	58	57	39	96	651
	Totals	790	188	167	153	115	276	1,689
Totals of Boys and Girls present....}		1,620	412	356	307	235	483	3,413

ANNEX B.

PUBLIC SCHOOLS—Material Condition.

Organization.	Good.	Very fair.	Fair.	Tolerable to indifferent.
Situations	24	17	6	7
Buildings	18	9	9	18
Playgrounds	18	11	8	17
Furniture	17	6	11	20
Apparatus	11	10	27	6
Books	20	17	13	4
Registers	24	16	12	2

PROVISIONAL SCHOOLS—Material Condition.

Organization.	Good.	Very fair.	Fair.	Tolerable to indifferent.
Situations	1	3	1	3
Buildings .....	...	...	2	6
Playgrounds	1	...	1	6
Furniture .....	...	...	1	7
Apparatus .....	...	...	1	7
Books	1	2	2	3
Registers .....	...	...	2	6

DENOMINATIONAL SCHOOLS—Material Condition.

Organization.	Good.	Very fair.	Fair.	Tolerable to indifferent.
Situations	9	5	8	1
Buildings	10	4	1	8
Playgrounds	7	4	6	6
Furniture	5	...	9	9
Apparatus	3	7	12	1
Books	9	8	5	1
Registers	11	8	4	...

Material Condition of *all* Schools.

Organization.	Good.	Very fair.	Fair.	Tolerable to indifferent.
Situations	34	25	15	11
Buildings	28	13	12	32
Playgrounds	26	15	15	29
Furniture	22	6	21	36
Apparatus	14	17	40	14
Books	30	27	20	8
Registers	35	24	18	8

ANNEX C.

PUBLIC SCHOOLS—Moral Character.

Details.	Good.	Very fair.	Fair.	Tolerable to indifferent.
Regularity	4	9	23	18
Punctuality	11	14	18	11
Cleanliness	17	16	13	8
Order	11	14	17	12
Tone	8	10	15	21

PROVISIONAL SCHOOLS—Moral Character.

Details.	Good.	Very fair.	Fair.	Tolerable to indifferent.
Regularity	1	...	3	4
Punctuality	1	1	3	3
Cleanliness .....	...	...	5	3
Order .....	...	...	1	7
Tone .....	...	...	1	7

DENOMINATIONAL SCHOOLS—Moral Character.

Details.	Good.	Very fair.	Fair.	Tolerable to indifferent.
Regularity	4	8	5	6
Punctuality	4	8	7	4
Cleanliness	8	9	6	...
Order	3	7	7	6
Tone	4	6	4	9

Moral Character of *all* Schools.

Details.	Good.	Very fair.	Fair.	Tolerable to indifferent.
Regularity	9	17	31	28
Punctuality	16	23	28	18
Cleanliness	25	25	24	11
Order	14	21	25	25
Tone	12	16	20	37

ANNEX D.

PUBLIC SCHOOLS—The Instruction.

Details.	Good.	Very fair.	Fair.	Tolerable to indifferent.
Classification	7	17	18	12
Occupation	9	12	13	20
Methods	8	13	15	18

PROVISIONAL SCHOOLS—The Instruction.

Details.	Good.	Very fair.	Fair.	Tolerable to indifferent.
Classification	1	1	6
Occupation	8
Methods	8

DENOMINATIONAL SCHOOLS—The Instruction.

Details.	Good.	Very fair.	Fair.	Tolerable to indifferent.
Classification	3	6	12	2
Occupation	2	6	8	7
Methods	4	3	10	6

APPENDIX.

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TABLE showing the Character of the Instruction in *all* Schools.

Details.	Good.	Very fair.	Fair.	Tolerable to indifferent.
Classification	10	24	31	20
Occupation	11	18	21	35
Methods	12	16	25	32

ANNEX E.

PUBLIC SCHOOLS—Estimated Proficiency of the Pupils.

Subjects.	Good.	Fair to very fair.	Tolerable to indifferent.	Totals.
Reading—				
Monosyllables	61	315	463	839
Easy narrative	54	221	389	664
Ordinary prose	52	220	106	378
Totals	167	756	958	1,881
Writing—				
On slates	86	379	351	816
In copy-books	96	652	294	1,042
Totals	182	1,031	645	1,858
Arithmetic—				
Simple rules	101	488	552	1,141
Compound rules	140	154	80	374
Higher rules	37	7	8	52
Totals	278	649	630	1,567
Grammar—				
Elementary	47	256	303	606
Advanced	28	238	124	390
Totals	75	494	427	996
Geography—				
Elementary	39	201	309	549
Advanced	50	175	163	388
Totals	89	376	472	937

PROVISIONAL SCHOOLS—Estimated Proficiency of the Pupils.

Subjects.	Good.	Fair to very fair.	Tolerable to indifferent.	Totals.
Reading—				
Monosyllables	4	59	63
Easy narrative	38	38
Ordinary prose	8	8
Totals	4	105	109
Writing—				
On slates	4	67	71
In copy-books	16	7	23
Totals	20	74	94
Arithmetic—				
Simple rules	10	38	48
Compound rules	4	2	6
Higher rules
Totals	14	40	54
Grammar—				
Elementary	15	15
Advanced	2	2
Totals	17	17
Geography—				
Elementary	5	10	15
Advanced	2	2
Totals	5	12	17

DENOMINATIONAL SCHOOLS—Estimated proficiency of the Pupils.

Subjects.	Good.	Fair to very fair.	Tolerable to indifferent.	Totals.
Reading—				
Monosyllables	25	169	203	397
Easy narrative	19	167	240	426
Ordinary prose	23	162	52	237
Totals	67	498	495	1,060
Writing—				
On slates	23	205	249	477
In copy-books	58	363	124	545
Totals	81	568	373	1,022
Arithmetic—				
Simple rules	36	224	373	633
Compound rules	44	84	53	181
Higher rules	9	26	14	49
Totals	89	334	440	863
Grammar—				
Elementary	28	202	139	369
Advanced	5	175	47	227
Totals	33	377	186	596
Geography—				
Elementary	20	169	204	393
Advanced	22	105	69	196
Totals	42	274	273	589

TABLE showing the Estimated Proficiency of the Pupils in *all* Schools.

Subjects.	Good.	Fair to very fair.	Tolerable to indifferent.	Totals.
Reading—				
Monosyllables	86	488	725	1,299
Easy narrative	73	388	667	1,128
Ordinary prose	75	382	166	623
Totals	234	1,258	1,558	3,050
Writing—				
On slates	109	588	667	1,364
In copy-books	154	1,031	425	1,613
Totals	263	1,619	1,092	2,977
Arithmetic—				
Simple rules	137	722	963	1,822
Compound rules	184	242	135	561
Higher rules	46	33	22	101
Totals	367	997	1,120	2,484
Grammar—				
Elementary	75	458	457	990
Advanced	33	413	173	619
Totals	108	871	630	1,609
Geography—				
Elementary	59	375	523	957
Advanced	72	280	234	586
Totals	131	655	757	1,543

ANNEX F.

DETAILED Statement of the condition of Schools in the Bathurst District, visited in 1868.

PUBLIC SCHOOLS.

BATHURST (N.V.)—Infants :—Visited, 23rd November.

Numbers present :—Boys, 24 ; girls, 27 ; total, 51.

The room is only tolerably suitable, and is not furnished with a gallery. Playground accommodation is very defective, and a supply of hat-pegs is needed. The discipline is healthy, and the general spirit of the school is fairly pleasing. The instruction is careful and industrious, and the attainments range from tolerable to very fair.

BATHURST (N.V.)—Primary :—Visited, 24th November.

Numbers present :—Boys, 72 ; girls, 27 ; total, 99.

The room is suitable, and well furnished. There is no playground properly so called, but this serious defect is likely soon to be remedied. The order is good ; the government is fairly effective ; and the instruction is intelligent, and marked by industry and earnestness. Considering that the school was without an assistant for the first six months of the year, the attainments are, on the whole, reasonably satisfactory.

BINALONG (V.) :—Visited, 8th June.

Numbers present :—Boys, 19 ; girls, 15 ; total, 34.

The building having recently been improved, the organization is good. The government is mild, but firm and effective. The instruction is sound and industrious. The methods are judicious. The attainments are satisfactory.

BLANEY (V.) :—Visited, 6th May.

Numbers present :—Boys, 19 ; girls, 9 ; total, 28.

A substantial stone building, in good repair. The material condition is satisfactory. The discipline is fairly effective. The teaching is conducted with energy and earnestness, and the attainments are reasonably satisfactory. The moral tone is, on the whole, fair.

BOWENFELLS (V.) :—Visited, 8th September.

Numbers present :—Boys, 44 ; girls, 20 ; total, 64.

An excellent building, well furnished and supplied with working materials. The school is well disciplined ; its moral character is good. The instruction is intelligent and earnest ; the methods are suitable, and applied with energy. The average proficiency is very fair. The singing is especially worthy of notice.

BURRUNDULLA (N.V.) :—Visited, 23rd October.

Numbers present :—Boys, 16 ; girls, 17 ; total, 33.

Except the want of suitable furniture, there is no special defect in the material condition of this school. The government is prompt and vigorous ; the moral tone is very fair. The teaching is intelligent, and is conducted with great energy. The proficiency ranges from fair to very fair.

CARCOAR (V.) :—Visited, 11th May.

Numbers present :—Boys, 25 ; girls, 21 ; total, 46.

A good building, well furnished and supplied with working materials. The playground is too small, and the teacher's residence needs some repairs. The discipline is fairly effective, but would be improved by greater energy. The methods are intelligent and skilful. The proficiency is, in most subjects, reasonably satisfactory.

COWRA (V.) Visited, 14th May.

Numbers present :—Boys, 27 ; girls, 27 ; total 54.

With the exception of the playground, which is unfenced, the material condition is good. The government is firm and effective. The methods are marked by very fair skill, and by care and industry. The results are satisfactory.

CRUDINE (N.V.) :—Visited, 28th October.

Numbers present :—Boys, 12 ; girls, 8 ; total, 20.

The school is at present conducted in a shepherd's hut, which is neither central nor suitable, on which account the attendance is low. A new vested building is in course of erection. The discipline is effective ; the teaching is conducted with fair intelligence ; and the proficiency, in the circumstances, is reasonably satisfactory.

CULLENBONE (N.V.) :—Visited, 22nd October.

Numbers present :—Boys, 7 ; girls, 19 ; total, 26.

The furniture is neither suitable nor sufficient, and the apparatus is scanty. The playground needs clearing and fencing, and the closets are not in good condition. The teacher's residence is uncomfortable, and too small. The discipline is only moderately effective. The instruction is not well regulated, and lacks penetrative power ; and the results are moderate.

CURRAJONG (N.V.) :—Visited, 26th May.

Numbers present :—Boys, 10 ; girls, 9 ; total, 19.

The playground is not enclosed ; otherwise the material condition is satisfactory. The moral aspect of the school is fair. The instruction is careful, and the methods are judicious. The proficiency is fairly creditable.

DENNIS ISLAND (N.V.) :—Visited, 3rd December.

Numbers present :—Boys, 16 ; girls, 7 ; total, 23.

The furniture is unsuitable and improperly arranged, and the closets are in bad repair ; otherwise the material condition is fair. The discipline is tolerable ; the teaching is industrious, but the methods are defective. The proficiency is moderate.

DUBBO

DUBBO (V.) :—Visited, 17th and 18th December.

Numbers present :—Boys, 30 ; girls, 25 ; total, 55.

The premises, which are built of wood, are in bad repair. Steps should be taken to erect a building as soon as practicable. The discipline is prompt and energetic, the teaching is animated and industrious, and the proficiency ranges from fair to good.

EVANS PLAINS'S (V.) :—Visited, 4th May.

Numbers present :—Boys, 18 ; girls, 19 ; total 37.

The building is suitable, in good repair, and well kept. It is fairly organized, and supplied with necessary material. The order and moral tone are very fair, the discipline is effective, the instruction is careful and intelligent, and the attainments are satisfactory.

FISH RIVER CREEK (V.) :—Visited, 27th August.

Numbers present :—Boys, 8 ; girls, 10 ; total, 18.

The building is only tolerably suitable for school purposes. Furniture, additional apparatus, and a properly cleared playground, are needed. The government is feeble and ineffective. The teaching is mechanical and not likely to have much effect. The teacher has neither been examined nor trained. The attainments are meagre. The school has only recently been opened.

FORBES (N.V.) :—Visited, 19th May.

Numbers present :—Boys, 36 ; girls, 24 ; total, 60.

The building is unsuitable, and in very bad repair. There is no proper playground. New premises are urgently needed. The discipline is fairly effective. The methods are fairly skilful, but defective in energy, and the results range from tolerable to very fair.

GRENFELL (V.) :—Visited, 29th May.

Numbers present :—Boys, 48 ; girls, 44 ; total, 92.

In a material point of view, this school is far from satisfactory. A new building, on another site, is much needed. The government is effective, the instruction is intelligent, and the methods are appropriate. The attainments are, on the whole, satisfactory.

GULGONG (N.V.) :—Visited, 20th October.

Numbers present :—Boys, 20 ; girls, 11 ; total, 31.

The building is moderately suitable. Flooring, proper furniture, and more apparatus, are needed. The playground is unfenced, and the closets are only moderately suitable. The discipline is not effective, and the moral tone is low. The teaching is of the most desultory and mechanical character. The methods, judging from results, are profitless ; and the proficiency is very unsatisfactory. The teacher has since left the service.

HARGRAVES (V.) :—Visited, 12th October.

Numbers present :—Boys, 22 ; girls, 31 ; total, 53.

The building is only moderately suitable, and in bad repair. Steps are being taken to erect new premises. The discipline is effective ; the moral tone is fair ; the teaching is careful and industrious ; and the methods are suitable. The results are reasonably satisfactory.

KIRKCONNELL (V.) :—Visited, 1st September.

Numbers present :—Boys, 22 ; girls, 16 ; total, 38.

An excellent building, well organized. The discipline is thoroughly effective. The moral tone is fair. The instruction is intelligent, earnest, and energetic. The methods are skilful. The attainments range from moderate to fair. The present teacher has only recently taken charge. Good progress may be anticipated.

LAWSON'S CREEK (N.V.) :—Visited, 8th October.

Numbers present :—Boys, 15 ; girls, 17 ; total, 32.

The premises and furniture are moderately suitable. The playground is unfenced. The discipline is only moderately effective, and the moral tone is not good. Several of the pupils are very untidy and dirty. The instruction is earnest, but mechanical ; and the methods are not effective. The attainments are low.

LIMEKILNS (V.) :—Visited, 4th November.

Numbers present :—Boys, 6 ; girls, 5 ; total, 11.

The school has hitherto been conducted in the room of a house adjacent to the new buildings, which are now ready for occupation. The new premises are excellent. The discipline is healthy. The instruction is careful, but wanting in energy ; and the attainments are satisfactory. *For reasons known to the Council*, the attendance is small.

LITHGOW VALLEY (N.V.) :—Visited, 17th September.

Numbers present :—Boys, 27 ; girls, 32 ; total, 59.

Considering the temporary character of the school, the building and general organization are reasonably satisfactory. The government is neither sufficiently firm nor vigilant, and the moral tone is low. The pupils are restless, talkative, and inattentive. The instruction is of a mechanical character, and the methods are not suitable. The proficiency is far from satisfactory.

LOWTHER (V.) :—Visited, 16th September.

Numbers present :—Boys, 8 ; girls, 17 ; total, 25.

A good wooden building, not quite finished. When completed, the material condition will be thoroughly satisfactory. The discipline seems genial and firm. The instruction is judicious. The methods are tolerably skilful. The attainments are from moderate to tolerable. The school has only been open a few weeks.

LUCKNOW (N.V.) :—Visited, 9th December.

Numbers present :—Boys, 14 ; girls, 15 ; total, 29.

The building is only tolerably suitable, and the playground is unfenced. The organization is, on the whole, only tolerable. The government is quiet, firm, and watchful. The teaching is marked by industry and fair intelligence. The results are, on the whole, fair.

MACQUARIE PLAINS (N.V.) :—Visited, 25th August.

Numbers present :—Boys, 20 ; girls, 18 ; total, 38.

The playground is too small. Another closet and new forms are needed. In other respects the organization is satisfactory. The discipline is wanting in firmness, decision, and energy ; the teaching is earnest, but lacks penetrative power ; and the attainments are not, on the whole, satisfactory.

MAIN CAMP (N.V.) :—Visited, 15th September.

Numbers present :—Boys, 28 ; girls, 25 ; total, 53.

The organization is, on the whole, fair, and better than is usually found in schools of a temporary nature on the line of railway. The government is firm. The moral tone is very fair. The teaching is careful and intelligent, and the methods are judicious. The results are satisfactory.

MARCHVALE (V.) :—Visited, 12th December.

Numbers present :—Boys, 11 ; girls, 11 ; total, 22.

A moderately suitable schoolroom ; furniture sufficient, but only moderately suitable, and badly arranged. The playground is unfenced, and there are no out-houses. The discipline is tolerable ; the teaching is intelligent, but the methods are defective ; and the results are, on the whole, only tolerable.

MARENGO (V.) :—Visited, 12th June.

Numbers present :—Boys, 12 ; girls, 13 ; total, 25.

The material state of this school is not satisfactory, but steps are being taken by the School Board for its improvement. The government is mild, but tolerably effective. The instruction is painstaking, but wanting in impressiveness. The results are, in the circumstances, passable.

MEADOW FLAT (V.) :—Visited, 3rd September.

Numbers present :—Boys, 8 ; girls, 10 ; total, 18.

The organization is very fair, and the discipline is good. The instruction is sound and intelligent, and the methods are suitable. With one exception, the proficiency ranges from fair to good.

MIDDLE RIVER HILL (N.V.) :—Visited, 22nd September.

Numbers present :—Boys, 25 ; girls, 17 ; total, 42.

A railway school, conducted in a wretched building, without suitable furniture, apparatus, or books. The two latter have since been supplied. The pupils are neither orderly nor attentive. The moral tone is low. The instruction is not regulated. The proficiency is meagre—as might be expected in the circumstances.

MITCHELL'S CREEK (V.) :—Visited, 2nd September.

Numbers present :—Boys, 17 ; girls, 18 ; total, 35.

The material condition is fairly satisfactory. The discipline is firm and vigilant. The teaching is intelligent and earnest. The methods are appropriate. The attainments vary from tolerable to very fair. The majority of the pupils are very young.

MOLONG (V.) :—Visited, 14th December.

Numbers present :—Boys, 27 ; girls, 27 ; total, 54.

The school-house is a wooden structure in fair condition, but the furniture is not good. New desks are needed. The discipline is genial and effective ; the instruction is sound and intelligent ; and the average proficiency is fair.

MOUNT MACQUARIE (V.) :—Visited, 8th May.

Numbers present :—Boys, 13 ; girls, 22 ; total, 35.

The building is tolerably suitable. The teacher's residence is too small. The discipline is healthy, the methods are fairly judicious, and the attainments are reasonably satisfactory.

MOUNT VITTORIA (N.V.) :—Visited, 10th September.

Numbers present :—Boys, 20 ; girls, 17 ; total, 37.

At the date of inspection the building was unfinished, and the furniture had not arrived from Sydney. At that time, therefore, the material condition was not good. The government is firm, prompt, and vigorous. The instruction is intelligent, but the attainments are small. The school had only been opened ten days.

MUDGE (V.)—Infants :—Visited, 5th October.

Numbers present :—Boys, 27 ; girls, 15 ; total, 42.

A tolerable room, fairly organized for infant school purposes. The discipline is effective, and the general spirit of the school is fairly pleasing. The instruction is appropriate, and fairly regulated. The proficiency is reasonably satisfactory.

MUDGE (V.)—Boys :—Visited, 6th October.

Number present :—Boys, 44.

A good schoolroom, well furnished and supplied with materials, but badly ventilated. A new closet is needed, and the premises generally are in need of repair. The discipline is effective ; the moral tone is very fair. The instruction is sound and thorough ; the methods are appropriate. The proficiency is satisfactory—analysis of sentences in the 4th class being very good. To the ordinary subjects are added geometry and algebra.

MUDGE

MUDGE (V.)—Girls :—Visited, 7th October.

Number present :—Girls, 45.

The school-room is only moderately suited for teaching purposes, but it is fairly supplied with furniture and apparatus. The discipline is firm and effective, and the spirit of the school is pleasing. The teaching is conducted with energy and industry; and the results are reasonably satisfactory.

MURRUMBURRA (N.V.) :—Visited, 6th June.

Numbers present :—Boys, 8; girls, 7; total, 15.

The building is tolerably suitable, but is not well furnished. The discipline is tolerable. The instruction is careful, but the methods are only moderate, and are wanting in energy. The proficiency is, on the whole, tolerable.

OPHIR ROAD (V) :—Visited, 17th August.

Numbers present :—Boys, 17; girls, 12; total, 29.

The building is in bad repair, and there is no proper playground. The discipline is mild, but firm and watchful. The instruction is careful, and the methods are fairly suitable. The attainments are reasonably satisfactory.

ORANGE (V.) :—Visited, 11th December.

Numbers present :—Boys, 33; girls, 16; total, 49.

An excellent building, well organized. The discipline is firm, vigilant, and sustained. The teaching is earnest and intelligent, and the proficiency is creditable.

PEEL (V.) :—Visited, 3rd November.

Numbers present :—Boys, 7; girls, 10; total, 17.

When the repairs are completed, the material condition will be fair. The government is wanting in vigour; the moral tone is tolerable. The instruction is intelligent, but is deficient in energy and care. The results are not, on the whole, satisfactory.

PIPE-CLAY CREEK (N.V.) :—Visited, 9th October.

Numbers present :—Boys, 22; girls, 22; total, 44.

The school is at present conducted in a wretched bark hovel, with a scanty supply of books and apparatus, and no suitable furniture. A new vested building is, however, in course of erection. The maintenance of discipline, in the circumstances, is almost impossible. The instruction is intelligent and energetic, and the proficiency, for the time and place, reasonably satisfactory.

PLEASANT VALLEY (N.V.) :—Visited, 28th August.

Numbers present :—Boys, 11; girls, 15; total, 26.

Furniture and a proper playground are wanting; otherwise the material condition is passable. The discipline is mild, but firm; the tone is healthy. The teaching is industrious, and the methods are tolerable. The attainments are fair.

ROCKLEY (V.) :—Visited, 21st August.

Numbers present :—Boys, 10; girls, 15; total, 25.

The playground needs fencing, and the occupation is defective; otherwise the organization is fair. The government is tolerably firm, but wanting in vigilance. The teaching is earnest, but the methods are deficient in energy and skill. The proficiency may be estimated as tolerable.

SPRING GROVE (N.V.) :—Visited, 8th December.

Numbers present :—Boys, 13; girls, 18; total, 31.

The premises are built of slab, and are fairly suitable, but insufficiently supplied with furniture, which is badly arranged. The order is bad, and the discipline generally ineffective; the moral tone is low. The instruction is mechanical, and the attainments are meagre. Needlework is the only thing well attended to. In no respect is this school in a satisfactory condition, nor is it likely to become so under the present management.

TAMBAROORA (V.)—Visited, 24th July.

Numbers present :—Boys, 15; girls, 16; total, 31.

The schoolroom is in fair repair, but the teacher's residence is untenable. The discipline is firm and effective, and the methods are fairly suitable. On the whole, the pupils evince tolerable proficiency.

TEA-POT SWAMP (V.) :—Visited, 4th December.

Numbers present :—Boys, 11; girls, 6; total, 17.

Some slight repairs are needed, but on the whole the material condition is good. The discipline is tolerably effective; the instruction is not regulated by a programme; and the average proficiency may be estimated as tolerable. Owing to many being absent, the school did not show to advantage.

WALLEROWANG (N.V.) :—Visited, 23rd September.

Numbers present :—Boys, 32; girls, 14; total, 46.

The building is suitable, but not well furnished. The supply of books and apparatus is defective. This latter defect has, however, been remedied since the date of inspection. The government is defective in energy, firmness, and vigilance. The instruction is careful, but is deficient in animation. The methods are tolerably suitable, but more vigour is needed to make them effective. The results are unsatisfactory.

WATTLE FLAT (V.) :—Visited, 5th November.

Numbers present :—Boys, 28 ; girls, 39 ; total, 67.

The building is in a wretched condition, and quite too small for the attendance. The furniture is clumsy and unsuitable. New premises are urgently required. The discipline is moderately effective : the moral tone is low. The instruction is not properly regulated, and the attainments range from very small to tolerable. Good results will not be obtained with the present organization.

WELLINGTON (V.) :—Visited, 15th and 16th December.

Numbers present :—Boys, 23 ; girls, 12 ; total, 35.

An excellent brick building, sufficiently supplied with furniture, but requiring additional apparatus. The discipline is fairly effective, the instruction is earnest and painstaking, and the proficiency is reasonably satisfactory. The discipline and instruction would, however, both be improved by greater energy and vigilance.

WHITE ROCK (N. V.) :—Visited, 18th August.

Numbers present :—Boys, 13 ; girls, 17 ; total, 30.

The building is fairly suitable, and is in good repair. Another closet is needed. The discipline is wanting in energy and vigilance. The instruction is defective in intelligence and penetrative power. The attainments are below the average.

YOUNG (V.) :—Visited, 2nd June.

Numbers present :—Boys, 43 ; girls, 27 ; total, 70.

The material condition of the school has been considerably improved since last inspection. The discipline is firm and vigilant. The teaching is intelligent and earnest. The methods are suitable and are applied with energy. The results range from tolerable to good.

INCIDENTAL INSPECTIONS.

CADIA (V.)—Public :—Visited, 31st August.

A good brick building, well furnished and supplied with apparatus and working materials. The instructional documents are fairly regulated, and the school records are neatly and correctly kept. As my visit took place after school hours, I had no opportunity of observing the discipline or teaching ; hence this school is not reckoned in Annex A, &c.

WINBURDALE (N.V.) :—Visited, 23rd April.

Numbers present :—Boys 11 ; girls, 14 ; total, 25.

The building is only tolerably suitable, but it is in fair repair. A teacher's residence is not provided, and there is no proper playground. Tolerable order is kept, and the discipline generally appears to be fairly effective. The school records are correctly kept. This school has not been taken into account in framing the several preceding Annexes ; hence the seeming discrepancy between the numbers entered in the Annex A and those in the statement of work done throughout the year.

PROVISIONAL SCHOOLS.

CONDOBOLIN :—Visited, 22nd May.

Numbers present :—Boys, 12 ; girls, 12 ; total, 24.

The building is tolerably suitable, but there is no playground, and the furniture is neither sufficient nor suitable. The government is moderate ; the instruction is meagre ; and the methods are unskilful. The proficiency is small.

CROWTHER :—Visited, 23rd June.

Numbers present :—Boys, 2 ; girls, 6 ; total, 8.

The organization is tolerable. The government is fitful and slack, and the instruction is mechanical. The results are not satisfactory. Another teacher has since been appointed.

FIVE ISLANDS :—Visited, 7th May.

Numbers present :—Boys, 6 ; girls, 9 ; total, 15.

The building is tolerably suitable, but the furniture is indifferent. The order and discipline are bad ; the instruction feeble and mechanical ; and the attainments generally unsatisfactory.

RYDAL :—Visited, 7th September.

Numbers present :—Boys, 7 ; girls, 14 ; total, 21.

The material condition is not good. At the date of inspection, books and apparatus had not been received. The discipline is feeble and worthless. The instruction is mechanical, and suitable methods are unknown. The attainments are very meagre.

SOD WALLS :—Visited, 7th September.

Numbers present :—Boys, 6 ; girls, 6 ; total, 12.

The school is conducted temporarily in a small and unsuitable room. Books and apparatus did not arrive until a few days after the date of inspection. The discipline is mild ; the teaching seems industrious and tolerably intelligent ; and the proficiency, for the time and circumstances, is reasonably satisfactory.

SOUTH APSLEY :—Visited, 20th August.

Numbers present :—Boys, 6 ; girls, 5 ; total, 11.

The building is tolerable suitable, but closets have not been provided. The supply of furniture and apparatus is defective. The discipline is fairly effective, and the general tone is pleasing. The subjects consist principally of reading, writing, and arithmetic, which are reasonably satisfactory.

WARWICK :—

WARWICK :—Visited, 31st August.

Numbers present :—Boys, 10 ; girls, 8 ; total, 18.

The schoolhouse is moderately suitable. At the date of inspection no books or apparatus had been received. The discipline is moderately firm, but fitful. The teaching is energetic, but desultory. The attainments are moderate.

WOMBAT :—Visited, 4th June.

Numbers present :—Boys, 3 ; girls, 4 ; total, 7.

Material condition wretched. Instruction : Reading and writing indifferent ; other subjects—failure. The teacher left soon after the inspection.

CAMDEN DISTRICT.—GENERAL REPORT.

At the end of 1867 there were 111 schools—or 115 departments—on the list for this district. Of these, 6 were transferred to the Cumberland District, at the beginning of 1868. Other schools having, however, been added during the year, on the 31st December, 1868, the list contained 106 schools, or 110 departments, viz. :—48 Public, 1 Half-time, 13 Provisional, and 48 Certified Denominational Schools.

The following numerical statement exhibits the amount of work done by me, in the year, in the supervision and inspection of the schools placed under my charge :—

Number of schools or departments, on 31st December, 1868 :—Public, 48 ; Half-time, 1 ; Provisional, 13 ; and Certified Denominational, 48 ; total, 110.

Number of pupils enrolled in the year—7,413.

Number of pupils on class rolls in last quarter of the year—5,616.

Number of teachers, assistants, and pupil teachers employed—121.

Number of visits on applications for new schools—14.

Number of visits of special inquiry—23.

Number of visits for inspection—70.

Number of pupils on the rolls of the schools inspected—3,820.

Number of pupils present at inspection—2,949.

Number of teachers supervised at examination—52.

Number of pupil teachers and candidates examined—19.

Total distance travelled—2,707 miles.

INSPECTION OF SCHOOLS.

The schools not inspected in 1867 were among those first visited and inspected in 1868. 27 Public, 9 Provisional, and 29 Certified Denominational Schools—numbering in all 70 departments—have been visited for inspection in the year. Those schools newly opened, and others not inspected in 1867—22 in number—have been subjected to the General Inspection, while those visited and reported upon in 1867 have this year been subjected to the Regular Inspection only.

TABLES showing the Ages and Sexes of the Pupils enrolled (in the schools inspected), and also of those present at examination :—

1.—PUPILS ENROLLED (PUBLIC AND PROVISIONAL SCHOOLS).

Schools.	7 years and under.		8 years.		9 years.		10 years.		11 years.		12 years and above.		Totals.	
	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.
Public Schools	360	300	129	94	98	70	97	98	76	65	138	129	898	756
Provisional Schools	54	53	18	13	14	16	14	21	6	6	25	26	131	135
Totals	414	353	147	107	112	86	111	119	82	71	163	155	1,029	891

2.—PUPILS PRESENT (PUBLIC AND PROVISIONAL SCHOOLS).

Schools.	7 years and under.		8 years.		9 years.		10 years.		11 years.		12 years and over.		Totals.	
	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.
Public Schools	299	241	102	76	84	49	70	78	58	53	102	98	715	595
Provisional Schools	44	34	16	11	11	13	11	20	4	3	18	22	104	103
Totals	343	275	118	87	95	62	81	98	62	56	120	120	1,071	829

3.—PUPILS ENROLLED (CERTIFIED DENOMINATIONAL SCHOOLS).

Schools.	7 years and under.		8 years.		9 years.		10 years.		11 years.		12 years and above.		Totals.	
	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.
C. E. Schools	233	175	64	50	55	50	54	52	42	20	86	56	534	407
R. C. „	151	116	50	38	40	28	42	31	34	32	69	64	386	309
Pres. „	42	31	14	7	12	8	11	7	5	6	13	15	97	74
Wes. „	26	20	10	4	8	2	7	5	3	3	...	5	54	39
Totals	452	346	138	99	115	88	114	95	84	61	168	140	1,071	829

4.—PUPILS PRESENT (CERTIFIED DENOMINATIONAL SCHOOLS).

Schools.	7 years and under.		8 years.		9 years.		10 years.		11 years.		12 years and over.		Totals.	
	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.
C. E. Schools	169	136	48	45	38	41	43	36	31	16	64	41	393	315
R. C. "	107	83	39	26	32	21	32	24	26	28	47	53	283	235
Pres. "	36	23	10	5	9	5	8	5	3	3	10	12	76	53
Wes. "	21	16	10	4	6	2	5	4	3	1	...	5	45	32
Totals	333	258	107	80	85	69	88	69	63	48	121	111	797	635

CONDITION OF THE SCHOOLS INSPECTED.

I. MATERIAL CONDITION.

1. *Situations and Playgrounds.*—As a whole, the Public Schools inspected are well situated. The playgrounds are fairly satisfactory, but in a few instances suitable out-buildings have not yet been provided. The Provisional Schools are but moderately satisfactory in these respects. With two exceptions, the Certified Denominational Schools are well situated, and have tolerably good playgrounds; but, at one-third of the number inspected, out-offices are either not provided to the playgrounds, or, if provided, their condition is very unsatisfactory.

2. *Buildings and Furniture.*—Eighteen of the Public Schools visited are conducted in buildings belonging either to denominations or to private persons. In the majority of these cases the buildings are more or less unsatisfactory; and the furniture in use is, in many instances, very unsuitable for school purposes. In some cases also (where the buildings are used as churches) the furniture provided is badly arranged. Where the school property is vested in the Council, the buildings and furniture are, in most cases, good. The Provisional School buildings and furniture are, with one or two exceptions, very unsatisfactory. With regard to Denominational Schools, seven school buildings (of the thirty-one inspected) are in bad repair, or otherwise unsuitable, fourteen are badly furnished, and ten have no residence provided for the teachers.

3. *Books and Apparatus.*—All the schools in the district are now fairly well supplied with these requisites.

4. *Records.*—These are fairly well attended to by the teachers. In most cases also the necessary returns are neatly and correctly made out and furnished at the proper times.

TABLES showing the Material Condition of the Schools.

1.—PUBLIC AND PROVISIONAL SCHOOLS.

Actual State of the Schools.	Public Schools.		Provisional Schools.	Total.
	Vested.	Non-vested.		
Good or fair	7	5	...	12
Tolerable or moderate	1	5	6	12
Indifferent or bad	3	8	3	14

2.—CERTIFIED DENOMINATIONAL SCHOOLS.

Actual State of the Schools.	C. E. Schools.	R. C. Schools.	Presbyterian Schools.	Wesleyan Schools.	Total.
Good or fair	10	7	...	2	19
Tolerable or moderate	2	5	1	...	8
Indifferent or bad	1	1	2	...	4

II.—MORAL CONDITION OF THE SCHOOLS.

1. *Attendance.*—Although the schools are not yet satisfactory in this respect, some improvement has undoubtedly been effected, especially in the regularity of the pupils' attendance, since last inspection. From careful inquiry made at the time of inspection, I ascertained that, in a number of the localities, there were many children of a school age who were not in attendance at the schools established for them. In a few instances the parents profess to care little or nothing about the education of their children; and in many more instances, though professing to be anxious to send their children to school, they act as though they cared but little with regard to the matter—the children being kept from school for the most frivolous reasons, and no real interest shown in their educational progress. Teachers and School Boards, by careful attention to their duties, may, I believe, still further improve the pupils' regularity, and also induce more parents to send their children to school; I am strongly of opinion, however, that nothing short of an enactment, dealing with the question of fees and introducing the system of compulsory school attendance, would effectually remedy the evils of irregularity and non-attendance. The punctuality, as regards both the pupils' attendance and the school operations, may, in the majority of the schools inspected, be considered fairly satisfactory.

2. *Cleanliness, Order, and Government.*—In thirty schools these important matters of discipline are well attended to; and in thirty-six they are fairly satisfactory. In four schools they are indifferent or bad.

TABLES showing the Moral Condition of the Schools.

1.—PUBLIC AND PROVISIONAL SCHOOLS.

Actual state of the Schools.	Public Schools.	Provisional Schools.	Total.
Good or fair	17	2	19
Tolerable or moderate	10	2	12
Indifferent or bad	2	5	7

2.—CERTIFIED DENOMINATIONAL SCHOOLS.

Actual state of the Schools.	C. E. Schools.	R. C. Schools.	Pres. Schools.	Wes. Schools.	Total.
Good or fair	8	3	3	...	14
Tolerable or moderate	4	7	...	2	13
Indifferent or bad	1	3	...	...	4

III.—INSTRUCTION AND PROFICIENCY.

1. *Classification and Occupation.*—In a few schools the classification of the pupils has by no means received due attention from the teachers. There is evidence, however, of this important matter having been carried out with thoughtfulness and care in a large majority of the schools inspected. The pupils' classification and their school occupation have, in most instances, been judiciously arranged in accordance with the provisions of the "Standard of Proficiency" and other documents furnished to the teachers for their guidance. Four-fifths of the Public Schools, one-half of the Provisional Schools, and two-thirds of the Certified Denominational Schools are satisfactory in these respects.

2. *Subjects and Methods.*—The ordinary subjects, as prescribed in the "Course of Secular Instruction," are taught in all the schools visited. In about four-fifths of the Public Schools, and two-thirds of the Certified Denominational Schools, object lessons, singing, and drawing are also included (usefully) in the schoolwork. The methods in use are in many instances still very unsatisfactory; at the same time, the teachers are certainly improving in this respect, and at next inspection the report will, I think, be much more satisfactory.

3. *Proficiency—Reading.*—In many of the schools great efforts have been made since last inspection to improve the reading, and in some instances marked success is apparent. In a few of the schools where the reading was very defective the right methods of teaching have evidently been thoughtfully considered by the teachers, and hence more satisfactory results have been produced. In a large number of the schools, *much more* of the teachers' time and attention should be devoted to *teaching* this subject in the junior classes.

Writing and dictation.—On the whole, fair improvement has been made in these subjects.

Arithmetic.—In most of the Provisional Schools, in a few of the Public Schools, and in about one-third of the Certified Denominational Schools this subject is still taught very unsatisfactorily. In the majority of the Public Schools and Certified Denominational Schools however, a decided improvement is evidently going on; the pupils are not only taught to perform certain arithmetical operations, but also to apply those operations to the solution of practical questions. The average proficiency of the pupils in this subject and their intelligent apprehension of its principles are, on the whole, tolerably satisfactory.

Grammar.—The pupils are tolerably well acquainted with the elementary parts of this subject, but, except in a few instances, it has not yet taken its proper place in the schools as a means of mental training.

Geography.—This subject is professedly taught in accordance with the Standard's requirements, but, in most of the schools, only a moderate knowledge of it is displayed by the pupils. In a few instances the subject is well taught; but, taking all the schools inspected, the general proficiency can only be considered moderately satisfactory.

TABLES shewing the state of the Schools as to Instruction:—

1.—PUBLIC AND PROVISIONAL SCHOOLS.

Actual state of the Schools.	Public Schools.	Provisional Schools.	Total.
Good or fair	20	1	21
Tolerable or moderate	7	4	11
Indifferent or bad	2	4	6

2.—CERTIFIED DENOMINATIONAL SCHOOLS.

Actual state of the Schools.	C. E. Schools.	R. C. Schools.	Pres. Schools.	Wes. Schools.	Total.
Good or fair	5	4	3	12
Tolerable or moderate	7	6	1	14
Indifferent or bad	1	3	1	5

APPENDIX.

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TABLES shewing the Proficiency of the Pupils:—

1.—PUBLIC AND PROVISIONAL SCHOOLS.

Estimate of Proficiency.	Public Schools.	Provisional Schools.	Total.
Good or fair	14	2	16
Tolerable or moderate	13	4	17
Indifferent or bad	2	3	5

2.—CERTIFIED DENOMINATIONAL SCHOOLS.

Estimate of Proficiency.	C. E. Schools.	R. C. Schools.	Pres. Schools.	Wes. Schools.	Total.
Good or fair	5	3	2	.....	10
Tolerable or moderate	7	7	1	2	17
Indifferent or bad	1	3	.....	.....	4

TEACHERS.

The teachers are, as a body, conscientious, intelligent, and fairly well fitted for the efficient discharge of their duties. In my intercourse with them, I have also found them, in all cases, willing to receive and act upon my suggestions for the improved working of their schools. Fifty-two teachers were examined in the year in accordance with the provisions in clause 37 of the Council's Regulations. Of these, twenty-two were successful in obtaining a higher classification. Eleven pupil teachers were also examined in the year.

The number and classification of the teachers in the district at the close of the year are shewn in the following table:—

Teachers.	Class I.		Class II.		Class III.			Probationers.	Pupil Teachers.	Totals.
	A.	B.	A.	B.	A.	B.	C.			
Male teachers	2	3	2	30	15	17	14	5	88
Female teachers	4	2	10	11	6	33
Totals	2	3	2	34	17	27	25	11	121

LOCAL SUPERVISION.

No marked improvement is yet apparent in the character of the supervision exercised by the School Boards. In a few instances the supervision exercised is really effective—the Boards' duties prescribed by the Regulations being carried out with regularity and painstaking; but by a large majority of the School Boards little or no real interest is manifested in the progress and well-being of the schools placed under their supervision.

Separate detailed statements for Public and Certified Denominational Schools, shewing the A., B. condition of the different schools at the time of inspection, will be found appended to this report.

J. HUFFER,
Inspector.

CAMDEN DISTRICT.

APPENDIX A.

DETAILED STATEMENT of the Condition of Public and Provisional Schools inspected in 1868.

The remarks under head 1 relate to the material condition of the schools; 2, to their moral condition; 3, to the subjects and methods of instruction; 4, to the proficiency of the pupils.

ARNCLIFFE (Non-vested):—Visited, 17th December, 1868.

Numbers present:—Boys, 19; girls, 7; total, 26.

1. The school-house is too small, and the furniture is unsuitable and badly arranged. There are no out-offices, and the playground is unfenced. 2. The discipline is tolerably healthy. 3. The instruction is carried on with earnestness and tolerable skill. 4. The proficiency, under the circumstances of the school, is fairly satisfactory.

APPIN (Vested):—Visited, 4th December, 1868.

Numbers present:—Boys, 13; girls, 10; total, 23.

1. A verandah is much needed on the west side of the building, and a supply of water should be provided; otherwise, the material condition of the school is good. 2. The discipline and prevailing tone are healthy. 3. The prescribed subjects are taught with earnestness and skill. 4. The results, considering the time the school has been in operation, are very satisfactory. (At the time of my visit a large number of the pupils were kept from school for harvest work.)

ASHFIELD

ASHFIELD (Non-vested) :—Visited, 29th May, 1868.

Numbers present :—Boys, 22 ; girls, 13 ; total, 35.

1. The school premises are central, and they have recently been put in a tolerable state of repair. The furniture is sufficient, but unsuitable. 3. The regularity and punctuality are unsatisfactory. The pupils are very clean, orderly, and attentive ; and the tone of the school is pleasing. 3. The prescribed subjects are taught—singing and drawing excepted. The methods are appropriate. 4. The results (under the present teacher) are very satisfactory.

BROUGHTON CREEK (Non-vested) :—Visited, 27th August, 1868.

Numbers present :—Boys, 13 ; girls, 21 ; total, 34.

1. The material condition of the school is fairly satisfactory. 2. The discipline is healthy. 3. The prescribed subjects are taught—drawing excepted. The instruction is carried on with earnestness and tolerable skill. 4. The proficiency is tolerable.

BOTANY (Non-vested) :—Visited, 7th July, 1868.

Numbers present :—Boys, 38 ; girls, 31 ; total, 69.

1. The premises are well situated, but in other respects they are not satisfactory. New vested buildings are now in course of erection. 2. The discipline and general tone are fairly healthy. 3. The prescribed subjects are taught with industry and care. 4. The results, considering the defective organization, are tolerably satisfactory.

BOOLONG (Non-vested) :—Visited, 1st September, 1868.

Numbers present :—Boys, 21 ; girls, 32 ; total, 53.

1. The material condition and organization are tolerably satisfactory. 2. The discipline is fairly healthy. 3. The instruction is carried on with zeal and earnestness. 4. The proficiency is tolerable.

CAMBEWARRA (Vested) :—Visited, 26th August, 1868.

Numbers present :—Boys, 18 ; girls, 16 ; total, 34.

1. The material condition is fair. 2. The discipline is tolerably healthy. 3. The teacher is intelligent and painstaking. 4. The general proficiency is fair.

COOLANGATTA (Non-vested) :—Visited, 4th September, 1868.

Numbers present :—Boys, 22 ; girls, 18 ; total, 40.

1. The building now in use is tolerably suitable, but it is badly furnished. 2. The regularity, cleanliness, and order of the pupils are fairly satisfactory. 3. The prescribed subjects are taught with industry and care. 4. The progress made since the present teacher took charge is satisfactory.

CARARAWELL (Non-vested) :—Visited, 24th August, 1868.

Numbers present :—Boys, 18 ; girls, 16 ; total, 34.

1. The material condition of the school is not good. New buildings are greatly needed. 2. The discipline and general tone are healthy. 3. The prescribed subjects are taught with intelligence and much earnestness. 4. The proficiency is fair.

CAWDOR (Non-vested) :—Visited, 15th June, 1868.

Numbers present :—Boys, 23 ; girls, 18 ; total, 41.

1. The premises are well situated ; they are in good repair, and fairly well furnished. Half the floor space in the schoolroom is occupied by church furniture, consequently the school arrangements and organization are unsatisfactory. 2. The pupils are clean, orderly, and attentive. 3. The instruction is carried on with energy and care. The methods are moderately appropriate. 4. The proficiency is fair.

CROOBYAR (Non-vested) :—Visited, 6th August, 1868.

Numbers present :—Boys, 42 ; girls, 32 ; total, 74.

1. The teacher's residence is too small. A class-room is needed, and the whole premises should be repaired and cleaned. 2. The discipline is good. 3. All the prescribed subjects are taught. The teacher is intelligent, energetic, and painstaking. 4. The proficiency is fairly satisfactory.

GLENMORE (Non-vested) :—Visited, 11th June, 1868.

Numbers present :—Boys, 18 ; girls, 25 ; total, 43.

1. The school is at present carried on in the Wesleyan Chapel, but suitable buildings and furniture (vested) are now being provided. 2. The discipline is fairly healthy. 3. The teaching is carried on with much earnestness and painstaking, but the methods are defective. 4. The proficiency is tolerable.

JAMBEROO (Vested) :—Visited, 12th September, 1868.

Numbers present :—Boys, 18 ; girls, 11 ; total, 29.

1. Slight repairs are needed to the roof of the schoolhouse, and an additional room to the teacher's residence is much required. 2. The regularity is not good, otherwise the discipline and general tone are fair. 3. The teaching is carried on with intelligence and skill. 4. Fair progress has been made during the past year.

MARRICKVILLE (Vested) :—Visited, 28th May, 1868.

Numbers present :—Boys, 80 ; girls, 34 ; total, 114.

1. The out-offices should be screened, and the playground divided for boys and girls ; otherwise, the material condition is good. 2. The discipline is fair. 3. The usual subjects are taught. The methods are fairly appropriate. 4. The results are tolerably satisfactory.

MULGOA FOREST (Non-vested) :—Visited, 8th June, 1868.

Numbers present :—Boys, 26 ; girls, 20 ; total, 46.

1. The premises are well situated, but otherwise they are unsatisfactory. Out-offices have not been provided. The teacher's residence is greatly in need of repair. 2. The discipline is tolerable. 3. The teaching is carried on with industry, but the methods are unsuitable. 4. The proficiency is only moderate.

NOWRA (Vested) :—Visited, 11th August, 1868.

Numbers present :—Boys, 18 ; girls, 25 ; total, 43.

1. A teacher's residence is needed, and the out-offices should be screened ; otherwise, the material condition is good. 2. The attendance is unsatisfactory. The pupils are fairly orderly and attentive. 3. The prescribed subjects are taught, drawing excepted. The methods are defective, and there is a want of thoroughness in the school work. 4. The proficiency is only tolerable.

NORTH BULLI (Non-vested) :—Visited, 10th December, 1868.

Numbers present :—Boys, 20 ; girls, 11 ; total, 31.

1. New buildings (Vested) are now being provided. The schoolroom at present in use is much too small, and it is otherwise unsuitable. 2. The discipline is very good. 3. The instruction is carried on with skill and much earnestness. 4. The proficiency is satisfactory.

OMEGA RETREAT (Vested) :—Visited, 15th September, 1868.

Numbers present :—Boys, 46 ; girls, 46 ; total, 92.

1. The teacher's residence is too small ; the playground should be stumped and levelled ; otherwise, the material condition is good. 2. The discipline is satisfactory. 3. The usual subjects are taught with energy and care. The methods are fairly appropriate. 4. The proficiency is very fair, in some subjects very good.

PYREE (Non-vested) :—Visited, 2nd September, 1868.

Numbers present :—Boys, 42 ; girls, 47 ; total, 89.

1. The material condition is bad, school requisites excepted. 2. The discipline is very good. 3. The prescribed subjects are taught with skill and much earnestness. 4. The proficiency is, on the whole, satisfactory.

ROSE VALLEY (Non-vested) :—Visited, 14th September, 1868.

Numbers present :—Boys, 13 ; girls, 18 ; total, 31.

1. New school buildings (Vested) are in course of erection. The temporary premises are unsuitable. 2. The discipline and general tone are tolerably healthy. 3. The prescribed subjects are taught, drawing excepted. The methods are fairly appropriate. 4. The proficiency, under the circumstances of the school, is fairly satisfactory.

SHELLHARBOUR (Non-vested) :—Visited, 16th September, 1868.

Numbers present :—Boys, 33 ; girls, 36 ; total, 69.

1. The material condition, requisites excepted, is bad. A new building is greatly needed. 2. The discipline is tolerably healthy. 3. The instruction is carried on with earnestness. 4. The general proficiency is fair.

STONY CREEK (Vested) :—Visited, 10th September, 1868.

Numbers present :—Boys, 11 ; girls, 12 ; total, 23.

1. The schoolroom needs repairs. 2. The discipline is fairly satisfactory. 3. The instruction is carried on with moderate intelligence and skill. 4. The proficiency is tolerably satisfactory.

TOMERONG (Non-vested) :—Visited, 10th August, 1868.

Numbers present :—Boys, 21 ; girls, 17 ; total, 38.

1. The material condition of the premises, teacher's residence excepted, is very fair. Since last inspection, suitable out-offices have been erected. 2. The discipline is fair. 3. The instruction is carried on with industry, but the methods are only moderately suitable. 4. The proficiency is moderate.

ULLADULLA (Non-vested) :—Visited 5th August, 1868.

Numbers present :—Boys, 28 ; girls, 11 ; total, 39.

1. There is no teacher's residence, and the schoolroom and out-offices are greatly in need of repairs. 2. The discipline is healthy. 3. The instruction is satisfactory. 4. The general proficiency of the pupils is fair.

WESTBROOK (Vested) :—Visited, 12th June, 1868.

Numbers present :—Boys, 22 ; girls, 15 ; total, 37.

1. The school premises need repairs. 2. The discipline is tolerable. 3. The teaching is carried on with industry, but the methods used are defective. 4. The general proficiency is small.

WORRAGEE (Vested) :—Visited, 31st August, 1868.

Numbers present :—Boys, 14 ; girls, 10 ; total 24.

1. The school premises are in bad repair. 2. The discipline is only moderately healthy. 2. The teaching is weak and ineffectual. 4. The proficiency of the pupils is very moderate.

WOLLONGONG

WOLLONGONG (Vested) :—Visited, 8th December, 1868.

Number present :—31.

1. The material condition is bad. Arrangements are now being made to have the premises put in thorough repair. 2. The discipline is very fair. 3. The instruction in the upper classes is efficient; in the second class moderately so. 4. The progress made is fairly satisfactory.

WOLLONGONG (Girls) :—Visited, 8th and 9th December, 1868.

Number present :—24.

1. The material condition is unsatisfactory. 2. The discipline and general tone are healthy. 3. The prescribed subjects are taught with earnestness and painstaking. 4. Fair progress has been made since last inspection.

WOLLONGONG (Infants) :—Visited, 9th December, 1868.

Number present :—44.

1. The material condition, out-offices excepted, is fairly satisfactory. 2. The pupils are clean, orderly, and attentive, and the general tone of the school is pleasing. 3. The instruction and general management are carried on with industry, and the methods in use are tolerably appropriate. 4. The proficiency is fair.

PROVISIONAL SCHOOLS.

BAMERANG :—Visited, 24th August, 1868.

Numbers present :—Boys, 14; girls, 16; total, 30.

1. The material condition is tolerably satisfactory. 2. The discipline is weak. 3. The ordinary subjects are taught with industry and painstaking, but the methods are mechanical and ineffective. 4. The proficiency is moderate.

BROUGHTON VALE :—Visited, 28th August, 1868.

Numbers present :—Boys, 12; girls, 12; total, 24.

1. The material condition is fair for the kind of school. 2. The discipline is moderate. 3. The methods of instruction are defective. 4. The proficiency of the pupils, considering the time they have been at school, is tolerable.

BROUGHTON VILLAGE :—Visited, 28th August, 1868.

Numbers present :—Boys, 13; girls, 13; total, 26.

1. A new schoolroom is about to be erected. The premises temporarily used are fairly suitable. 2. The discipline is good. 3. The ordinary subjects are taught with intelligence and zeal. 4. The general proficiency is equal to that found in a tolerably good Public School.

BOMADEERY :—Visited, 15th August, 1868.

Numbers present :—Boys, 15; girls, 20; total, 35.

1. The building and furniture are but moderately satisfactory. 2. The discipline is very fair. 3. The ordinary subjects are taught with much industry and painstaking. 4. The progress made during the year is satisfactory.

BURRIAR :—Visited, 25th August, 1868.

Numbers present :—Boys, 17; girls, 9; total, 26.

1. Furniture excepted, the material condition of the school is fairly satisfactory. 2. The discipline is moderately healthy. 3. The teacher is very industrious, but his practical skill is small. 4. The proficiency is very moderate.

JANNUNG :—Visited, 7th August, 1868.

Numbers present :—Boys, 9; girls, 10; total, 19.

1. The school is at present conducted in temporary premises, which are tolerably suitable, but not sufficiently central to the population in the locality. 2. The discipline is fair. 3. The prescribed subjects are taught, and the school work is carried on with great industry by the teacher and pupils. 4. The results, for a provisional school, are very satisfactory.

MOORFIELDS :—Visited, 9th July, 1868.

Numbers present :—Boys, 5; girls, 5; total, 10.

1. The material condition is fair. 2. The attendance is unsatisfactory, and the general tone of the school is not healthy. 3. The school work is carried on with industry, but the methods in use are very defective, rote learning being their chief characteristic. 4. The proficiency is very small.

SAGGARTFIELD :—Visited, 25th September, 1868.

Numbers present :—Boys, 6; girls, 11; total, 17.

1. The furniture is unsuitable, and the material condition of the school is otherwise unsatisfactory. 2. The discipline is bad. 3. The teacher is industrious, but little beyond rote learning is attempted. 4. The pupils' attainments are small. The progress made since last inspection is not satisfactory.

NOWEA HILL :—Visited, 21st August, 1868.

Numbers present :—Boys, 13; girls, 7; total, 20.

1. The schoolhouse and its furniture are rough and unsuitable. 2. The discipline is moderate. 3. The classification is very imperfect. The ordinary subjects are taught. The methods are inappropriate. The teacher is industrious and painstaking. 4. The proficiency is moderate.

CUMBERLAND DISTRICT.—INSPECTOR'S GENERAL REPORT OF SCHOOLS, FOR THE YEAR 1868.

THE Colony has now had two years' experience of the Public Schools Act. For the character of the Act the Legislature is responsible, for its administration the Council of Education ; but, what is really of more moment than either, the people of the Colony are interested in, and to a large extent responsible for, its successful and profitable working. How far, therefore, this Act is fulfilling expectations, and advancing the great cause for which it was framed, it will be the object of this Report to show, with respect to the Cumberland District.

I.—THE NUMBER AND DESCRIPTION OF SCHOOLS.

Within the year, eighty schools have been in operation :—

Public Schools	24
Provisional Schools	9
Half-time Schools	2
Church of England Schools.....	21
Roman Catholic Schools	14
Presbyterian Schools.....	5
Wesleyan Schools	5
Total	80

Of the twenty-four Public Schools, it is deserving of notice, that two, those of St. Alban's and Ryde, are new schools, and one, that of Upper M'Donald, is a change from a Church of England to a Public School. The Dural Church of England School also, which has been for three months closed, will be opened at the beginning of the ensuing year as a Public School. A third Church of England School, that of Upper Colo, has been surrendered ; and, with the view of better ministering to the educational necessities of the locality, two Half-time Schools have been opened in its stead.

As allowed by the Act, a Roman Catholic School, recently opened at Villa Maria, has been added to the number of schools of that denomination under the Council. One Presbyterian School, improperly so named, suspended operations at the close of the third quarter of the year—mainly through the little local support that it was receiving, which furnished evidence that its continuance was not a matter of local concern. Of the nine Provisional Schools, five have been but recently opened, and one is a school that had been in operation for a short time in 1867 but which had been closed for about a year. Before passing from the numbers and description of schools, it is of consequence to note that several applications for Public and Half-time Schools have been dealt with, and that progress is being made towards their establishment.

II.—INSPECTION OF SCHOOLS.

All the eighty schools above specified have been regularly examined once during the year, with the exception of eight. Not a few of them have been visited on other occasions. Of the eight schools not regularly examined, all but three have been visited, namely,—Lane Cove Presbyterian, and the Provisional Schools at Wright's Creek and Upper M'Donald, neither of which was in operation when the schools in their respective localities were inspected.

Of the seventy-two schools thoroughly examined, a concise history will be found appended to this Report, in the Annexes and Detailed Statement, thus :—

Annex A shows the material condition of the schools,

B shows the numbers and ages of the pupils on the rolls, and present at the examination,

C shows the moral character of the schools,

D shows the character of the instruction,

E shows the proficiency of the pupils ;

and the Detailed Statement gives a verbal summary of tables A C D and E.

From Annex B is deduced the following interesting information. Of pupils upon the rolls of the several classes of schools, the percentage present at the examination may be thus expressed :—

24 Public Schools	79·3 nearly.
4 Provisional Schools	69·8
2 Half-time Schools	80
21 Church of England Schools	73·4
13 Roman Catholic Schools.....	70·8
4 Presbyterian Schools	78·2
4 Wesleyan Schools	71·7
30 Public Provisional and Half-time Schools	76·3
42 Denominational Schools.....	73·5

The whole condition, working, and results of these seventy-two schools were carefully inquired into. One standard was applied to all ; and one mode of examination was, as far as practicable, adhered to throughout. No doubt, there were instances in which the inspection was deemed by those interested rather exacting, unnecessarily observant, and searching ; but, as the grand aim of inspection is to ascertain fairly the value of a school as an educational institution, and to suggest remedies in cases of defect, a merely superficial examination would be as dishonest as it would be valueless. The moral condition of each school was determined by a full observation of the general conduct and demeanour of the scholars ; whilst the attainments in the ordinary branches of education were tested by oral and written examination, and compared with the Council's Standard before a final estimate was made. The expectations of some teachers have been disappointed ; they counted upon their pupils making a better appearance at examination than they did ; according to their opinion they had done their very best to secure good results. It is not implied that they had not done so, but it is asserted that they have not realized the position of intelligent successful educators ; they have not, to use a current expression, made themselves "master of their position." To do this, it is imperative that they closely and constantly study the subjects to be educated—minds, their capacities, peculiarities, and developments ; the objects to be presented to them with the view of opening, enlarging, strengthening, and cultivating them ; and the best mode of bringing these subjects and objects into active contact, so that good results may be reasonably calculated upon, and without fail secured.

Three things the teacher who will command success in his profession must not merely keep in view, but make the subject of anxious study,—the educable subject, the educating objects, and the educative manner. Without an intelligent and faithful attention to these particulars, fidelity, diligence, and energy are to a large extent expended in vain.

Having

Having thus briefly indicated the extent, manner, and aim of inspection, it may be best at this point to present, in a tabular form, the rank of the teachers employed by the Council in this district during the year :—

1.—TEACHERS IN PUBLIC AND HALF-TIME SCHOOLS.

1st Class.		2nd Class.		3rd Class.			Probationers and Pupil Teachers.
Section A.	Section B.	Section A.	Section B.	Section A.	Section B.	Section C.	
.....	1	1	4	8	7	6	8

2.—TEACHERS IN DENOMINATIONAL SCHOOLS.

1st Class.		2nd Class.		3rd Class.			Probationers and Pupil Teachers.
Section A.	Section B.	Section A.	Section B.	Section A.	Section B.	Section C.	
.....	1	12	12	13	13

The teachers of the nine Provisional Schools have no classification ; they receive a salary at the discretion of the Council. A comparison of the above tables with last year's statement will show that a considerable number of teachers has been promoted. This promotion has not been attained by any single section of the teachers—it was open to, and secured by, all who diligently and effectively wrought for it ; and the consequence, no doubt, will be, to excite profitable inquiry, and to stimulate latent talent among teachers, so that the ensuing year may be more marked by progress than the past.

Much need not be said about the character and general fitness of teachers for their office. The very fact of their holding office ought to be their testimonial. That such is not invariably the case, is a matter of regret. There are undeniably persons holding the office of teachers, whose fitness for that position appears never to have been seriously taken into account. They have in some manner got into that office, and the difficulty with which the Council has to contend, is how best to dispose of them without treating them with any seeming harshness. The cases thus pointed to are comparatively few. The great majority of the teachers are reasonably fitted, both as regards moral character and attainments, for their part in the all important work with which the Council of Education is charged.

III.—ORGANIZATION.

In the great majority of the Public Schools, the organization generally ranks from fair to good. This estimate embraces the whole condition of the schools, from their situations to their internal fittings and working appliances. About one-seventh is less favourably circumstanced.

As regards the Denominational Schools, it will be observed by a reference to Annex A, that in respect of situations, buildings, and playgrounds, they compare well with the Public Schools. One drawback is deserving of notice, that many of these schoolhouses have been designed and fitted up for the double purpose of school and church ; they are thus well adapted for neither, but specially inconvenient for successful school work. In the matter of furniture, apparatus, and school documents, the comparison is less favourable to the Denominational Schools. Although a considerable improvement has taken place since last year, there are but very few schools of either class that are not in possession of a very fair supply of books ; and, as a rule, the keeping of these throughout all the schools is reasonably careful. There are a few exceptions—cases in which the teachers either do not care how the books are destroyed, or do not concern themselves about their preservation. If remonstrated with, the usual reply is, "We cannot help it, children will tear and soil their books."

IV.—DISCIPLINE.

There is still much room for improvement under this head. A great deal remains to be effected before the generality of schools can be regarded as in a truly healthy prosperous condition.

Of the Public Schools, it may be stated that five-sixths of them are under discipline ranging from fair to good ; while in the remaining sixth the discipline is about tolerable. In the Denominational Schools, the character of the discipline is represented thus :—

In Church of England Schools,	$\frac{4}{5}$ ths, fair to good.
" "	$\frac{1}{5}$ ths, indifferent to tolerable.
In Roman Catholic Schools,	$\frac{1}{3}$ rd, fair.
" "	$\frac{2}{3}$ rds, indifferent to tolerable.
In Presbyterian " Schools,	$\frac{3}{4}$ ths, fair to good.
" "	$\frac{1}{4}$ th, indifferent to tolerable.
In Wesleyan " Schools,	$\frac{3}{4}$ ths, fair to good.
" "	$\frac{1}{4}$ th, tolerable.

In all Denominational Schools, taken collectively, the proportion that reaches the description of fair to good is about one-half. This is not as it should be. It is true that in several of these schools an improvement in the description has taken place, but in some none is perceptible. In these latter, the teachers do not understand discipline, and they are totally incapable of exercising it. The character of the attendance of their pupils, and their behaviour at school, do not appear to give them much concern. Hence it is, that complaint has so often to be made respecting unsatisfactory attendance, and indifferent order. Hence it is, that the moral tone of such schools ranks low. The elevating and adjusting lever of a vigorous healthy discipline is either not employed at all, or employed without firmness, uniformity, and skill. There are teachers who are remarkably strict some days, nay even severe, on the point of regularity, punctuality, cleanliness, and order ; and, on other days, indifferent and lax. Discipline, to be healthy and profitable, must be strict and firm without harshness, steady and uniform without vacillation. Were the subject of discipline more fully understood than it is, and did it more thoroughly pervade and influence the whole being and operations of the schools at large than it yet does, their whole appearance would be marked by a beauty hitherto not theirs, their moral atmosphere would be charged with health, and cheering results would furnish abundant matter for congratulation.

Teachers,

Teachers, it is readily admitted, have many obstacles to the maintenance of effective discipline; but, by firmness and consistency on their own part, these obstacles may be successfully met and overcome. Even the indifference of parents, their carelessness in the all-important matter of sending their children regularly and punctually to school, and their unreasonable exactions upon their children's time—keeping them at home often for the merest trifles—may be largely remedied by the prudence and consistent firmness of the teacher. Regularity and punctuality of attendance on the part of the pupils are tolerably reliable indications of the character of the discipline in their schools; they usually accompany each other. Regular scholars are ordinarily punctual. This being the case, it is of consequence that, as regards these two points, the relative merits of the several sections of schools—Public and Denominational—be given in a tangible form. That this may be done fairly, the following calculation is made from the returns for the last quarter of the year. It gives therefore the attendance of pupils at the several schools, as compared with the numbers upon the rolls, for a period of three months, and shows the percentage to have been,—

In Public Schools	69.5 per cent. average attendance.		
In Church of England Schools	68.3	"	"
In Roman Catholic Schools	66.9	"	"
In Presbyterian Schools	72.1	"	"
In Wesleyan Schools	70.8	"	"

A noticeable feature here is, that in the schools where the number of free scholars is the greatest the attendance is generally the worst. This remark is, to some extent, borne out by the following particulars, deduced from the same quarter's returns:—

Schools.	Av. att. of Pupils.	School Fees paid.	Rate per Pupil.
24 Public	1,134	£317 9 5	£0 5 7
20 Church of England.....	936	270 16 11	0 5 9
13 Roman Catholic	553	93 5 4	0 3 4½
4 Presbyterian.....	166	33 6 10	0 3 11½
5 Wesleyan	204	59 15 7	0 5 10

In the matter of school fees, some teachers are to blame. Instead of commanding a good attendance at their schools by the efficiency and success of their teaching, they try to secure it by admitting children at merely nominal fees. Teachers have urged that they are obliged to do so, and even to admit without any fee, in order to keep up their number. In such cases one would not expect the moral tone to be very elevated.

In its bearing upon cleanliness and order, the discipline of several of the schools has considerably improved, and many of the teachers show a laudable desire for greater efficiency in the whole field of discipline.

V.—INSTRUCTION.

The instruction throughout the schools generally has improved, both in character and amount. A more judicious classification has been observed, the pupils have been better employed, and there has been an increased efficiency in the methods practised. In the great majority of schools one classification for all the subjects now prevails, the classes are more steadily and profitably occupied, and more tact and intelligence are displayed in the art of teaching. This is not universally the case; there are still schools in which the classification is irregular, and the arrangement of the pupils improper and unwise. In a few schools there is an unnecessary and valueless multiplication of classes, the teachers overlooking their incompetency to manage even a few classes efficiently, and being guilty of the absurdity of thus rendering their incompetency and inefficiency more apparent to all but themselves. They may in this manner deceive many parents, but to intelligent observers they merely exhibit their incapacity.

In the majority of schools the time is fairly distributed among the different classes, and in proportion to the relative importance of the subjects taught. In some instances still, the time-tables, programmes, and registers of lessons, although they have an existence, must be regarded as mere formal and unreliable documents. The time allotted to particular lessons is not adhered to, nor are the lessons proposed regularly given. Professedly, the subjects of instruction are nearly the same in all the schools, and in a very considerable majority there is a reasonable approach to the Council's requirements.

Of the methods employed little need be stated. In all the Public Schools, with only two exceptions, they range from fair to good. In the Denominational Schools, taken collectively, they range from fair to good in three-sevenths, and from indifferent to tolerable in four-sevenths. Greater precision and more penetrativeness are much wanted in the teaching generally. And here it may be given as an axiom, that that is the best method and he is the best teacher, under which and by whom the scholars are most successfully trained to teach themselves.

Reading.—In a great majority of the schools reading is taught with considerable care. The care in most cases, however, is limited to the bare pronunciation and meaning of the words, coupled with a little superficial explanation and questioning. This is made too apparent when classes are minutely examined respecting the amount of knowledge which they possess of the lessons read. The answering is generally too limited, often inaccurate, showing that the teaching has, to some extent at least, been unsuccessful. In a very small minority of schools, the teaching of reading consists in the mere listening to the children going through a few ill-enunciated sentences, and giving them a few spellings. In a fair number of schools, both Public and Denominational, a healthier state of things exists. Good, intelligent reading, with proper emphasis and expression, is aimed at, and reasonable advance is being made towards it. To be successful in this most important branch of education, teachers must not merely read and study and fully acquaint themselves with the lessons, but they need to read them aloud to themselves, in order to gain their proper expression, and thus be fitted for presenting to their classes patterns of intelligence and effective reading. In this way very much may be done to improve and elevate the department of reading in the schools at large.

Writing.—Although this is almost wholly a mechanical art, it is not the less necessary that proper attention be paid to it. This appears to be realized, for the writing in most of the schools is, upon the whole, fair; in some it is good.

Arithmetic.—Generally, this vastly important branch of education is not cultivated with that enlightened and practical common sense which is essential to its utility and value being realized by the pupils. There is still, as it were, too much following a beaten track—doing a stereotyped class of sums according to a given plan. There is no mental culture in this. Thought is not exercised, reasoning is unnecessary, and common sense is ignored. This evil has been pretty fully pointed out to many teachers, and there is good reason for expecting a beneficial change. In several schools arithmetic is intelligent in its principles and operations, so as to be available in the business of every-day life.

Grammar.—In a fair proportion of schools grammar is better taught than formerly. The patterns of parsing and analysis have been of service in directing teachers to a more exact and uniform system of studying grammar, and of teaching it in their schools. These remarks, which apply mainly to Denominational Schools, do not, by any means, apply to the whole of these schools. There are several of them in which improvement under the present teachers need hardly be looked for. Throughout the Public Schools generally, the subject of grammar is taught with fair skill and success.

Geography.—Considerable improvement has taken place in the teaching of this branch in many of the schools. This is most marked in the case of several Denominational Schools in which formerly little profitable attention had been paid to it. In too many of these schools, still, it is almost solely an exercise of memory, the children being required to learn by rote paragraphs from books, instead of

of having their mental faculties generally profitably exercised and carefully cultivated by lessons properly given. In some of the Denominational Schools, and in many of the Public Schools, frequent recourse is had to the black-board in order to illustrate and render more interesting and effective lessons in geography.

Object Lessons.—In almost all the schools object lessons are given; but, in not a few instances, they are given in such a way as to make it evident that their nature and design are not comprehended. Talking to a class about some object, or reading to it from a book on object lessons, is not an unfrequent mode of giving an object lesson. This method may lull the majority of a class into a state of drowsiness; but most certainly it will not rouse it to a state of mental activity and energy.

Drawing and Music.—There are now but few schools in which these subjects are not to some extent taught. In many, the teaching is not of much value; in several, it is very successful. There is an objectionable tendency in a few teachers to give these two subjects an undue prominence; so much is this the state of the case, that these are almost the only subjects that reflect credit upon their schools, and to the proficiency of their pupils in which the attention of visitors is invited.

In nearly all the schools, considerable attention is paid to the teaching of needlework. In all the Public Schools, and in several of the others, the Scripture lessons are regularly taught, and, in the majority of instances, fairly comprehended. Annexes D and E exhibit, in a tabular form, the character of the instruction given, and the proficiency attained by the pupils in the several classes of schools.

VI.—LOCAL SUPERVISION.

This is a matter of the highest importance to the healthy successful working of the schools. It is not as yet almost in any case so fully realized as it ought to be. Some Local Boards discharge their duty very fairly; others are rather neglectful. As regards Denominational Schools generally, the Clergymen are virtually the Local Boards, in so far at least as the supervising of the schools is concerned.

VII.—RESULTS OF INSPECTION.

Upon the whole, these are reasonably satisfactory. Perceptible progress has been made in the right direction; the means of education have been more widely diffused; many teachers have been stirred up to greater diligence and energy; and their schools give evidence of greater efficiency.

ALEXANDER L. FORBES, A.M.,
Inspector of Schools, Cumberland District.

ANNEX A.

TABLES showing the Material Condition of Schools.

1.—PUBLIC SCHOOLS.

Organization.	Good.	Fair.	Tolerable.	Indifferent.
Situations	13	8	3	.....
Buildings	10	7	3	4
Playgrounds	9	7	3	5
Furniture	10	8	4	2
Apparatus	16	6	2	.....
Books	23	1	.....	.....
Registers	17	2	4	1

2.—CHURCH OF ENGLAND SCHOOLS.

Organization.	Good.	Fair.	Tolerable.	Indifferent.
Situations	13	6	2	.....
Buildings	10	7	3	1
Playgrounds	9	5	3	4
Furniture	5	12	3	1
Apparatus	8	11	2	.....
Books	9	10	2	.....
Registers	6	11	3	1

3.—ROMAN CATHOLIC SCHOOLS.

Organization.	Good.	Fair.	Tolerable.	Indifferent.
Situations	9	4	.....	.....
Buildings	4	7	1	1
Playgrounds	5	3	.....	5
Furniture .....	.....	4	5	4
Apparatus .....	.....	6	7	.....
Books .....	.....	11	2	.....
Registers .....	.....	5	3	5

APPENDIX.

4.—PRESBYTERIAN SCHOOLS.

Organization.	Good.	Fair.	Tolerable.	Indifferent.
Situations	3	1	.....	.....
Buildings	1	1	.....	2
Playgrounds	2	1	.....	1
Furniture .....	.....	3	1	.....
Apparatus	2	2	.....	.....
Books	2	2	.....	.....
Registers	2	1	1	.....

5.—WESLEYAN SCHOOLS.

Organization.	Good.	Fair.	Tolerable.	Indifferent.
Situations	3	1	.....	.....
Buildings	4	.....	.....	.....
Playgrounds	1	.....	2	1
Furniture	2	1	1	.....
Apparatus	3	1	.....	.....
Books	4	.....	.....	.....
Registers	2	2	.....	.....

6.—PROVISIONAL SCHOOLS.

Organization.	Good.	Fair.	Tolerable.	Indifferent.
Situations .....	.....	4	.....	.....
Buildings	1	2	1	.....
Playgrounds .....	.....	.....	1	3
Furniture .....	.....	1	3	.....
Apparatus .....	.....	2	2	.....
Books	4	.....	.....	.....
Registers	2	1	1	.....

7.—HALF-TIME SCHOOLS.

Organization.	Good.	Fair.	Tolerable.	Indifferent.
Situations .....	.....	2	.....	.....
Buildings .....	.....	1	1	.....
Playgrounds .....	.....	.....	2	.....
Furniture .....	.....	.....	.....	2
Apparatus .....	.....	1	1	.....
Books	2	.....	.....	.....
Registers	2	.....	.....	.....

8.—TOTALS OF PUBLIC, PROVISIONAL, AND HALF-TIME SCHOOLS.

Organization.	Good.	Fair.	Tolerable.	Indifferent.
Situations	13	14	3	.....
Buildings	11	10	5	4
Playgrounds	9	7	6	8
Furniture	10	9	7	4
Apparatus	16	9	5	.....
Books	29	1	.....	.....
Registers	21	3	5	1

9.—TOTALS OF CERTIFIED DENOMINATIONAL SCHOOLS.

Organization.	Good.	Fair.	Tolerable.	Indifferent.
Situations	28	12	2	.....
Buildings	19	15	4	4
Playgrounds	17	9	5	11
Furniture	7	20	10	5
Apparatus	13	20	9	.....
Books	15	23	4	.....
Registers	19	19	7	6

ANNEX B.

TABLES showing the Ages of Pupils on the Rolls, and present at Examination.

1.—IN PUBLIC SCHOOLS.

Ages.	7 years and under.		8 years.		9 years.		10 years.		11 years.		12 years and over.		Totals.		
	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.	
Enrolled	312	238	108	79	90	76	98	68	97	64	169	146	874	671	1,545
Present	254	193	87	62	74	63	78	50	72	45	139	107	704	520	1,224

2.—CHURCH OF ENGLAND SCHOOLS.

Ages.	7 years and under.		8 years.		9 years.		10 years.		11 years.		12 years and over.		Totals.		
	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.	
Enrolled	276	194	101	79	92	81	70	91	64	56	149	110	752	611	1,363
Present	200	132	71	59	66	65	58	67	53	41	107	82	555	446	1,001

3.—ROMAN CATHOLIC SCHOOLS.

Ages.	7 years and under.		8 years.		9 years.		10 years.		11 years.		12 years and over.		Totals.		
	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.	
Enrolled.....	180	153	46	37	41	34	68	50	39	31	64	55	438	360	798
Present	126	105	29	28	33	25	50	35	24	28	44	38	306	259	565

4.—PRESBYTERIAN SCHOOLS.

Ages.	7 years and under.		8 years.		9 years.		10 years.		11 years.		12 years and over.		Totals.		
	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.	
Enrolled.....	58	44	16	12	7	14	10	12	7	4	20	17	118	103	221
Present	43	38	12	11	6	10	8	7	6	2	17	13	92	81	173

5.—WESLEYAN SCHOOLS.

Ages.	7 years and under.		8 years.		9 years.		10 years.		11 years.		12 years and over.		Totals.		
	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.	
Enrolled.....	47	44	13	15	17	12	11	14	21	16	32	20	141	121	262
Present	38	30	11	8	14	10	4	8	17	10	25	13	109	79	188

6.—PROVISIONAL SCHOOLS.

Ages.	7 years and under.		8 years.		9 years.		10 years.		11 years.		12 years and over.		Totals.		
	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.	
Enrolled.....	27	13	6	8	5	8	5	5	6	5	5	13	54	52	106
Present	20	9	3	6	4	6	3	5	4	1	3	10	37	37	74

7.—HALF-TIME SCHOOLS.

Ages.	7 years and under.		8 years.		9 years.		10 years.		11 years.		12 years and over.		Totals.		
	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.	
Enrolled.....	5	4	1	1	1	...	4	1	...	3	11	9	20
Present	3	4	1	1	1	...	3	1	...	2	8	8	16

APPENDIX.

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8.—TOTALS IN PUBLIC, PROVISIONAL, AND HALF-TIME SCHOOLS.

Ages.	7 years and under.		8 years.		9 years.		10 years.		11 years.		12 years and over.		Totals.		
	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.	
Enrolled.....	344	255	115	88	96	84	107	73	103	70	174	162	939	732	1,671
Present	277	206	91	69	79	69	84	55	76	47	142	119	749	565	1,314

9.—TOTALS IN ALL CERTIFIED DENOMINATIONAL SCHOOLS.

Ages.	7 years and under.		8 years.		9 years.		10 years.		11 years.		12 years and over.		Totals.		
	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.	
Enrolled.....	561	435	176	143	157	141	159	167	131	107	265	202	1,449	1,195	2,644
Present	407	305	123	106	119	110	120	117	100	81	193	146	1,062	865	1,927

10.—TOTALS IN ALL SCHOOLS.

Ages.	7 years and under.		8 years.		9 years.		10 years.		11 years.		12 years and over.		Totals.		
	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.	
Enrolled.....	905	690	291	231	253	225	266	240	234	177	439	364	2,388	1,927	4,315
Present	684	511	214	175	198	179	204	172	176	128	335	265	1,811	1,430	3,241

ANNEX C.

TABLES showing the Moral Character of the Schools.

1.—OF PUBLIC SCHOOLS.

Details.	Good.	Fair.	Tolerable.	Indifferent.
Regularity	5	15	3	1
Punctuality	9	12	3	.....
Cleanliness.....	12	9	3	.....
Order	14	7	3	.....
Moral tone.....	11	9	4	.....

2.—OF CHURCH OF ENGLAND SCHOOLS.

Details.	Good.	Fair.	Tolerable.	Indifferent.
Regularity	3	10	5	3
Punctuality	8	4	8	1
Cleanliness.....	6	7	4	4
Order	4	8	5	4
Moral tone.....	3	6	7	5

3.—OF ROMAN CATHOLIC SCHOOLS.

Details.	Good.	Fair.	Tolerable.	Indifferent.
Regularity	3	4	6
Punctuality	4	4	5
Cleanliness.....	2	3	4	4
Order	2	5	6
Moral tone.....	4	4	5

4.—OF PRESBYTERIAN SCHOOLS.

Details.	Good.	Fair.	Tolerable.	Indifferent.
Regularity	1	2	1	.....
Punctuality	1	2	1	.....
Cleanliness.....	3	1	.....	.....
Order	1	1	1	1
Moral tone.....	1	1	1	1

5.—OF WESLEYAN SCHOOLS.

Details.	Good.	Fair.	Tolerable.	Indifferent.
Regularity	1	1	2	.....
Punctuality	1	3	.....	.....
Cleanliness.....	2	2	.....	.....
Order	1	2	1	.....
Moral tone.....	1	2	1	.....

6.—OF PROVISIONAL SCHOOLS.

Details.	Good.	Fair.	Tolerable.	Indifferent.
Regularity	2	2
Punctuality	2	2
Cleanliness.....	3	1
Order	3	1
Moral tone.....	3	1

7.—OF HALF-TIME SCHOOLS.

Details.	Good.	Fair.	Tolerable.	Indifferent.
Regularity	2	.....	.....
Punctuality	2	.....	.....
Cleanliness.....	2	.....	.....
Order	2	.....	.....
Moral tone.....	1	1	.....

8.—OF PUBLIC, PROVISIONAL, AND HALF-TIME SCHOOLS

Details.	Good.	Fair.	Tolerable.	Indifferent.
Regularity	5	17	5	3
Punctuality	9	14	5	2
Cleanliness.....	12	11	6	1
Order	14	9	6	1
Moral tone.....	11	10	8	1

9.—OF ALL CERTIFIED DENOMINATIONAL SCHOOLS.

Details.	Good.	Fair.	Tolerable.	Indifferent.
Regularity	5	16	12	9
Punctuality	10	13	13	6
Cleanliness.....	13	13	8	8
Order	6	13	12	11
Moral tone.....	5	13	13	11

ANNEX D.

TABLES showing the Character of the Instruction.

1.—IN PUBLIC SCHOOLS.

Details.	Good.	Fair.	Tolerable.	Indifferent.
Classification	13	7	4
Occupation	18	4	2
Methods.....	5	17	1	1

APPENDIX.

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2.—IN CHURCH OF ENGLAND SCHOOLS.

Details.	Good.	Fair.	Tolerable.	Indifferent.
Classification	5	7	6	3
Occupation	8	9	3	1
Methods	1	9	5	6

3.—IN ROMAN CATHOLIC SCHOOLS.

Details.	Good.	Fair.	Tolerable.	Indifferent.
Classification .....	.....	1	5	7
Occupation	1	4	5	3
Methods .....	.....	3	4	6

4.—IN PRESBYTERIAN SCHOOLS.

Details.	Good.	Fair.	Tolerable.	Indifferent.
Classification	2	.....	2	.....
Occupation	2	1	1	.....
Methods	1	1	1	1

5.—IN WESLEYAN SCHOOLS.

Details.	Good.	Fair.	Tolerable.	Indifferent.
Classification	2	1	1	.....
Occupation	3	.....	1	.....
Methods	1	2	.....	1

6.—IN PROVISIONAL SCHOOLS.

Details.	Good.	Fair.	Tolerable.	Indifferent.
Classification	1	2	1
Occupation	2	1	1
Methods	1	1	2

7.—IN HALF-TIME SCHOOLS.

Details.	Good.	Fair.	Tolerable.	Indifferent.
Classification	2	.....	.....
Occupation	2	.....	.....
Methods	2	.....	.....

8.—IN PUBLIC, PROVISIONAL, AND HALF-TIME SCHOOLS.

Details.	Good.	Fair.	Tolerable.	Indifferent.
Classification	13	10	6	1
Occupation	18	8	3	1
Methods	5	20	2	3

9.—IN ALL CERTIFIED DENOMINATIONAL SCHOOLS.

Details.	Good.	Fair.	Tolerable.	Indifferent.
Classification	9	9	14	10
Occupation	14	14	10	4
Methods.....	3	15	10	14

10.—IN ALL SCHOOLS.

Details.	Good.	Fair.	Tolerable.	Indifferent.
Classification	22	19	20	11
Occupation	32	22	13	5
Methods.....	8	35	12	17

ANNEX E.

TABLES showing the Proficiency of the Pupils in the Subjects of Examination.

1.—IN PUBLIC SCHOOLS.

Subjects.	Good.	Fair.	Tolerable.	Moderate.	Total.
Reading—					
Monosyllables	105	217	159	56	537
Easy Narrative	56	138	88	37	319
Ordinary Prose	81	142	65	32	320
Writing—					
On Slates	184	199	122	69	574
In Copy-books	182	259	134	69	644
Arithmetic—					
Simple Rules	126	167	132	79	504
Compound Rules	47	68	88	72	275
Higher Rules	24	26	26	20	96
Grammar—					
Elementary.....	76	140	74	35	325
Advanced	74	119	81	41	315
Geography—					
Elementary.....	79	120	72	33	304
Advanced	46	114	79	26	265
Other Subjects—					
Needle-work	73	121	98	75	367
Singing	183	163	195	201	742
Drawing	55	137	125	125	442

2.—IN PROVISIONAL AND HALF-TIME SCHOOLS.

Subjects.	Good.	Fair.	Tolerable.	Moderate.	Total.
Reading—					
Monosyllables.....	2	8	21	15	46
Easy Narrative	6	9	9	16	31
Ordinary Prose	2	8	8	3	13
Writing—					
On Slates .....	.....	12	21	13	46
In Copy-books .....	.....	2	21	16	39
Arithmetic—					
Simple Rules	2	8	11	23	44
Compound Rules .....	.....	1	.....	8	9
Higher Rules .....	.....	.....	.....	.....	.....
Grammar—					
Elementary.....	.....	5	5	19	29
Advanced .....	.....	2	1	10	13
Geography—					
Elementary.....	.....	10	4	11	25
Advanced	2	9	2	13
Other Subjects—					
Needle-work	12	4	16
Singing
Drawing	3	2	5

APPENDIX.

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3.—IN CHURCH OF ENGLAND SCHOOLS.

Subjects.	Good.	Fair.	Tolerable.	Moderate.	Total.
Reading—					
Monosyllables.....	70	133	143	100	446
Easy Narrative	24	97	109	60	290
Ordinary Prose	35	105	77	30	247
Writing—					
On Slates	56	147	159	91	453
In Copy-books	88	179	180	85	532
Arithmetic—					
Simple Rules	30	131	134	139	434
Compound Rules	17	35	69	110	231
Higher Rules	18	13	4	2	37
Grammar—					
Elementary.....	32	67	86	109	294
Advanced	29	61	60	88	238
Geography—					
Elementary.....	46	112	92	42	292
Advanced	29	61	57	79	226
Other Subjects—					
Needle-work	39	102	133	78	352
Singing	48	118	105	78	349
Drawing	23	80	73	66	242

4.—IN ROMAN CATHOLIC SCHOOLS.

Subjects.	Good.	Fair.	Tolerable.	Moderate.	Total.
Reading—					
Monosyllables.....	17	33	56	99	205
Easy Narrative	16	35	75	44	170
Ordinary Prose	9	29	50	32	120
Writing—					
On Slates.....	26	38	65	108	238
In Copy-books	24	69	112	85	290
Arithmetic—					
Simple Rules	12	27	48	86	173
Compound Rules	8	18	21	73	120
Higher Rules	2	4	6	4	16
Grammar—					
Elementary.....	20	35	57	58	174
Advanced	12	21	34	57	124
Geography—					
Elementary.....	20	45	48	57	170
Advanced	17	28	32	43	120
Other Subjects—					
Needle-work	10	34	58	55	157
Singing	10	35	54	81	196
Drawing .....	.....	20	28	26	74

5.—IN PRIVATE SCHOOLS.

Subjects.	Good.	Fair.	Tolerable.	Moderate.	Total.
Reading—					
Monosyllables.....	18	56	12	14	100
Easy Narrative	5	16	10	7	38
Ordinary Prose	7	12	5	6	30
Writing—					
On Slates	24	35	28	18	105
In Copy-books	15	26	17	.....	58
Arithmetic—					
Simple Rules	10	27	33	8	78
Compound Rules	3	1	11	15	30
Higher Rules .....	.....	6	6	.....	12
Grammar—					
Elementary.....	8	2	8	2	20
Advanced .....	.....	5	13	12	30
Geography—					
Elementary.....	3	15	12	8	38
Advanced	1	10	16	3	30
Other Subjects—					
Needle-work	7	22	12	30	71
Singing	9	10	16	8	43
Drawing .....	.....	5	8	.....	13

6.—IN WESLEYAN SCHOOLS.

Subjects.	Good.	Fair.	Tolerable.	Moderate.	Total.
Reading—					
Monosyllables.....	16	20	11	22	69
Easy Narrative	5	15	23	14	57
Ordinary Prose	9	28	13	4	54
Writing—					
On Slates.....	11	24	21	13	69
In Copy-books	21	48	23	19	111
Arithmetic—					
Simple Rules	16	32	31	18	97
Compound Rules	8	12	19	15	54
Higher Rules .....	.....	10	4	.....	14
Grammar—					
Elementary.....	14	17	19	7	57
Advanced	17	15	8	14	54
Geography—					
Elementary.....	6	28	6	17	57
Advanced	2	24	20	8	54
Other Subjects—					
Needle-work	6	20	12	13	51
Singing	26	36	24	10	96
Drawing	14	29	30	23	96

7.—IN PUBLIC, PRIVATE, AND HALF-TIME SCHOOLS.

Subjects.	Good.	Fair.	Tolerable.	Moderate.	Total.
Reading—					
Monosyllables	107	225	180	71	583
Easy Narrative	56	144	97	53	350
Ordinary Prose	81	144	73	35	333
Writing—					
On Slates.....	184	211	143	82	620
In Copy-books	182	261	155	85	683
Arithmetic—					
Simple Rules	128	175	143	102	548
Compound Rules	47	69	88	80	284
Higher Rules	24	26	26	20	96
Grammar—					
Elementary.....	76	145	79	54	354
Advanced	74	121	82	51	328
Geography—					
Elementary.....	79	130	76	44	329
Advanced	46	116	88	28	278
Other Subjects—					
Needle-work	73	121	110	79	383
Singing	183	163	195	201	742
Drawing	55	137	128	127	447

8.—IN ALL CERTIFIED DENOMINATIONAL SCHOOLS.

Subjects.	Good.	Fair.	Tolerable.	Moderate.	Total.
Reading—					
Monosyllables.....	121	242	222	235	820
Easy Narrative	50	163	217	125	555
Ordinary Prose	60	174	145	72	451
Writing—					
On Slates.....	117	244	274	230	865
In Copy-books	148	322	332	189	991
Arithmetic—					
Simple Rules	68	217	246	251	782
Compound Rules	36	66	120	213	435
Higher Rules	20	33	20	6	79
Grammar—					
Elementary.....	74	121	170	176	541
Advanced	58	102	115	171	446
Geography—					
Elementary.....	75	200	158	124	557
Advanced	49	123	125	133	430
Other Subjects—					
Needle-work	62	178	215	176	631
Singing	99	199	209	177	684
Drawing	37	134	139	115	425

9.—IN ALL SCHOOLS.

Subjects.	Good.	Fair.	Tolerable.	Moderate.	Total.
Reading—					
Monosyllables	228	467	402	306	1,403
Easy Narrative	106	307	314	178	905
Ordinary Prose	141	318	218	107	784
Writing—					
On Slates.....	301	455	417	312	1,485
In Copy-books	330	583	487	274	1,674
Arithmetic—					
Simple Rules	196	392	389	353	1,330
Compound Rules	83	135	208	293	719
Higher Rules	44	59	46	26	175
Grammar—					
Elementary.....	150	266	249	230	895
Advanced	132	223	197	222	774
Geography—					
Elementary	154	330	234	168	886
Advanced	95	239	213	161	708
Other Subjects—					
Needle-work	135	299	315	255	1,004
Singing	282	362	404	378	1,426
Drawing	92	271	267	242	972

DETAILED STATEMENT of the Condition of Schools in the Cumberland District, inspected during the Year 1868.

1.—PUBLIC SCHOOLS.

CASTLEREAGH :—Visited, 19th May.

Present at examination :—Boys, 12; girls, 9; total, 21.

1. The school building is in very bad condition. 2. The pupils are tolerably punctual but irregular in their attendance. In person and dress cleanliness and tidiness are observable, and their conduct generally is becoming. 3. The methods employed are fairly suitable and effective. 4. The results produced are very fair.

COLYTON :—Visited, 27th May.

Present at examination :—Boys, 18; girls, 24; total, 42.

1. Generally the material condition of the school is good. 2. The discipline is, upon the whole, fairly satisfactory. 3. The work of teaching is carried on with fair intelligence and earnestness. 4. The attainments and progress of the pupils are reasonably good.

DOBROYDE :—Visited, 17th September.

Present at examination :—Boys, 18; girls, 27; total, 45.

1. The material condition is very good. 2. The discipline is not so effective as is desirable—and, as a consequence, the moral aspect of the school is less pleasing than otherwise it would be. 3. The instruction is careful, but wanting in animation and force. 4. The attainments range between moderate and fair.

FIVE DOCK :—Visited, 16th September.

Present at examination :—Boys, 38; girls, 30; total, 68.

1. The schoolroom is good and well supplied with all requisites. 2. The discipline is fairly effective, and the moral aspect of the school is pleasing. 3. Fair skill and efficiency characterize the teaching. 4. Reasonably satisfactory progress has been made, and the attainments are, on the whole, fair.

FREEMAN'S REACH :—Visited, 26th June.

Present at examination :—Boys, 21; girls, 8; total, 29.

1. The schoolroom is in tolerable condition; some articles of furniture are wanting, and the necessary outside arrangements require to be made more becoming and complete. 2. The discipline is not effective to the producing of pleasing results. 3. The instruction accords with the prescribed course, and the methods employed are tolerably appropriate. 4. The proficiency ranks between tolerable and fair.

LLANDEILO :—Visited, 4th June.

Present at examination :—Boys, 21; girls, 21; total, 42.

1. The schoolroom is reasonably satisfactory, but the teacher's house is in very bad condition. 2. The discipline is tolerably effective. 3. The Standard Course is followed as regards the subjects, whilst the methods are tolerably appropriate, but wanting in animation and energy. 4. Taken as a whole, the attainments are passable.

LUDDENHAM :—Visited 28th February.

Present at examination :—Boys, 28; girls, 25; total, 53.

1. The schoolhouse is a good brick building, in fair condition, and suitably furnished. The teacher's residence requires repair. 2. The moral aspect of the school is tolerably pleasing. 3. The subjects of instruction are regulated by the prescribed standard, and the methods employed are, in the main, modern and reasonably successful. 4. The attainments, as a whole, are nearly fair.

MANLY :—Visited, 3rd November.

Present at examination :—Boys, 30; girls, 5; total, 35.

1. The school organization, as a whole, is very fair. 2. Blemishes still mar the moral aspect, showing that the discipline is not effective. 3. The methods of teaching would be of far more value were they practised with sufficient animation and persistence. 4. The proficiency is little beyond tolerable.

MCDONALD RIVER (Lower) :—Visited, 1st September.

Present at examination :—Boys, 15 ; girls, 7 ; total, 22.

1. A slab building, in tolerable condition. 2. The discipline is healthy, and the moral tone fairly pleasing. 3. The teaching is earnest and intelligent. 4. Satisfactory progress is being made.

MCDONALD RIVER (Central) :—Visited, 2nd September.

Present at examination :—Boys, 16 ; girls, 10 ; total, 26.

1. The material condition of the premises generally is very unsatisfactory ; an entirely new organization is much required. 2. The discipline is tolerably effective. 3. As regards skill, the methods in use are above tolerable. 4. The proficiency may be regarded as nearly fair.

MCDONALD RIVER (Upper) :—Visited, 7th September.

Present at examination :—Boys, 18 ; girls, 9 ; total, 27.

1. The building is reasonably good, but insufficiently and unsuitably furnished. 2. Discipline is little understood or beneficially practised. 3. The more ordinary subjects are presented to the pupils with but little skill and benefit. 4. The attainments are very low, and the progress is too imperceptible.

LOWER HAWKESBURY :—Visited, 8th September.

Present at examination :—Boys, 8 ; girls, 13 ; total, 21.

1. The building is good ; but as its main end is for Church purposes, its internal arrangement and fittings are not the most suitable or convenient for a school. 2. The moral aspect of the school is, all circumstances considered, satisfactory. 3. The ordinary subjects of instruction are dealt with in a careful and painstaking manner. 4. The attainments, though low, are, considering the circumstances of the school, tolerably satisfactory.

NORTH SYDNEY :—Visited, 30th October.

Present at examination :—Boys, 10 ; girls, 17 ; total, 27.

1. Materially considered, the school is fairly organized. 2. Healthy discipline prevails, and the moral tone is, in the main, pleasing. 3. The instruction is given with earnest care and fair effect. 4. The attainments are creditable, and the progress made is reasonably satisfactory.

PARRAMATTA :—Visited, 5th and 7th August.

Present at examination :—Boys, 108 ; girls, 56 ; total, 164.

1. In all essentials the school, materially viewed, stands well. 2. It is under healthy discipline, and its moral attitude is highly pleasing. 3. The prescribed subjects are taught with liveliness, energy, and effect. 4. The average proficiency ranks from fair to good.

PENNANT HILLS :—Visited, 27th August.

Present at examination :—Boys, 44 ; girls, 28 ; total, 72.

1. The whole material condition and arrangement of the premises are very unsatisfactory. 2. The discipline might advantageously be exercised with more decision, firmness, and permanence of effect. 3. Earnestness and care mark the teaching, which would be improved by greater regard to penetrativeness. 4. The progress is tolerably good ; and, making allowance for difficulties arising from unsuitable accommodation, the attainments are satisfactory.

PENRITH :—Visited, 19th March.

Present at examination :—Boys, 38 ; girls, 19 ; total, 57.

1. The material condition of the school is, upon the whole, fairly satisfactory. 2. The discipline is firmly exercised, and the moral tone is, in its more prominent features, healthy. 3. The prescribed subjects of instruction are taught with considerable skill and effect. 4. The progress is perceptible, and the attainments are, as a whole, fair. The present teacher has been but a short time in charge.

PETERSHAM :—Visited, 18th September.

Present at examination :—Boys, 38 ; girls, 32 ; total, 70.

1. The schoolroom is wholly unfit for its purpose. 2. The discipline is fair. 3. The teaching is, in the main, tolerably skilful and effective. 4. The attainments rank from tolerable to fair.

PROSPECT :—Visited, 21st May.

Present at examination :—Boys, 20 ; girls, 13 ; total, 33.

1. The school is kept temporarily in a building that is tolerably good and suitable, and well furnished. 2. The moral character of the school is fair. 3. The instruction is carefully imparted. 4. Reasonable progress is being made.

RICHMOND :—Visited, 13th and 14th July.

Present at examination :—Boys, 41 ; girls, 34 ; total, 75.

1. The schoolroom is good and well-furnished, but too small for the attendance. 2. The discipline is not of that steady, firm, and dignified character which naturally begets and maintains easy and ready obedience and respectful demeanour. 3. Considerable energy and fair skill mark the teaching ; at the same time there is felt the want of sufficient earnestness and effect. 4. The attainments range from tolerable to very fair.

RYDE :—Visited, 2nd and 3rd December.

Present at examination :—Boys, 90 ; girls, 81 ; total, 171.

1. This school consists of two departments—advanced and infants. The whole premises are in good condition, and well and suitably fitted out. 2. The discipline in both departments is carefully and beneficially maintained, and the moral aspect is, on the whole, pleasing. 3. The instruction, both as regards subjects and methods, is fairly satisfactory. 4. The progress made is creditable, and the attainments, for the time of the school's existence, may be accounted fair.

SMITHFIELD :—

SMITHFIELD :—Visited, 23rd July.

Present at examination :—Boys, 19 ; girls, 16 ; total, 35.

1. The whole material condition of the school is reasonably good. 2. The discipline is tolerably effective. 3. Instruction is fairly well regulated and imparted. 4. The attainments are nearly fair.

ST. ALBAN'S :—Visited, 3rd September.

Present at examination :—Boys, 16 ; girls, 10 ; total, 26.

1. The school is conducted temporarily in a small wooden building, fairly furnished. 2. The discipline wants force and firmness. 3. The teaching is marked by diligence and care. 4. The attainments are low ; but, for the time of the school's existence, the progress is reasonable.

ST. MARY'S :—Visited, 5th June.

Present at examination :—Boys, 16 ; girls, 13 ; total, 29.

1. The schoolroom is in fair condition, and the furniture has been improved in character and arrangement. 2. The moral aspect is, on the whole, healthy. 3. The ordinary subjects are taught. The methods, as such, are tolerably appropriate ; animation and energy are wanting in their application. 4. The attainments may be estimated as tolerable.

WALLGROVE :—Visited, 20th March.

Present at examination :—Boys, 16 ; girls, 13 ; total, 29.

1. The schoolroom is fairly suitable, and adequately furnished. 2. The moral tone is, on the whole, pleasing. 3. The instruction is imparted with considerable care and effect. 4. The proficiency of the pupils ranks from tolerable to fair.

2.—PROVISIONAL AND HALF-TIME SCHOOLS.

LOWER PORTLAND :—Visited, 19th June.

Present at examination :—Boys, 4 ; girls, 9 ; total, 13.

1. The building is very fair, but unsuitable, and insufficiently furnished. 2. The discipline is feeble, and the moral aspect unsatisfactory. 3. The methods are merely mechanical, and of little effect. 4. The attainments are small.

NEWINGTON :—Visited, 15th July.

Present at examination :—Boys, 14 ; girls, 12 ; total, 26.

1. The building is old, and very uninviting in appearance. The furniture is rude and insufficient. 2. The moral aspect is tolerably satisfactory. 3. The instruction is imparted with diligence and care, but the methods employed are chiefly mechanical. 4. The attainments are tolerable.

SACKVILLE REACH :—Visited, 18th June.

Present at examination :—Boys, 10 ; girls, 9 ; total, 19.

1. The material condition of the school is tolerably good, and it is fairly furnished. 2. The discipline is neither firm nor effective. 3. Mechanical teaching prevails, and the results are meagre. 4. As a consequence of the character of the teaching, the attainments are very small. There is little mental development or culture.

SHANCAMORE :—Visited, 27th February.

Present at examination :—Boys, 9 ; girls, 7 ; total, 16.

1. The schoolroom is a new slab erection, unfloored, and insufficiently furnished. 2. The discipline is worthless, and the moral tone low. 3. The teaching is fitful, and of little real value. 4. The proficiency is very small.

UPPER COLO (Half-time) :—Visited, 26th November.

Present at examination :—Boys, 6 ; girls, 4 ; total, 10.

1. The school premises are in bad condition generally, and the furniture of the schoolroom is bad, unsuitable, and insufficient. 2. The discipline is fairly healthy. 3. The instruction is imparted with fair skill and success. 4. As a whole, the progress is creditable, and the proficiency fair.

WHEENEY CREEK (Half-time) :—Visited, 25th November.

Present at examination :—Boys, 2 ; girls, 4 ; total, 6.

1. The school is conducted in a tolerably sized room of a private house. It is insufficiently and unsuitably furnished. 2. The discipline is fairly healthy. 3. The ordinary subjects are taught, and the methods employed are fairly appropriate and successful. 4. The proficiency is generally satisfactory.

A. L. FORBES, A.M.,
Inspector of Schools, Cumberland District.

GOULBURN DISTRICT—INSPECTOR'S GENERAL REPORT FOR 1868.

I BEG to submit, for the information of the Council of Education, my General Report upon the condition of the Public, Provisional, Half-time, and Denominational Schools inspected by me in the Goulburn District during the year. A statement containing a separate abridged abstract of my report upon each school is hereunto appended. The remarks chiefly relate to the material condition and organization of the schools, the general discipline and moral training of the pupils, the subjects and methods of instruction, and the general progress of the scholars in learning.

SCHOOLS IN OPERATION.

When I took charge of the district on 1st April, there were 95 schools in operation, attended by 4,565 scholars, as hereafter set forth:—

31 Public Schools, attended by 1,635 pupils: average for each school,	52
3 Provisional	21
14 Half-time	19
23 Church of England	49
23 Roman Catholic	61
1 Presbyterian	55

Now, 26th December, 1868, there are 118 schools, attended by 5,560 scholars, being an increase of 23 schools and 995 children. The following statement shows the number of each class of schools in operation in the district at the close of the year, with the attendance of pupils.

35 Public Schools, attended by 2,162 pupils: average for each school,	61
19 Provisional	30
28 Half-time	17
17 Church of England	58
18 Roman Catholic	71
1 Presbyterian	62

On 30th June, in accordance with the 29th section of the Public Schools Act, on account of the small attendance of pupils, the certificates were withdrawn from the Church of England Schools at Bungendore, Tarago, Pejar, Gundaroo, Crookwell, and Kippelaw; and from the Roman Catholic Schools at Breadalbane, Bungonia, Spring Valley, Laggan, and Michalago; but the Council granted aid to Provisional Schools at all these places, from 1st July, excepting Kippelaw, which was not in operation at the time the certificate was withdrawn, and from which no application for aid was received.

OCCUPATION OF TIME.

As already stated, I took charge of the Goulburn District on the 1st April. Immediately after entering upon my duties I was engaged receiving and examining the returns of the schools for the previous quarter of the year, compiling the abstracts, and attending to accumulated correspondence. Some time was employed reporting upon special matters relating to the Armidale District, and in making preliminary arrangements for the establishment of the Public School at Goulburn, which was formally opened to the public on the 6th May, by the Honorable Henry Parkes, M.P., President of the Council of Education, in the presence of a large assembly of citizens and others interested in educational progress. Having arranged a programme of work for the year, I commenced the inspection of schools on 27th of May; but owing to the numerous applications for new schools, the large amount of correspondence from the Council's Office requiring immediate attention, and some of which I was unable to report upon within the year, prevented me from visiting many schools which should have been inspected. I, however, visited—

15 Public Schools
9 Provisional
6 Half-time, and
19 Denominational.
31 Teachers were examined
1 Assistant
2 Pupil Teachers
7 Candidate Teachers, and
3 Candidate Pupil Teachers.
720 Communications were written on the Council's business.
1796 miles travelled.

The following places were visited, in order to report upon applications for new schools:—

Breadalbane	Currawang
Gundaroo, Upper	Gundaroo, Lower
Bungendore	Fairy Meadow
Carwoola	Foxlow
Tarago	Pejar
Middle Creek	Cottah Wallah
Woodhouselee	Tarlo
Yelbraith	Richlands
Spring Valley	Bungonia
Murrumbateman	Gap Range
Boro	Mummell
Araluen	Jembaicumbene

Elrington.

Prompt attention to the examination of the returns at the close of the quarter, supplying blank forms, and school records, with directions and information upon different matters, to the teachers of so many as 118 schools, occupy much time, when the Inspector has personally to perform all duties of detail; but as I become more fully acquainted with the educational requirements of the district, I shall be better able to report upon matters relating to the management of the schools.

CHARACTER OF THE INSPECTION.

In every school inspected, careful inquiry is made as to the observance of the Council's regulations, the kind of books in use, the character of the documents on the walls of the schoolroom, the suitability of the time-tables and occupations of the scholars, and if the school records are correctly and neatly kept. The suitability of the site, the size, repair, and cleanliness of the schoolroom, the condition and suitability of the teacher's residence, the extent of the playgrounds, condition of fencing, out-offices, sheds for protection from sun and rain, flower-borders and master's garden, are noted, together with the condition, quantity, and suitability of furniture, apparatus, and books, and classification of the pupils. As regards discipline, the punctuality of both teachers and pupils is noted, the regularity of the scholars as exhibited on the roll book, the cleanliness of the school premises, furniture, and apparatus, of the pupils in dress and person; with the order, moral tone, and government of the school, including the demeanour, manners, general conduct, and attention of the pupils under examination, and teacher's example as regards language, moral influence, and inculcation of truth, honesty, temperance, kindness, and politeness. In the next place come under consideration the subjects of instruction, the methods

methods of tuition, the individual attainments of the scholars, their time in class, the number promoted to higher classes during the year, the rate of school fees, the number of free pupils, the practical skill and usefulness of the teachers, and the efficiency of the local supervision. At the conclusion of the inspection of every school, if required, such suggestions are made to the teacher or School Board as are considered necessary to improve the schools and benefit the public; but before forming a final judgment on the state of the school, the teacher is allowed an opportunity of explaining the causes of defects in the management, and of stating any matters which may be considered of importance. Attention to all the details requires much time, diligence, and thoughtfulness on the part of the Inspector. The inspection of a Half-time or a Provisional School generally occupies from three to five hours, and an ordinary Public or Denominational School from five to eight hours; but in schools attended by a large number of pupils, or where there are two or three separate departments, the time occupied varies from two to three, and sometimes five days.

ORGANIZATION.

In almost every instance the schools inspected are centrally and suitably situated. A number is held in churches, and the buildings are generally in good repair, but in most cases they are not well furnished, without fire-places, and very cold and uncomfortable in winter. In few cases are the school-houses of a very bad description, but they are not well furnished, the furniture being either unsuitable or insufficient in quantity. Of the schools inspected, a small number is vested in the Council; and although there are a few very suitable and substantial school buildings, there are some schoolrooms too small and otherwise unsuitable for the purposes of teaching, and in some cases the necessary out-offices are wanting. In several places the residences of the teachers are not sufficiently comfortable, nor the schoolrooms in good repair, but this is in many instances owing to the protracted drought, the depressed state of the Colony, and the extreme poverty which prevails among the agricultural classes. In general the schools are fairly provided with books and apparatus, and where the stock of these articles was found insufficient, applications in most cases had been made for a supply. In several schools I found no programmes of school work in use, and in some cases when these documents were prepared they were unsuitable. Nearly all the schools are well supplied with maps, and in most cases with clocks. The classification of the pupils is tolerably judicious in most respects, and the school records, with but few exceptions, carefully kept. In some schools the promotions of the scholars, the school-fees paid, and the quarter of enrolment of the pupils were not recorded at the proper time, nor the class-roll duly closed at the end of the quarter. Excepting in a few instances, the returns of the schools have recently been furnished with correctness and despatch.

DISCIPLINE.

The schools generally admit of considerable improvement in this respect. The pupils in many instances are unpunctual, talkative, and not sufficiently attentive to their work. In the majority of the Public and Denominational Schools the cleanliness is tolerably satisfactory, but in several instances the daily inspection of the pupils is either neglected or not sufficiently strict. The irregularity of the children's attendance is often a source of complaint with teachers; but on the whole, the attendance was tolerably regular for the last quarter of the year, being 70 per cent. daily for the number enrolled. In any individual case, however, it is unquestionable that the degree of regularity greatly depends on the character of the teacher. Excessive irregularity is frequently assigned as the cause of the low condition of a school; but experience teaches that it is generally, in reality, the result of the bad management of a teacher, for both parents and pupils naturally become indifferent when the discipline and instruction are of a worthless character. On the other hand, a good, cheerful, popular school exerts an attractive influence over the children—they become anxious for learning, are less liable to be kept at home, attend with increased regularity and in greater numbers. Of course, floods, sickness, and disease frequently affect the attendance of pupils, but in these features of the case the teacher is not often to blame.

In many schools the scholars are unpunctual in the morning. I have inspected some schools where the business, according to the time-table, commences at 10 o'clock, and the pupils come into school, singly and in groups, up to within a few minutes of 11. Among the many circumstances which are indicative of a badly-managed school, the want of punctuality, when allowed to an extreme, is perhaps the most infallible; it is the consequence of indifference and the want of vigilance on the part of the teacher. Children, if left to themselves, will never be punctual, no matter how late the hour for commencing business. Perhaps the most effectual remedy for latecomers is, to detain them in the evening for 30 or 40 minutes after school hours; this, combined with the remonstrance of the teacher, never fails to ensure punctuality; but I regret that in this district it is not generally practised with sufficient strictness. As regards order, it will be admitted by all that when anything has to be done it should be done in an orderly manner. In many matters success depends upon attention to order, and among these may be reckoned the management of a primary school. Children are naturally restless and noisy, and when many of them are together it would be impossible to direct their efforts to any good end, unless kept under proper control; but by strict discipline their natural restlessness is made to contribute to their advancement. Order and uniformity of action, discipline, and strict attention to work among the pupils attending the greater number of all classes of schools in the district admit of much improvement. Strict attention to the details of marching drill is not generally observed; and even in schools where the discipline is considered the most perfect, the time is wasted which is set apart for other duties, in repeating orders which are not, when first given, promptly obeyed. A school or class under proper discipline is so trained to habits of order and obedience that the pupils, when told what to do, do it exactly as it ought to be done, without a second command; but this excellence does not obtain in many schools. In several cases more convenient arrangements are required for the children's hats, bonnets, and lunch. The attention of the teachers has, however, been directed to such improvements as are necessary; and it is to be hoped that beneficial results shall follow. In nearly all cases, I found the teachers very willing to adopt my suggestions.

SUBJECTS OF INSTRUCTION.

The course of instruction, in the majority of the schools in the district, includes reading, spelling, and explanation of words, writing from copies and from dictation, slate and mental arithmetic, grammar, composition, and analysis of the English language, object lessons on animals, vegetables, minerals, and manufactures; elementary mechanics, social economy, the laws of health, and duties of citizens; singing, drawing, Scripture; needlework for the girls; and, in some schools, book-keeping, mensuration, geometry, and algebra, with the elements of Latin, for the advanced boys. In two Half-time Schools and one Provisional, the only subjects taught are reading, writing, and the elements of arithmetic; and in five Provisional, one Roman Catholic, and one Presbyterian, there is no instruction given upon object lessons. In twelve schools, made up of Public, Provisional, and Half-time, and in six Denominational Schools, drawing is not taught; nor music in nearly the same number. Needlework is taught in all the schools, excepting six, conducted by unmarried men; but in few do the advanced boys learn the elements of mathematics or classics.

PROFICIENCY

PROFICIENCY OF PUPILS.

The following table shows the number of pupils learning the different branches at the time of inspection :—

Learning—The alphabet, and to read monosyllables	825
To read easy narrative	567
To read ordinary prose	435
To write on slates	835
To write on paper	910
To write from dictation	1,062
Simple rules of arithmetic	1,275
Compound rules	313
Advanced rules	224
Elements of English grammar	580
Advanced parts of the subject	371
Analysis and composition of English language	297
Elements of modern geography	586
Advanced parts of the subject	401
Scripture	1,102
Lessons on common things and objects	1,621
Drawing	671
Vocal music	750
Latin	24
Algebra	31
Geometry	36
Mensuration	27
Book-keeping	13
Needlework, knitting, netting, crochet, &c.	628 girls.

From this statement, it appears that of the 1,827 pupils examined, 825 are learning the alphabet and to read monosyllabic composition; but it must be remembered that 843 are not over seven years of age—that several schools have been recently opened—that many of the children have been but a short time under instruction. The following statement shews the classification of the pupils :—

First class	458 boys, 367 girls; total, 825
Second class	304 " 263 " " 567
Third class	192 " 188 " " 380
Fourth class	42 " 13 " " 55

The condition of both Public and Denominational Schools, as regards the character of the instruction and the attainments of the pupils, is much the same in most respects. In the majority of the schools, the proficiency of the pupils varies from *moderate to tolerable*; in three or four the attainments are *small*, and in a few cases *fair* or perhaps a little over that degree of progress. When a school is inspected, the answering of the pupils is carefully noted, and the teacher has the advantage of his scholars, being examined upon the subjects which he professes to have taught them. The standard used for measuring results is as follows :—When a class is undergoing examination, if each pupil answers his question correctly, the proficiency is marked *excellent*; if seven in eight answer, the progress is noted *very good*; if three in four answer, it is considered *good*, or up to the standard of attainments required by the Council; if five in eight answer correctly, the mark is *very fair*; and if half the pupils answer, *fair*; if three in eight answer the questions put to them, the progress is considered *tolerable*; but when only one in four of the scholars are able to answer upon the subjects which the master professes to have taught them, the proficiency is estimated as *small, slow, or unsatisfactory*. Now, if the general condition of the schools, as above mentioned, is compared with this standard, it will be observed that the efficiency of the instruction and general progress of the scholars admit of much improvement in a large number of both Public and Denominational Schools. In many schools the pupils read with hesitation and indistinctness, in others the enunciation is rapid and often incorrect, and it is remarkable how little attention is paid to the punctuation. In a considerable number the reading is passable, but it is evident too little attention is paid to the meanings of words and the matter of the lessons. Spelling is not well taught, although writing from dictation is common in most of the schools, but I find that sufficient attention is not given to the correction of the exercises. The penmanship in some cases is creditable, but in the majority of the schools it is not performed in a sufficiently careful manner; the errors of the pupils in imitating the copies are not corrected in due time; sometimes the copies are not of a suitable description, and many teachers do not appear to be aware that success in teaching writing depends upon effort and care on the part of the pupils, and vigilant supervision on the part of the master. As regards arithmetic, there are but few schools where it is well taught. The methods which ensure success are but little understood; the principles are seldom rightly introduced to the pupils, and the elements—such as tables, notation, enumeration, and the simple rules—are not sufficiently dwelt upon. There is too little competitive work among the pupils, and mental calculation is much neglected. In grammar, the attainments are tolerable in a considerable number of schools. The pupils in the second class can generally distinguish the greater number of the parts of speech, and in some cases can parse etymologically. In the third class, although sometimes not much in advance of the second, the pupils can generally parse syntactically, and are making some progress in the composition and analysis of the English language. There are a few schools where grammar is not taught, and in some the progress is small. About half the number of the pupils enrolled are learning geography, and a large number of these are studying the mere elements, such as the cardinal points, the topography of the school district, the uses of a map, the outlines of the geography of Australia, and the relative positions of the continents and oceans. The more advanced pupils are learning the physical geography of the globe, with Europe and New South Wales in detail. Nearly all the schools are well supplied with maps, but globes are found in few, and map drawing is not much practised. A large number of the scholars learn Scripture history, either from the Second, Third, or Fourth Book of Lessons or Scripture Extracts, published by the Commissioners of National Education in Ireland. Several applications were received during the year for a supply of the Scripture Lessons for Denominational Schools, the Local Boards having decided that they were more suitable for children than the Bible. The proficiency of the scholars in object lessons, vocal music, and drawing, admits of great improvement in nearly all the schools; and the teaching of needlework in all its details, to the girls, does not, in general, receive sufficient attention. The teachers are, however, all endeavouring to improve the condition of the schools; and there is little doubt but beneficial results must follow.

METHODS OF TEACHING.

Of the general style of teaching followed in many of the schools, particularly the method of questioning on the ordinary reading lessons, whether the object be to examine or instruct, I cannot speak very highly. The majority of the teachers are, however, willing to do their best; but in many cases they evince but little judgment or discretion in the mode of teaching the different matters they bring before the pupils, and the teaching is often wanting in earnestness and vigour. It can hardly be otherwise, when so many teachers go through their daily work as if it were a kind of mechanical routine, and come to their schools every morning without any special preparation for the business of the day—not having, perhaps, bestowed a single thought upon the lessons to be taught, nor the means by which the work can be most efficiently done. So long as teachers neglect to prepare carefully the work which daily

daily engages them, so long will it be vain to expect much improvement in the character and quality of the instruction they are employed to impart; and I am persuaded I cannot render the teachers under my supervision a greater service than by directing their attention to this matter.

"A Prussian teacher," writes Mr. Horace Mann, "no more thinks of meeting his classes without daily preparation, than a clergyman would think of preaching a sermon without special reading and forethought." Even in some good schools, the aim of the master seems to be to *instruct*, not *educate*,—to impart knowledge of a very useful kind, no doubt, but apparently without studying *so to impart it as to improve the mind of the pupil in the process of its acquisition*. The teachers are, however, aware that promotion depends upon the condition of their schools, and they have an evident desire to increase their practical skill. I have often suggested to inexperienced teachers that they must learn to distinguish between the mere child and the more advanced boy; their language must be simple, and the instruction imparted in such a manner as the youngest child can comprehend. Periodical repetitions of lessons are essentially necessary to ensure success; and satisfactory proficiency cannot be attained without thorough examination. Every error should be corrected by the pupil marking it after it has been pointed out by another, and every lesson imparted in such a manner as to improve the mind in the course of its acquisition. The three great means of instruction, are, *explanation, repetition, and interrogation*.

HALF-TIME SCHOOLS.

With regard to these schools, I am of opinion they will form a most important feature in the education of the Colony, in the sparsely populated districts. I was convinced of their utility several years ago. On 6th June, 1864, in consequence of free-selection, the dispersion of population, and the rapid settlement of the agricultural districts creating a necessity for additional schools, I wrote to the late Board of National Education as follows:—"There is no question which urges itself so much upon the Inspectors, as the immediate extension of the National system, to meet the educational requirements of the Colony more fully and satisfactorily. I am of opinion that some arrangements could be made for extending education into the isolated localities and sparsely populated districts of the interior. In order to do this, I think a number of itinerant teachers could be employed. Each teacher could attend two localities three days in each week, or three localities two days, if the places were not more than ten miles apart. The settlers at each place would be required to provide a schoolroom, furniture, and apparatus, and the Board would probably grant salaries to the teachers, and a stock of books, if sufficient funds were placed at their disposal." The late Board of National Education, however, was unable to take any action in the matter, chiefly from the want of funds. The establishment of Half-time Schools by the Council will, I am satisfied, in time, produce the most gratifying results. Even now, although few of them have been more than fifteen months in operation, the results are highly satisfactory. So far as I have inspected them, the teachers are painstaking and energetic in the performance of their duty; and in some cases, the progress of the pupils has surpassed my most sanguine expectations. In some of these schools I found a considerable number of children who commenced to learn the alphabet about a year or fifteen months ago, and they can now read ordinary prose, such as the Third Book, or Scripture Lessons, with tolerable correctness—write from copies or from dictation legibly—and are making some progress in the elements of arithmetic. The organization, discipline, and instruction of the schools in many cases admit of great improvement; but, on the whole, the success so far appears to me to be truly gratifying. The results, however, are quite in accordance with the views of some of the most eminent educationists of the present day. They say that manual and mental labour combined facilitates school instruction; and it is all but the universal testimony of the teachers and inspectors of Industrial Schools that the boys employed in spade husbandry learn far more readily than boys not so employed, and that although their time in school is shorter, they learn more quickly whilst there. Now I consider Half-time Schools are much like Industrial Schools, the pupils attend to rural industries at home under the direction of their parents for half their time, and they receive school instruction from the teacher during the other half. I fully concur in the views of Mr. Inspector Johnson contained in his report of last year, as to the success and future usefulness of Half-time Schools. There are 28 of these schools in the Goulburn District, attended at the close of the year by 474 pupils, being an average of 17 pupils for each school. The teachers report to me monthly the work done at each teaching station; and at the close of the year, in accordance with my request, each teacher furnished an annual report containing information as to the time he had been in charge of his schools, the number of pupils, the subjects taught, the number of miles travelled monthly, the classification of the pupils, and the number promoted by him to an advanced reading book or higher class. On an average the schools have not been much over a year in operation, and 523 scholars attended in 1868. During the year, 110 children were promoted to advanced reading books, and 116 to higher classes, and at the close of the year the classification stood as follows:—

First class.....	247 pupils.
Second class.....	139
Third class.....	38

The 14 teachers attending the 28 schools travel 1,922 miles monthly, or 22,864 annually, being an average of 84 miles weekly for each teacher. The total amount of the annual salaries from the Council is £978, giving an average of £70 for each master. The total school fees received for the year was £60 11s. 4d., not including 3 teachers who receive board and lodging in lieu of school fees; the average amount for such will therefore be £5 10s. 1d., making the total annual emoluments for each teacher £75 10s. 1d.

ATTENDANCE OF PUPILS.

The following table exhibits the Attendance of Pupils at all the Public, Provisional, and Half-time Schools in the Goulburn District:—

	Boys.	Girls.	Total.
Numbers of pupils enrolled in the schools inspected.. ..	639	555	1,194
Numbers of pupils present at examination	492	429	921
Numbers of pupils enrolled for the last quarter of the year.. ..	1,696	1,523	3,219
Average attendance for the same period	1,285	989	2,274
Total numbers of pupils who attended the schools in 1868	2,191	1,933	4,124

The following table shows the Attendance of Pupils at all the Denominational Schools in the district:—

	Boys.	Girls.	Total.
Numbers of pupils enrolled in the schools inspected.. ..	609	521	1,130
Numbers of pupils present at examination	504	402	906
Numbers of pupils enrolled for the last quarter of the year.. ..	1,190	1,151	2,341
Average attendance for the same period	854	777	1,631
Total numbers of pupils who attended the schools in 1868	744	1,538	3,282

By comparing the figures in the foregoing statements, it will be observed that 70 per cent. of the pupils enrolled for the last quarter of the year attended school daily, and that more than three-fourths of the scholars enrolled in the schools inspected were present at examination. If the attendance of scholars for the first quarter of the year is compared with the last quarter, it will be found that there is an increase for the year of 995 pupils.

AGES OF CHILDREN EXAMINED.

Of the 1,827 pupils present at the time of inspection—

439 boys and 344 girls were 7 years of age and under.
120 " 94 " 8 years of age.
110 " 88 " 9 "
96 " 88 " 10 "
76 " 73 " 11 "
155 " 144 " 12 " and above.

From the foregoing statement, it may be observed that about 43 per cent. of the pupils examined are not over 7 years of age, that nearly one-third are between 7 and 10 years, and that about 25 per cent. of the entire number of the children examined are above 10 years. These proportions of the different ages are much the same in the number of pupils enrolled and in all the schools examined, both Public and Denominational.

TEACHERS AND THEIR EMOLUMENTS.

There were employed in the schools of the district, at the close of the year, 107 teachers, 6 assistant teachers, and 3 pupil teachers. Of these, 86 were males and 30 females.

Employed in Public Schools.

1 teacher at £120 per annum.
4 teachers at £108 per annum each.
10 " 96 "
1 " 87 "
3 " 84 "
1 " 80 "
10 " 72 "
1 " 64 "
6 " 60 "
3 assistants at 48 "

Employed in Provisional Schools.

2 teachers at £60 per annum each.
9 " 48 "
8 " 36 "

Employed in Half-time Schools.

1 teacher at £150 per annum.
1 " 84 "
3 " 72 "
8 " 60 "
1 " 48 "

Employed in Church of England Schools.

1 teacher at £96 per annum.
4 teachers at 84 per annum each.
8 " 72 "
4 " 60 "
1 pupil teacher at £36 per annum.
1 " 30 "
1 " 20 "

Employed in Roman Catholic Schools.

2 teachers at £84 per annum each.
11 " 72 "
6 " 60 "
1 assistant at 50 "
1 " 40 "
1 " 24 "

Employed in Presbyterian Schools.

1 teacher at £72 per annum.

It appears, from the statements given above, that the annual average salary paid by the Council to each teacher in the district is as follows :—

	£	s.	d.
Teachers in Public Schools	73	3	2
Assistants	48	0	0
Teachers in Half-time Schools	70	0	0
Teachers in Provisional Schools	44	4	2
Teachers in Church of England Schools	73	8	2
Pupil Teachers	28	6	8
Teachers in Roman Catholic Schools	69	6	8
Assistants	45	10	0

From the Abstract of Annual Returns, it will be found that the average amount of school-fees paid to each teacher is as follows :—

Teachers in Public Schools	35	3	9	each.
Teachers in Half-time Schools	5	10	1	
Teachers in Provisional Schools	10	6	1	"
Teachers in Church of England Schools	40	0	0	"
Teachers in Roman Catholic Schools	32	13	0	"

The teachers have nearly all residences free of rent, and the Half-time teachers have generally some allowance for forage.

Cost of Education per Pupil.

The total number of pupils who attended all the schools in the district in the year was 7,406, and the total annual salaries of the teachers, with the cost of inspection added, amount to £8,593. From the Abstract of Returns, it appears that the total amount of school fees paid to the teachers during the year was £3,009 18s. Now, if the grants made by the Council for permanent improvements and the erection of school buildings are not taken into account, it will then follow that each pupil who attended the schools in 1868 cost the Council of Education £1 3s. 2d., and the parents or guardians, in the shape of school-fees, 8s. 1d. Total cost of education of each pupil, £1 11s. 3d. From this statement, it appears that the Council pays rather less than three-fourths of the total cost of each child's education, and the people a little over one-fourth.

FREE SCHOLARS.

A great objection to free education is, that it is never valued by parents so highly as that which is paid for. In schools where there is a large number of free pupils, the children are not so regular nor punctual in their attendance as scholars who pay fees. I am also inclined to the opinion that the teachers of such schools do not feel so much interest in the education of the scholars. A high school-fee in elementary schools is also objectionable; it is a check to popular education, and should be discouraged. Many parents object strongly to pay high fees, or to have their children's names entered on the indigent list. The educational policy of Prussia in this matter is, to exact a small school-fee for the education of every scholar, and it is perhaps the most judicious course that can be adopted. The number of free pupils educated in the schools of this district during the year is as follows:—

Schools.	Boys.	Girls.	Total.
Public	163	159	322
Provisional	37	35	72
Half-time	112	115	227
Church of England	58	66	124
Roman Catholic	220	216	436
Totals	590	591	1,181

It is difficult to define the exact limits of what may be termed "inability to pay school-fees," and it is probable that any regulation on the subject would be liable to some abuse. Children in this district are admitted to the schools free, when it is found, upon inquiry of the teacher or School Board, that the parents or guardians making the application cannot afford to pay fees. Speaking generally, there are few free scholars attending the schools whose parents or guardians are able to pay.

GENERAL REMARKS.

The discipline and instruction, in a considerable number of the schools inspected, admit of much improvement, and the furniture is seldom of a good description. The local supervision is, in general, tolerably intelligent, and, I am of opinion, as efficient as could be expected, considering that the service is gratuitous. Additional schools in various parts of the district, and increased inspection, are urgently needed to secure to the people the advantages of the Public School system, which daily increases in public favour. The Half-time Schools promise to do much for the education of the sparsely populated districts, and much good must result from the lively interest taken by the clergy of all denominations, in this district, in promoting education among the people, in accordance with the principles of the Public Schools Act.

W. M'INTYRE,

Inspector of Schools.

Goulburn, 6 February, 1869.

THE following remarks are abridged statements of my detailed reports upon the condition of the Public, Provisional, and Half-time Schools inspected from 27th May to 31st December, 1868. The remarks chiefly relate to the material condition and organization of the schools, the general discipline and moral training, the subjects and methods of instruction, and the progress of the pupils in learning. The reports are given consecutively in the order of inspection.

GUNNING (Non-vested):—Visited, 28th May.

Numbers of pupils enrolled:—Boys, 34; girls, 24; total, 58.

Numbers present at examination:—Boys, 26; girls, 22; total, 48.

The schoolroom, the lease of which will shortly terminate, is in good repair, but much too small, and there are no playgrounds nor closets, but the supply of furniture, apparatus, and books is sufficient. There is no residence for the teacher. A site was selected on the day of my visit and the Public School Board decided to take measures for the erection of suitable buildings. The general discipline is tolerably good, and the subjects prescribed by the Council for the several classes are taught with considerable intelligence and earnestness. The attainments of the pupils are fairly satisfactory.

DALTON (Non-vested):—Visited, 29th May.

Numbers of pupils enrolled:—Boys, 17; girls, 19; total, 36.

Numbers present at examination:—Boys, 13; girls, 13; total, 26.

This school is conducted in the Wesleyan Chapel. It is sufficient in size, and in good repair, but some additional furniture is required. The supply of apparatus and books is sufficient, but the teacher's residence needs some repairs. The pupils are not sufficiently punctual, clean, orderly, nor attentive to their work, and the general discipline is unsatisfactory. All the subjects are attempted to be taught, excepting vocal music; but the school work is badly arranged, and the methods of teaching ineffective. The attainments of the pupils are very unsatisfactory; but it is due to the teacher to state that he has been but a few months in charge of the school.

NORTH YASS (Non-vested):—Visited, 5th June.

Numbers of pupils enrolled:—Boys, 11; girls, 14; total, 25.

Numbers present at examination:—Boys, 6; girls, 9; total, 15.

The schoolroom is too small, and the furniture unsuitable and badly arranged. The discipline is unsatisfactory. The usual subjects of instruction are attempted to be taught, but it does not appear that the pupils have made much progress in learning. The present teacher has been recently appointed, and the proficiency of the pupils examined is small. This school was not centrally situated for the inhabitants, and it has been closed since the date of my visit.

QUEANBEYAN (Non-vested):—Visited, 25th June.

Numbers of pupils enrolled:—Boys, 42; girls, 34; total 76.

Numbers present at examination:—Boys, 31; girls, 30; total, 61.

The school is held in the Oddfellows' Hall; the room is sufficient in size, but very inadequately furnished. There is a good stock of apparatus and books. A suitable playground and closets are much needed. The discipline is tolerably satisfactory. All the subjects required are taught, and the methods of instruction efficacious. The attainments of the pupils are tolerably satisfactory. The School Board is making arrangements for the erection of suitable buildings.

BUNGENDOBE

BUNGENDORE (Provisional) :—Visited, 2nd July.

Numbers of pupils enrolled :—Boys, 12; girls, 9; total, 21.
 Numbers present at examination :—Boys, 12; girls, 9; total, 21.

The material condition of this school is good: the playground is fenced; there are proper out-buildings, and a sufficient supply of school furniture, apparatus, and books. The pupils are in general punctual in attendance, clean, orderly, and attentive to their work. The subjects of instruction are those prescribed by the Council, and the methods of teaching are moderately efficient. The progress in learning is a moderate approach to standard.

CARWOOLA AND FOXLOW (Half-time) :—Visited, 6th July.

Numbers of pupils enrolled :—Boys, 24; girls, 13; total, 37.
 Numbers present at examination :—Boys, 21; girls, 11; total, 32.

Carwoola is about six miles from Foxlow. The schoolrooms are good buildings, but a supply of furniture is much needed. Four-fifths of the pupils are regular and punctual in attendance, and they are tolerably clean, orderly, and attentive to their work. The subjects taught are reading, writing, and arithmetic. The instruction is not well arranged, nor the classification of the pupils very appropriate. The attainments of the children may be estimated as moderate.

KENNY'S POINT (Provisional) :—Visited, 8th July.

Number of pupils enrolled :—Boys, 12; girls, 10; total, 22.
 Numbers present at examination :—Boys, 12; girls, 10; total, 22.

This school is centrally situated, on the banks of Lake George. The schoolroom is rather small, but it is suitably furnished, and there is a fair supply of apparatus and books. This is one of the few schools in the agricultural districts where the number of pupils is well kept up—the average attendance being about 80 per cent. of the number enrolled. The pupils are clean, orderly, and attentive to their work. Excepting vocal music, all the subjects prescribed are taught with considerable efficiency. The progress of the pupils is fairly satisfactory.

COLLECTOR (Non-vested) :—Visited, 9th July.

Numbers of pupils enrolled :—Boys, 3; girls, 11; total, 14.
 Numbers present at examination :—Boys, 3; girls, 11; total, 14.

The schoolroom is sufficient in size, but it is not in good repair. There is a fair supply of furniture, apparatus, and books. The pupils are in most cases punctual, clean, and well conducted. The instruction is well arranged, and the teaching is conducted with considerable skill and earnestness. The attainments of the pupils are tolerably satisfactory.

GUNDABOO (Provisional) :—Visited, 5th August.

Numbers of pupils enrolled :—Boys, 15; girls, 14; total, 29.
 Numbers present at examination :—Boys, 11; girls, 10; total, 21.

The school-buildings are in good repair in most respects, the stock of apparatus and books is nearly sufficient, but some additional desks are required. About 70 per cent. of the pupils enrolled are regular and punctual in attendance; and the discipline, as regards cleanliness, order, and attention, is tolerably good. The branches of learning accord with the "Course of Secular Instruction." The late teacher, Mr. Viles, has managed the school with considerable efficiency. The present master has been very recently appointed. The progress of the pupils is tolerably satisfactory.

SPRING VALLEY (Provisional) :—Visited, 10th August.

Numbers of pupils enrolled :—Boys, 23; girls, 24; total, 47.
 Numbers present at examination :—Boys, 19; girls, 21; total, 40.

The schoolroom is too small, and in much need of repairs. There are no closets, little or no playground; the furniture is insufficient in quantity, and badly arranged. A supply of apparatus and books is much needed. The discipline admits of great improvement in all respects. The pupils are disorderly, and inattentive to their work. The instruction is not well arranged, and the organization and methods of tuition are far from satisfactory. The attainments of the pupils are small.

BUNGONIA (Provisional) :—Visited, 13th August.

Numbers of pupils enrolled :—Boys, 13; girls, 15; total, 28.
 Numbers present at examination :—Boys, 10; girls, 14; total, 24.

The material condition of this school will be passable in most respects, when the repairs in progress are complete. Some additional furniture has been ordered. The supply of apparatus and books is barely sufficient. About 60 per cent. of the scholars enrolled are regular in attendance, but in some cases they are not sufficiently punctual. They are, however, tolerably clean, orderly, and attentive. Drawing, vocal music, and lessons on objects, are not taught, and the school work is not well arranged. The average attainments of the scholars are but moderate, and admit of considerable improvement.

ROSLYN (Vested) :—Visited, 21st August.

Numbers of pupil enrolled :—Boys, 14; girls, 9; total, 23.
 Numbers present at examination :—Boys, 14; girls, 9; total, 23.

The school buildings need some repairs; and the supply of furniture, apparatus, and books, is barely sufficient. The discipline admits of considerable improvement, and the habit of attention requires much cultivation. All the ordinary subjects of instruction are taught. The attainments of the pupils are very moderate. The teacher has been but a few days in charge of the school.

LAGGAN (Provisional) :—Visited, 24th August.

Numbers of pupils enrolled :—Boys, 10; girls, 17; total, 27.
 Numbers present at examination :—Boys, 8; girls, 12; total, 20.

This school is held in the Roman Catholic Chapel. It is sufficient in size, in good repair, but not well furnished. Out-buildings, some apparatus, and books are required. The pupils are rather irregular in attendance, and very unpunctual. The general discipline admits of great improvement. The subjects of instruction are reading, writing, arithmetic, geography, English grammar, and needlework. The methods of teaching are not sufficiently efficacious. The attainments of the pupils are moderate. The teacher in charge of the school has been recently appointed, and its condition may be attributed to the labours of the late teacher.

RICHLANDS (Provisional) :—Visited, 27th August.

Numbers of pupils enrolled :—Boys, 10 ; girls, 7 ; total, 17.

Numbers present at examination :—Boys, 7 ; girls, 7 ; total, 14.

There is no playground nor closets for the use of the children. Some repairs to the schoolroom and additional furniture, are much needed. The discipline is tolerable. The ordinary course of instruction is observed, excepting drawing, object lessons, and Scripture, but the teacher is not much acquainted with the modern methods of tuition. The proficiency of the pupils is moderate for the short time the school has been in operation.

TARALGA (Vested) :—Visited, 31st August.

Numbers of pupils enrolled :—Boys, 19 ; girls, 23 ; total, 42.

Numbers present at examination :—Boys, 19 ; girls, 23 ; total, 42.

The material condition of this school is bad, but new buildings are in course of erection, and proper furniture will be supplied. Three-fourths of the pupils are regular in attendance, clean, and orderly, but they are not sufficiently punctual. All the subjects of instruction prescribed are attempted to be taught, excepting drawing. The methods of tuition are not efficacious, and the progress of the scholars is unsatisfactory.

MYRTLEVILLE (Vested) :—Visited, 1st September.

Numbers of pupils enrolled :—Boys, 14 ; girls, 24 ; total, 38.

Numbers present at examination :—Boys, 12 ; girls, 21 ; total, 33.

The fences and buildings are in much need of repairs, and the furniture is barely sufficient. The discipline is passable, but the lesson documents are not prepared with sufficient care. The teaching appears to be conducted with considerable attention and earnestness. Drawing and vocal music are not taught. The progress of the pupils may be estimated as ranging from moderate to tolerable.

NORWOOD (Non-vested) :—Visited, 24th September.

Numbers of pupils enrolled :—Boys, 18 ; girls, 19 ; total, 37.

Numbers present at examination :—Boys, 16 ; girls, 13 ; total, 29.

There is a fair supply of furniture, but the schoolroom is so small that it cannot be properly arranged. Better out-buildings, fencing for the playground, and some additional furniture, are required. The Public School Board is making arrangements for the erection of suitable buildings. The discipline is tolerably good, considering the unsuitableness of the schoolroom. Instruction is given in all the ordinary subjects excepting vocal music and drawing. The proficiency of the pupils is tolerably satisfactory.

MUMMELL (Provisional) :—Visited, 23rd October.

Numbers of pupils enrolled :—Boys, 14 ; girls, 12 ; total, 26.

Numbers present at examination :—Boys, 13 ; girls, 9 ; total, 22.

This school was opened on 5th October, 1868. The schoolroom is suitable, but the supply of furniture and apparatus is barely sufficient. A stock of books has been ordered. The discipline needs much improvement in all respects. The pupils are learning the mere elements of reading, writing, and arithmetic. The progress is small.

MARULAN (Non-vested) :—Visited, 11th November.

Numbers of pupils enrolled :—Boys, 26 ; girls, 27 ; total, 53.

Numbers present at examination :—Boys, 22 ; girls, 24 ; total, 46.

The schoolroom is much too small, and so near the main street that the noise of vehicles passing is very disagreeable. There is no suitable playground, and the supply of furniture, apparatus, and books, is insufficient. Two-thirds of the pupils enrolled are regular in attendance, but in some instances they are not sufficiently punctual. The cleanliness and order are passable, but the habit of attention requires much cultivation. Drawing and vocal music are not taught. The course of instruction includes reading, writing, arithmetic, geography, English grammar, Scripture, needlework, and lessons on objects and common things. The pupils do not answer with much accuracy, and for the time under instruction the progress is not sufficiently satisfactory.

NEW COUNTRY FLATS (Non-vested) :—Visited, 12th November.

Numbers of pupils enrolled :—Boys, 19 ; girls, 25 ; total, 44.

Numbers present at examination :—Boys, 14 ; girls, 16 ; total, 30.

This school is situated on the left bank of the Wollondilly, where it crosses the Great Southern Railway. It was established for the education of the children of the labourers employed on the railway works. The schoolroom is sufficient in size, but the roof is somewhat leaky, and the floor is made of clay. The supply of furniture is not quite sufficient in quantity, but there is a fair stock of apparatus and books. In several instances the pupils are not sufficiently punctual, but in other respects the discipline is passable. The instruction is tolerably well arranged, and the classification of the pupils appropriate. The teaching is conducted with considerable skill and earnestness. All the subjects prescribed by the Council are taught. The progress of the pupils is tolerably satisfactory for the time the school has been in operation.

TOWRANG (Non-vested) :—Visited, 13th November.

Numbers of pupils enrolled :—Boys, 20 ; girls, 19 ; total, 39.

Numbers present at examination :—Boys, 11 ; girls, 13 ; total, 24.

This school is held in the Wesleyan Chapel. The building is suitable and in good repair, but the grounds are not fenced, and there are no closets. The furniture and books are not quite sufficient, but there is a fair supply of apparatus. The pupils are irregular in attendance, but the discipline is passable in other respects. Excepting drawing, all the subjects prescribed on the "Course of Secular Instruction" are taught with considerable earnestness. The attainments of the pupils range from moderate to tolerable.

TARAGO (Provisional) :—Visited, 20th November.

Numbers of pupils enrolled :—Boys, 19 ; girls, 21 ; total, 40.

Numbers present at examination :—Boys, 16 ; girls, 14 ; total, 30.

This school is held in the English Church. It is a good building, and suitable for the purposes of teaching.

teaching. There is a fair supply of apparatus and books. Three-fourths of the pupils enrolled are regular in attendance, but they are not sufficiently punctual, and the discipline in other respects admits of considerable improvement. The habit of attention needs much cultivation. The classification is tolerably appropriate, but the lesson documents are not well arranged. All the subjects prescribed are attempted to be taught, but the teacher is not well acquainted with the modern methods of tuition. The proficiency of the pupils in reading is tolerably good, but the progress in the other branches of study is small or moderate.

BULLAMALITA AND SPRINGFIELD (Half-time) :—Visited, 1st December.

Numbers of pupils enrolled :—Boys, 19; girls, 15; total, 34.

Numbers present at examination :—Boys, 16; girls, 15; total, 31.

These schools are about 8 miles apart. There are 18 pupils enrolled at Bullamalita, and 16 at Springfield. The schoolrooms are tolerably suitable, and fairly supplied with books, but some additional furniture and apparatus are much needed. About 60 per cent. of the pupils enrolled are regular and punctual in attendance. They are tolerably clean, orderly, and attentive to their work. The subjects taught are reading, writing, arithmetic, geography, and grammar, with lessons on common things. The schools have been in operation about one year and three months, and, taking into consideration that the majority of the pupils commenced learning the alphabet, the results are very gratifying; at the same time, the instruction can be much improved. The progress in reading and writing is tolerable; in the other subjects, small.

BALLALABA AND FARRINGTON (Half-time) :—Visited Ballalaba, 11th December.

Numbers of pupils enrolled :—Boys, 25; girls, 32; total, 57.

Numbers present at examination :—Boys, 2; girls, 8; total, 10.

In the course of a recent tour upon special duties in the district, incidental visits were made to the schools held at Mrs. Clarke's and Nithsdale, and the pupils examined. These two schools are generally known as the Ballalaba Half-time Schools. They are about 2 miles apart, on the banks of the Shoalhaven, and 16 miles from Braidwood. The Farrington and Jinglemoney Schools are about 4 miles further down the river. There are 13 pupils enrolled at Nithsdale, and 8 at Mrs. Clarke's, making a total of 21. Of this number, 10 were examined. The 4 schools have been in operation for 17 months, the teacher attending at each place for 3 half days, or 6 hours in each week. The rooms in which the schools are held are tolerably comfortable, but the furniture is not very suitable. The children are clean, obedient, attentive to their work, and respectful in their demeanour. The subjects taught are reading, writing, arithmetic, geography, grammar, object lessons, writing from dictation, and drawing. The general progress of the pupils appears to me, so far as examined, very satisfactory for the time under tuition. Some of the children commenced learning the alphabet when the schools were opened, 4th August, 1867, and they can now read ordinary prose with considerable ease and fluency, write from copies and from dictation fairly, and have made some progress in Scripture, arithmetic, geography, drawing, and singing. Mrs. Clarke appears to be much interested in the education and moral training of her children.

GOULBURN (Vested)—Infants :—Visited, 15th December.

Numbers of pupils enrolled :—Boys, 80; girls, 50; total, 130.

Numbers present at examination :—Boys, 56; girls, 37; total, 93.

The organization is good, and the discipline satisfactory. The subjects prescribed by the Council are taught, and the methods of tuition are appropriate, and applied with considerable intelligence and effect. The progress of the pupils is good for the time the school has been in operation.

GOULBURN (Vested)—Girls :—Visited, 16th December.

Number of pupils enrolled :—Girls, 68.

Number present at examination :—Girls, 51.

The organization is good—the discipline judicious and effective. The methods are suitable, and applied with considerable skill. The proficiency of the scholars is good for the time the school has been in operation.

GOULBURN (Vested)—Boys :—Visited, 17th and 18th December.

Number of pupils enrolled :—Boys, 126.

Number present at examination :—Boys, 99.

The material condition of this school is good. The discipline is fairly satisfactory in most respects. All the subjects prescribed for the several classes are taught, with the elements of algebra, geometry, and Latin, to the advanced boys. The general progress may be estimated as very fair.

W. M'INTYRE,
Inspector of Schools.

Goulburn, 6 February, 1869.

MAITLAND DISTRICT—GENERAL REPORT, 1868.

DURING the past year my district was enlarged in area by an extension westward to the Castlereagh River, but only by five or six schools. The number of schools in operation at its close was,—

Extent of District and Number of Schools.

Public	33	—	containing	35	departments.
Provisional	13	”	13	”	”
Half-time	1	”	1	”	”
Church of England.....	19	”	20	”	”
Roman Catholic	8	”	11	”	”
Presbyterian.....	1	”	1	”	”
Wesleyan	1	”	1	”	”
Total	76	”	82	”	”

Summary of duties.

The Denominational Schools at Ellalong, Gresford, Millfield, and Rosebrook having failed to maintain the requisite attendance, were, on the application of their supporters, converted into Provisional Schools; and the old National School at Four-mile Creek underwent a like change. Assistance was granted to new Provisional Schools at The Bulga, Mount Wills, Somerville, and Quorrobolong. The number of schools examined was 68, containing 74 departments; of which, 20 received two visits, and 2, three. Two Denominational Schools, viz., Broke Church of England, and Muswellbrook Roman Catholic, were closed at the time of inspection; and six Provisional Schools, four of which were opened during the latter half of the year, were not inspected for want of time. The work of inspection

inspection was continued up to the 18th December, and occupied, during the whole year, 103 days; in preparing reports and conducting correspondence 143 days were consumed; the remainder were taken up in attending the conference of Inspectors and conducting examinations of teachers. There were ten public holidays, and I lost one day through illness. The establishment of Half-time Schools at Ballington and Eccleston failed, owing to the apathy of the people in the former place, and the paucity of scholars in the latter.

The inspection was chiefly of one kind, viz., what is described in the instructions to Inspectors as "General and Regular." This comprehends a minute examination into the character of each school, in its material, moral, and instructional phases—in this last with principal regard to results—and is a very searching ordeal; but, owing to the fact that previous notice is given, room is left for a considerable amount of "making up" against the day of trial, and hence this mode is incomplete in itself. Under its dictates, an Inspector has little opportunity of judging of the methods of instruction or of the ordinary conduct of a school; and he is consequently unable to detect many of the serious defects from which the working of few schools is free in their normal state. In this district, at present, it is simply impossible for an Inspector to visit all, or even the majority of schools, twice, and hence when regularly examined they are seen only in their *best condition*. What they are in their worst can only be inferred; but to render inspection complete and beneficial, this also should be known directly. To suggest a remedy is not within the scope of this report, but I shall probably advert to this matter at another time.

Organization.—The sites are, in the great majority of instances, favourable; and the schoolrooms are, for the most part, of a passable character. The Public Schools at Wollombi, Falbrook, Aberglasslyn, and Branxton, were materially improved. New Church of England and Roman Catholic Schools were erected at East Maitland. The infant department of the West Maitland Roman Catholic School was removed to a more suitable part of the premises, and the girls department enlarged; and in other cases, improvements were effected which, upon the whole, have slightly raised the character of the school accommodation. Nearly one-fifth of the number still, however, continue in a very indifferent state—some are too small, some very old and shaky, some affected both ways; while several are of the rudest material and structure, deficient in light and ventilation, and worthless for all purposes of a more tangibly practical utility. The East Maitland Public School is in a bad state, and would require a large outlay to make it effective, but these wants have been already pointed out, and need not be dwelt upon here.

Agreeably to the Council's desire, special attention was given to Teachers' Residences—fifty-eight having been reported upon since the receipt of instructions. There are ten Public Schools without any, but in most of which an allowance is made by the Council for rent. Two Church of England Schools have none; and, if the West Maitland Convent be excepted, all the Roman Catholic, the Presbyterian, and Wesleyan Schools, are similarly circumstanced. The Provisional and Half-time Schools are for the most part provided with moderate dwellings, under the circumstances; but in one of the former the schoolroom was everything, kitchen and bedroom as well. The character of this accommodation is in general moderate, and rather better in the Church of England than in other schools. The influence, direct and indirect, which the home he occupies has upon the teacher's character, is generally too much overlooked. Expected to set an example of neatness and order, not only to his scholars but to his neighbourhood, while compelled in his household arrangements to resort to every imaginable shift to secure a small share of comfort—how can he, with the thought of himself and his wants, pay the requisite attention to externals? Fortunately, society is very lenient upon the point, otherwise his efforts would be extremely painful, and too often fruitless.

Some improvement has taken place within the year in regard to the out-buildings and supply of water. In the bulk of the schools in this district, the character of the playgrounds may be described as from tolerable to fair; but it must be understood that, with very few exceptions, their condition merely enables them to pass without complaint—and that, in point of *real* efficiency, they are very defective, even in the more important schools. As regards furniture, there is no great cause of complaint, except in the case of a few, more than three-fourths being from tolerable to fair in their supply and its character. Defects similar to those noticed last year continue however, and considerable effort is still required to remove them. About one-fifth of the schools are well provided with apparatus; the same proportion indifferently and the remainder, *i.e.*, the majority, tolerably. Under the facilities afforded by the Council, there is a fair prospect of suitable and abundant appliances being soon found in all schools. With some exceptions, in which, owing to the negligence of teachers, no requisitions were forwarded, or where, from remoteness or isolation, the supplies had not reached, the schools are fairly provided with suitable books. In two or three those in use were not approved, but they were only retained for want of proper ones. The character of the books is the same as last year. In the majority of schools the records are kept with passable accuracy, but in many instances there is evident haste in their keeping, always leading to errors. Little matters of detail are also often overlooked as unimportant, and sometimes by teachers of the higher grades, who appear to think that in their case such trifles should not be noticed; as they know better, but from an apparent pressure of other work neglect to do it. Returns carelessly compiled are also received from the same class, causing considerable trouble, delay, and annoyance, which, with ordinary attention to the forms and instructions, might easily be prevented.

Discipline.—In about five-eighths of the schools, the pupils and teachers are punctual to a satisfactory extent; in one-fourth, tolerably so. This is an improvement upon last year's experience. The regularity too, notwithstanding the serious obstacles by which it is opposed, maintains what may be regarded as a reasonably satisfactory level, being indifferent or bad only in one-fifth of the schools. It has certainly improved within the year, though still very far from what it ought to be. Without compulsory education, this vital branch of discipline will be best promoted by thoroughly earnest and conscientious teachers, well qualified to impart to their labours an interest sufficiently powerful to attract the children, who would in turn strongly incline parents to dispense with their services to a much greater extent than at present. Irregularity often arises from the caprice of children—not the will of the parents; and if all schools were conducted by really competent teachers—I mean, not alone able to *teach*, but to exercise withal a wholesome influence on public opinion, by their prudence, discretion, intelligence, and zeal—the question of compulsory education would, I think, be considerably narrowed in a country like this, where the means of living are not, as in some European countries, the all-absorbing topic—the great object in the race of life. While on this subject, I may as well advert to another item of moment, viz., that of *school fees*. The Council is, I hope, in possession of sufficient information to warrant an early settlement of the question. For want of an authoritative pronouncement upon the matter, schools are competing with each other under circumstances mutually discreditable, and even promoting irregular attendance by the frequency with which children are withdrawn; and parents, interpreting the Public Schools Act their own way, positively demur to payment of the small fee charged, leaving to the teacher the unpleasant alternative of losing either the fees or the scholars. Cleanliness is well observed in the majority of schools; but not always accompanied by tidiness of person and dress, without which its value is much reduced. Order, though from tolerable to fair in nearly three-fourths of the schools, is still very far below the ideal type. I have observed that, in some schools, a stereotyped routine is pursued, to which the children soon conform, but out of which their habits are not good. In some, attention is deficient; in others, the manners of the pupils are neglected, and in almost all there prevails a want of steadiness under instruction, which is probably the most essential defect. Untrained teachers find it next to impossible to understand what the word "discipline" fully means; and their schools accordingly betray some gross irregularities. In the greater number of country schools, the pupils are generally well-behaved, and offer none of that active resistance to authority which town children are so noted for; but they offer other points of character perhaps equally puzzling to the skill of the teachers. There are few difficulties of discipline, however—even the all-important one of irregularity—which an energetic,

Character of inspection.

Sites. School-buildings.

Teachers' residences.

Furniture.

Apparatus.

Books.

Records.

Punctuality and regularity.

School fees affecting discipline.

Cleanliness.

Order.

Government. energetic, patient, and intelligent teacher cannot overcome, to a very great extent at least; as is pretty evident from the case of inefficient schools, in which it seldom happens that the greater portion of the blame may not be, either directly or indirectly, attributed to the teacher. The government of schools is generally guided by intelligence, though, here and there, a few exceptional cases are to be found. In a few instances, there is, properly speaking, no government, the sole apparent object of the teachers being to keep the children at any sacrifice, and for that purpose cultivating their good graces to an absurd extent.

Classification and occupation. The classification is generally fair, and the subjects are, for the most part, agreeable to the requirements of the standard. The guidance on both points, laid down for teachers, is sufficiently clear and explicit to obviate any but errors of negligence or incapacity. With regard to the occupation,—although formal aids have been issued, there is observable, generally, a much less approach to uniformity. In comparatively few schools is it really good; and, considering the facilities afforded, it is bad in too many. In general, its arrangement ranges from tolerable to fair. With the different subjects prescribed, it is certainly not a matter of absolute ease to a teacher to apportion them in such a manner as that each shall receive a share of attention proportioned to its importance; indeed, it often occurs that the most essential, as reading and arithmetic, have no more time, sometimes less, devoted to them than that bestowed upon those of secondary value, while object lessons are frequently placed wholly in the background, and sometimes entirely omitted. To prepare a well-defined and judicious scheme of school occupation requires an amount of active vigilance, careful observation, frequent comparison, and constant reflection, which, I may say, few teachers bestow upon it, and fewer still are capable of bestowing. Time-tables and programmes are constructed more to satisfy the letter of the requirement, than to reduce to system and order the various and varying elements which enter into the skilful working of a good school. These documents are suspended on the walls, and afterwards seldom consulted in many schools. In about one-sixth of the schools the methods are from fair to good, in about one-half tolerable, and bad in nearly one-third. My remarks upon method in the report of last year continue still applicable to the majority of the schools. It is seldom one meets with genuine method; but it is only fair to state that my opportunities of observing it directly were very few last year, my duties having had reference principally to results. For the most part, the methods in use fall under the synthetic type, which, without the analysis to which it is correlated, is incomplete, and for children even much less suitable. But whatever the form of the method employed, its application is greatly modified, if not wholly controlled, by other circumstances, among which stand prominently forward the regularity and order of the pupils. In the absence of these, good teaching is powerless; while with them even indifferent instruction is not ineffectual. They are the ground-work of successful teaching, and to secure them should hence be the great object of every teacher, as well as of all interested in the work of education. It seems to me, that, before method, in the hands of most teachers, can become an intellectual instrument, capable of searching thoroughly the minds of youth, a higher range of qualifications will be necessary. It may be true that for the merely rudimentary education conferred in the majority of Primary Schools, attainments very little above the small proficiency sought are needed; but even for this humble aim an enlightened teacher will be able to impart his knowledge more clearly, thoroughly, and expeditiously than one who is unable to advance further than the elementary stages.

Methods.

Proficiency.—The following tables shew the Number of Pupils enrolled and present at examination:—

NUMBERS ENROLLED.

	7 years and under.		8 years.		9 years.		10 years.		11 years.		12 years and over.		Total.	
	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.
Public Schools	408	378	148	104	99	74	105	105	82	57	135	107	977	825
Church of England Schools.....	338	346	105	96	96	62	84	61	64	101	110	805	739	
Roman Catholic Schools	246	197	47	83	54	56	52	42	44	37	67	56	510	471
Presbyterian Schools	16	16	3	4	4	6	5	2	5	2	6	4	39	34
Wesleyan Schools	10	7	3	...	2	1	6	3	4	1	3	3	28	15
Provisional Schools	32	27	8	11	13	8	9	6	7	9	20	18	89	79
Half-time Schools	1	3	1	1	1	...	1	1	1	1	2	2	7	8
Totals	1051	974	315	299	269	207	262	220	224	171	334	300	2455	2171

NUMBERS PRESENT.

	7 years and under.		8 years.		9 years.		10 years.		11 years.		12 years and over.		Total.	
	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.
Public Schools	322	310	100	84	81	58	81	80	57	44	96	88	737	664
Church of England Schools.....	279	255	84	74	72	50	66	47	63	55	64	85	628	566
Roman Catholic Schools	191	147	36	65	40	43	44	32	30	30	43	50	384	367
Presbyterian Schools	12	13	3	2	3	6	5	1	5	2	5	4	33	28
Wesleyan Schools	8	7	3	...	2	1	3	2	3	1	3	3	22	14
Provisional Schools	27	26	8	9	10	5	7	6	6	7	8	16	66	69
Half-time Schools	1	2	1	1	1	...	1	1	1	1	1	2	6	7
Totals	840	760	235	235	209	163	207	169	165	140	220	248	1876	1715

Reading.

From the foregoing tables, it appears that, of the entire number of pupils enrolled, 77·6 per cent. were present at examination. Of the entire number present, 77·6 per cent. were learning to read, as follows:—

Monosyllables.....	26·3 per cent.
Easy narrative	29·8 "
Ordinary prose	21·5 "

The merely mechanical portion of this most important element of education is perhaps as satisfactorily performed as could well be expected; the articulation and enunciation are, in general, clear and distinct, and the pauses fairly observed. But there is a great deficiency in expression among the more advanced scholars; and this is to be attributed to the poor knowledge of the subject-matter and of the words read, which is commonly evinced; and this great defect is mainly traceable to the insufficiency and unsuitableness of the teaching. A reading lesson very seldom extends beyond the mere utterances of the words in the book; there is no review of the subject treated of, no analysis of the matter in detail, nor always

always an inquiry into the meanings, application, and derivation of the words ; or if there be, it is of such a feeble, superficial, and intermittent nature, as to be productive of no lasting benefits either to the memory or the understanding. Without this insight into the views, opinions, or convictions of the writer, it is impossible that children can assimilate what they read, and catch the spirit of the passage, so as to deliver it with intelligence and expression. With the neglect of this lesson, teachers and pupils lose their best opportunity. Of all other exercises, a proper reading lesson affords the fullest scope to the faculties of thought and speech, which are the complement and perfection of the others, and of paramount importance in education ; it sharpens the intellect, imparts to it a power of grasp which greatly facilitates instruction in other subjects, and gives to the whole mental train an impetus, at once invigorating and progressive.

The following table exhibits the results :—

	Public Schools.	C. E. Schools.	R. C. Schools.	Presb. Schools.	Wesln. Schools.	Provl. Schools.	Half-time Schools.
	Per cent.	Per cent.	Per cent.	Per cent.	Per cent.	Per cent.	Per cent.
Reading monosyllables	28·7	23·4	28·1	34·4	.....	22·9	7·7
„ easy narrative	31·4	27·9	29·1	26·2	50	29·6	38·4
„ ordinary prose	21·7	22·5	18·7	24·6	25	20·1	30·9
Totals	81·8	73·8	75·9	85·2	75	72·6	77·0
Proficiency—							
Good or fair	26·2	26·0	41·2	38·4	44·4	10·2	.....
Tolerable or moderate	53·8	52·4	43·5	40·4	18·5	59·2	70·0
Indifferent or bad	20·0	21·6	15·3	21·2	37·1	30·6	30·0

The writing, in general, offers grounds of satisfaction. It is very generally practised, taught with considerable care, and with reasonably successful results. There is, however, one very prevalent error, which, in spite of previously expressed disapprobation, continues to be noticed, viz.,—that of allowing the younger children to drift into small hand, and girls, particularly, into an illegible angular scrawl, almost as soon as they are able to form the letters. And among schools otherwise bad, the writing is for the most part carefully done ; while, on the other hand, some of the best teachers appear to undervalue this branch of instruction, if one may judge by the careless productions witnessed. Were there no objection to this carelessness beyond the bad habit which it surely engenders, it should be discouraged ; but, apart from this, caligraphy in itself is an art beautiful and useful, and if deserving of attention at all, is worth the trouble of being studied carefully. I have frequently to point out the nonsense set for copy-lines in the shape of unfinished sentences. Dictation is general, and reasonably satisfactory. The results are collected in the following table :—

	Public Schools.	Church of England Schools.	Roman Catholic Schools.	Presby-terian Schools.	Wesleyan Schools.	Pro-visional Schools.	Half-time Schools.
	Per cent.	Per cent.	Per cent.	Per cent.	Per cent.	Per cent.	Per cent.
Writing on Slates	39·9	26·	27·6	21·3	.....	18·	30·8
„ in Copies	46·1	43·2	42·5	49·2	41·7	45·7	69·2
	76·	69·2	70·1	70·5	41·7	63·7	100·
Proficiency—							
Good or fair	30·2	35·7	35·1	39·5	53·3	29·	15·3
Tolerable or moderate	52·6	44·3	45·3	51·1	46·6	56·9	69·4
Indifferent or bad	17·2	20·	19·6	9·4	·1	14·1	15·3
Writing from dictation	78·7	68·4	64·5	72·1	69·4	39·2	69·2
Proficiency—							
Good or fair	21·5	19·	48·4	27·2	36·	.....	.....
Tolerable or moderate	51·5	44·6	32·3	36·3	20·	69·8	44·4
Indifferent or bad	27·	36·4	19·3	36·5	44·	30·2	55·6

Arithmetic.—There is a slight increase in the proportions of pupils learning the compound and higher rules of arithmetic upon last year's numbers, while the aggregate proportions remain much the same ; and the proficiency evinced shows, particularly in the case of Denominational Schools, an upward tendency. In that of Public Schools, the average is about stationary ; but here, the fact that in 1867 only about half these schools were examined, will afford some explanation of the phenomenon. In most schools during the past year the standard has been pretty well observed, but advancement continues to be the rock upon which teachers generally fall in the treatment of the subject. There is, however, evident in every division of it some improvement, though failures in notation are common, practical application of the knowledge acquired is seldom seen, and mental arithmetic is, for the most part, a failure, even in the best schools. Except from the results observed, I cannot speak much of the methods pursued ; but judged by those, they are generally crude and unskilful. Teachers cannot now complain of the want of needful appliances, for black-boards and chalk are found, or may be found, in every school ; but they are not judiciously used. Where text-books are discarded and exercises dictated or set, there is too much sameness in the *modus operandi*. The teachers fall into a peculiar habit, soon well known to the children, whose activity then quickly ceases. In many schools, also, copying is very prevalent ; and even in some, teachers are not above giving hints on the day of examination. This is a contemptible practice, and aims a fatal blow at the very root of a good education, the intellectual value of which is positively worthless, if marred by so gross a moral stain as that of untruthfulness or equivocation. I hope to see this habit henceforth and for ever abandoned, and in its stead to witness a spirit of candour and sincerity pervading every school, and mutually influencing teachers and scholars.

TABULAR STATEMENT OF RESULTS.

	Public Schools.	C. E. Schools.	R. C. Schools.	Presb. School.	Wesln. Schools.	Provl. Schools.	Half-time Schools.
	Per cent.	Per cent.	Per cent.	Per cent.	Per cent.	Per cent.	Per cent.
Learning Simple Rules	60·6	57·9	51·1	44·2	50·	46·6	69·2
„ Compound Rules	16·9	21·9	17·4	24·6	25·	12·6	.....
„ Higher Rules	4·9	.....	1·7	.....	.....	.....	.....
Totals.....	32·4	79·8	70·2	68·8	75·	59·2	69·2
Proficiency—							
Good or fair	17·1	16·6	37·2	30·9	44·4	4·9	.....
Tolerable or moderate	35·7	25·8	25·4	38·1	14·8	11·1	11·1
Indifferent or bad	47·2	57·6	37·4	31·	40·8	84·	88·9

Grammar.—Of the pupils present, nearly one-half were learning grammar. As a rule, the subject is poorly taught, and in a few schools, entirely neglected. This occurs chiefly in Provisional Schools, and one or two others, where the teachers are, for the most part, themselves ignorant of the subject. In all others an attempt is made to meet the requirements of the standard; but in many it is only an attempt feebly made, incoherently sustained, and of very superficial character. Children are taught to repeat the definitions with passable accuracy; but in most instances they are found to have no knowledge of their meanings, and even where some explanation has been given, it is seldom the pupils know the parts of speech to be only words. If a book or a pencil is held before a class, and the question asked what it is, the answer will, almost invariably, be—"a noun." It is in this abstraction from the concrete realities, and in the formation of notions, that the knowledge and power of teachers fail. But there are also instances of superior ability on the part of teachers, and equal obtuseness on the part of scholars, arising, I must say, from want of due appreciation, by the former, of the difficulties surrounding the subject; and perhaps, also, from laziness in noting the various stages of mental growth in the latter, and in presenting at each its appropriate part. There is, moreover, too much monotony pursued in teaching parsing and analysis to allow of the thorough conception of a sentence as a whole, and of the distinct conception of its several parts and of their relations to one another. I have found, in particular, that those of subject and predicate are badly understood, and hence the whole fabric raised upon them is illusory and unsound. There is, as far as I have been able to judge, too much teaching and too little examination—a fault which, though well meant, is nevertheless vicious, as permitting and inducing utter passivity of mind among the pupils, imposing an impossible task upon the teachers, and rendering the aims of education, immediate and remote, visionary and abortive. The efforts of composition exhibited were, in general, extremely poor.

TABLE SHOWING RESULTS.

	Public Schools.	C. E. Schools.	R. C. Schools.	Presb. Schools.	Wesln. Schools.	Provl. Schools.	Half-time Schools.
	Per cent.	Per cent.	Per cent.	Per cent.	Per cent.	Per cent.	Per cent.
Learning the Elementary portions	31·1	27·8	29·8	26·2	50	5·9	38·4
„ Advanced „	21·5	21·9	18·7	24·6	25	12·5	30·7
Totals.....	52·6	49·7	48·5	50·8	75	18·4	69·1
Proficiency—							
Good or fair	14·3	5·4	25·2	22·6	25·9	.....	.....
Tolerable or moderate	37·	24·	32·9	35·5	22·2	.....	.....
Indifferent or bad	48·7	70·6	41·9	41·9	21·9	100	100

Geography.—Geography is taught to an extent nearly equal to the preceding subject, but the knowledge evinced offers even less grounds of congratulation; indeed, the proficiency, both upon the whole and in detail, must be regarded as a failure. To account for this, considering the very moderate amount professed and required to be taught, seems somewhat difficult, if the teachers be credited with having fully performed their duties. This condition, however, I believe to have been wanting in the majority of instances. Not that I mean to charge them with wilful neglect, but that they have overlooked the true nature of the work to be done, or greatly undervalued its importance. To a casual observer there is little effort required in imparting or acquiring the knowledge of a neighbourhood, the uses of a map, or the definitions of land and water, which are the portions of the subject prescribed as elementary; and so, in reality, there is—*provided* the groundwork be properly commenced. But here the error arises. The groundwork is not properly laid. Geography is not commenced from the schoolroom, nor are the natural phenomena within range of observation brought before the pupils' minds. I have witnessed instances in which a second class could not tell the name of their own locality, distinguish the features of the surrounding landscape, or shew the cardinal points without reference to a map; while if asked the technical definitions of continent, ocean, &c., they would often answer correctly, but without any idea of the reality. In the advanced portions also, questions put in a bookish manner will be often readily answered; but otherwise, not. This is a subject full of interest, and capable of being brought into actual contact with the senses to an extent sufficient, with intelligent direction, to enable children to form a moderate notion, not only of their own neighbourhood, district, and country, but of the entire globe. Maps of New Zealand and Tasmania, together with good geographies of these countries, are much needed in our schools, and require to be speedily supplied. The results are as follows—

	Public Schools.	C. E. Schools.	R. C. Schools.	Presb. Schools.	Wesln. Schools.	Provl. Schools.	Half-time Schools.
	Per cent.	Per cent.	Per cent.	Per cent.	Per cent.	Per cent.	Per cent.
Learning the Elementary portions	31·1	27·7	27·9	27·9	50·	3·7	38·4
„ Advanced „	21·7	21·9	18·7	26·2	25·	12·6	30·7
Totals.....	52·8	49·6	46·6	54·1	75·	16·3	69·1
Proficiency—							
Good or fair	3·5	2·3	9·7	...	...	...	...
Tolerable or moderate	30·	19·4	21·3	...	37·	...	...
Indifferent or bad	66·5	78·3	69·	100	63·	100	100

Object Lessons.—Object Lessons are now almost universally taught in this district, 93 per cent. of the pupils present having been examined in them; but, to a greater and more marked extent than any other subject, the knowledge evinced is unsatisfactory. The faults noticed in last year's report continues still in force, in the majority of schools. The lessons themselves are not popular with teachers generally; their nature and scope are misunderstood, and their results are very meagre. The names of qualities and properties are repeated and written down, but seldom understood by the pupils. The subjects chosen are also often unsuitable. One finds "Gutta-percha," "India-rubber," "Cotton," "Silk," "Mercury," &c., selected from the standard books and set down in the programmes, even for the junior classes, while there are abundant materials at hand capable of arresting the direct observation of the pupils, but which are passed by unnoticed. Generally, the lessons, even when well given, are too scientific, formal, and stiff, and fail to arouse much mental activity.

	Public Schools.	C.E. Schools.	R.C. Schools.	Presb. Schools.	Wesln. Schools.	Provl. Schools.	Half-time Schools.
	Per cent.	Per cent.	Per cent.	Per cent.	Per cent.	Per cent.	Per cent.
Learning Object Lessons	96·5	93·7	98·8	98·3	97·2	22·9	100·
Proficiency—							
Good or fair	·9	.....	.....	.....	5·7	.....	.....
Tolerable or moderate	20·	18·4	29·6	10·	25·7	.....	.....
Indifferent or bad.....	79·1	81·6	70·4	90·	68·6	100·	100·

Scripture Lessons.—The Scripture Lessons are read only in Public, Provisional, and Half-time Schools; nor is the use of them compulsory upon children whose parents object. The proficiency evinced is small, upon the whole. It is—

Good or fair	2·7 per cent.
Tolerable or moderate	27·9 "
Indifferent or bad.....	69·4 "

In addition to the foregoing subjects, the following are also taught, viz. :—

	Public Schools.	C. E. Schools.	R. C. Schools.	Presb. Schools.	Wesln. Schools.	Provl. Schools.	Half-time Schools.
Geometry in	5	.....	1	.....	.....	.....	.....
Algebra "	3	.....	1	.....	.....	.....	.....
Singing "	15	15	4	1	1	1	.....
Drawing "	21	14	6	1	1	.....	.....
Needlework,,	18	16	4	1	1	1	.....

Teachers.—The first general examination of teachers under the Council was held last year at the following centres :—East Maitland, Wollombi, Singleton, and Scone. Of 46 summoned, according to the Regulations, 36 attended; 3 sat for special examination, and 2 candidates were also examined. In all, 41 teachers and 20 pupil teachers underwent examination—but of the latter, 11 were candidates, of whom 5 passed. Of the former, 17 were successful and 7 failed. The number of teachers in the service of the Council, on 31st December last, was—

	Male.	Female.	Total.
Principals	62	21	83
Assistants	2	7	9
Pupil teachers	9	3	12
	73	31	104

Their rank is as follows :—

Teachers—Class I	.....	.....	.....	.....	0
Class II {	Section A	.....	.....	.....	5
" B	.....	.....	.....	.....	4
Class III {	Section A	.....	.....	.....	21
" B	.....	.....	.....	.....	23
" C	.....	.....	.....	.....	19
Probationers	.....	.....	.....	.....	20
Pupil teachers	Class I.	Class II.	Class III.	Class IV.	
	2	2	2	5	

The teachers of this district are, as a body, respectable, anxious to fulfil their duties, and do their utmost to give satisfaction. I am happy to say that during the past year there was not a single case of anything tending to lower their character or lessen their moral influences.

Local Supervision.—The Public School Boards evince, to a partial extent, a tolerable interest in the institutions with which they are officially connected. In many instances, the members are not exactly the stamp of men calculated to render beneficial service, nor are they fitted, either by education or social influence, to improve the character of the schools; but they are the best that can be got under the circumstances. The Local Boards of Denominational Schools continue to give, for the most part, a pretty active support to their schools; but in all cases there is generally wanting a systematic procedure. The members visit the schools, but seldom examine very superficially, if at all, the records; and often put their names to documents, certifying their correctness, which have afterwards to be returned to the teachers. There is something stultifying in such conduct as this; and I am confident that if members knew how frequently they are made to vouch for incorrect figures they would be more cautious. It would be only right and proper for them to see the books, &c., from which the returns are made out, and satisfy themselves—as they would in ordinary accounts—that everything was quite accurate. In this respect, indeed, the local supervision is in all schools far too lenient, and takes much more upon trust than would be found justifiable in private life.

Concluding

Concluding observations.—The mechanism of the schools under the Council of Education is now pretty well adjusted, and adapted, with considerable fidelity, to the circumstances under which it is destined to act. These institutions are in fair work, and, with very few exceptions, have evinced some improvement during the year. They have all conformed to the Regulations, as far as these were known and understood, assumed an attitude of vigor and energy, and acquired a tone of honest straightforwardness, wherever a previous policy of deviousness or secrecy had been pursued. Their present condition is such as to inspire a confident hope that their future will be productive of a large amount of good, and materially advance the true prosperity and happiness of the country. The means of education in this district are also fairly sufficient; indeed, in some places the supply exceeds the demand. There is further needed, however, more frequent inspection, to improve the quality of the education imparted, by correcting defects, encouraging deserving teachers, diffusing among them a spirit of wholesome emulation, and thus, by widening their influence and increasing the power of their efforts, to render the educational force more impressive and continuous.

Maitland, 6th February, 1869.

W. DWYER,
Inspector, Maitland District.

APPENDIX.

DETAILED STATEMENT, showing the condition of the Public Schools inspected, as regards—

1. Their material condition.
2. Their moral character.
3. The subjects and methods of instruction.
4. The proficiency of the pupils.

ABERDEEN :—Visited, 5th August.

Numbers present at examination :—Boys, 18 ; girls, 24 ; total, 42.

1. Out-offices were needed ; otherwise, the condition of the premises and the organization of the school were tolerable. 2. The moral tone was tolerable. 3. The subjects were, for the most part, judiciously arranged, and the methods were tolerably intelligent. 4. The proficiency, which was partial, ranged from moderate to tolerable.

ABERGLASSLYN :—Visited, 3rd April.

Numbers present at examination :—Boys, 19 ; girls, 14 ; total, 33.

1. Since inspection, repairs have been executed, which make the state of the premises effective. 2. The pupils were irregular and unpunctual, inattentive, and feebly disciplined. 3. The subjects were badly arranged, and the methods very mechanical. 4. A few pupils wrote well ; in all other subjects the proficiency and mental culture were very small.

BISHOP'S BRIDGE :—Visited, 9th December.

Numbers present at examination :—Boys, 23 ; girls, 15 ; total, 38.

1. The premises are insufficient and unsuitable, and the schoolroom is very badly organized. 2. The attention of the pupils was slight, and their order very poor, but their general conduct moderate. 3. The principal subjects were taught, and moderately well arranged. The methods were earnest, but mechanical, and of slight effect. 4. The knowledge and intelligence of the pupils were low.

BOLWARRA :—Visited, 13th March.

Numbers present at examination :—Boys, 17 ; girls, 21 ; total, 38.

1. The schoolroom is old and dilapidated, but moderately provided with requisites. 2. The pupils were irregular, and addicted to talking, but generally well conducted, moderately attentive, and orderly. 3. Most of the prescribed subjects were taught, but not explicitly arranged ; the methods were intelligent, but not effectual. 4. The progress was small, and the proficiency only moderate.

BRANXTON :—Visited, 6th and 7th May.

Numbers present at examination :—Boys, 25 ; girls, 31 ; total, 56.

1. The premises are in good condition, and the schoolroom is very well organized. 2. The discipline was deficient in energy and influence, and the order of the pupils unsatisfactory ; but the teacher had only been a short time in charge. 3. The subjects were appropriate, and the methods fairly intelligent, but much too suggestive in their character. 4. The general proficiency ranged from moderate to tolerable.

CAMPSIE :—Visited, 1st May.

Numbers present at examination :—Boys, 15 ; girls, 20 ; total, 35.

1. The school is too small, in extremely bad repair, and very poorly furnished, and the condition of the premises is ineffective. 2. The pupils were neither regular nor punctual ; but, under the circumstances, the moral aspect of the school was moderate. 3. Except singing, the prescribed subjects were taught. The work of the school was conducted with earnestness and tolerable skill, though the methods were very mechanical. 4. The progress of the pupils was small, their proficiency moderate, and their mental culture slight.

CESSNOCK :—Visited, 10th December.

Numbers present at examination :—Boys, 14 ; girls, 25 ; total, 39.

1. The schoolroom is small and badly situated, but otherwise moderate for the place. 2. Many of the pupils were untidy in appearance, but in general they were moderately clean, attentive, and orderly. 3. The instruction was fairly appropriate, and imparted with moderate intelligence, but without adequate preparation. 4. The proficiency and intelligence of the pupils were small, but there was some prospect of improvement.

COONAMBLE :—Visited, 11th September.

Numbers present at examination :—Boys, 18 ; girls, 18 ; total, 36.

1. The school is well situated, but small, unsuitable, and badly furnished. The erection of new premises had been decided on. 2. The school had been closed for nearly three months, and the pupils met under a new teacher for the first time on the day of inspection. Individually they were well conducted, but wholly ignorant of order. 3. The occupation had not been arranged, and the methods were not witnessed. 4. The proficiency was very small in every class and subject.

DUNMORE :—

DUNMORE :—Visited, 25th March.

Numbers present at examination :—Boys, 26 ; girls, 9 ; total, 35.

1. The ground is not enclosed, and the condition of the building is extremely wretched. The furniture and apparatus are moderate in character and amount. 2. The pupils were unpunctual, untidy in several instances, inattentive, and disorderly. 3. The subjects were appropriate, but unskillfully arranged ; the methods were inanimate and very superficial. 4. The proficiency and mental culture were very small and poor.

ECCLESTON :—Visited, 18th December.

Numbers present at examination :—Boys, 6 ; girls, 4 ; total, 10.

1. The buildings are in good repair, and the schoolroom is sufficient and adequately furnished. 2. The pupils present were regular, punctual, clean, and orderly. 3. The subjects were appropriate, and arranged with tolerable judgment. The methods were intelligent, earnest, and well applied. 4. The proficiency was tolerable, and the mental culture fair.

FALLBROOK :—Visited, 24th July.

Numbers present at examination :—Boys, 12 ; girls, 19 ; total, 31.

1. For the kind, the premises are in fair condition, and the schoolroom is tolerably suitable and moderately organized. 2. Most of the pupils were regular and punctual, clean, well-behaved, and in very fair order. 3. Except singing and drawing, the occupation accorded with the prescribed course, and was otherwise tolerably judicious. The methods were moderately intelligent. 4. In reading, writing, and arithmetic, the proficiency was from moderate to fair ; in the other subjects, less satisfactory.

FISHERY CREEK :—Visited, 28th February.

Numbers present at examination :—Boys, 15 ; girls, 5 ; total, 20.

1. The premises are in good condition, but in need of cleansing and repairs. The organization of the school is passable. 2. The moral tone was moderate. 3. The ordinary subjects, with geometry and algebra, were taught, and their arrangement, though wanting precision, was upon the whole suitable. The methods were rather suggestive. 4. Writing, arithmetic, and grammar were tolerably well understood ; the other subjects, badly.

GOSFORTH :—Visited, 8th May.

Numbers present at examination :—Boys, 5 ; girls, 7 ; total, 12.

1. The site is for the most part low ; the buildings are old and in bad condition ; the schoolroom was untidy, and the furniture badly arranged. 2. The moral character of the school was moderate. 3. The subjects were appropriate, but defectively arranged. The methods were mechanical, but earnest and perseveringly applied. 4. The few pupils present were carefully taught. The general proficiency ranged from moderate to tolerable, and in a considerable number of instances from fair to good.

HINTON :—Visited, 27th March.

Numbers present at examination :—Boys, 11 ; girls, 10 ; total, 21.

1. The premises are in a fair state of repair, and the schoolroom is fairly organized. 2. The pupils were very irregular and addicted to whispering, but punctual, well-conducted, and orderly in their movements. 3. The instruction was suitable in kind, arranged in proper guides, and imparted with fair intelligence. 4. The proficiency was small as a whole, and only tolerable in reading and writing.

IONA :—Visited, 20th March.

Numbers present at examination :—Boys, 11 ; girls, 16 ; total, 27.

1. The premises are in bad condition, but the school is moderately provided with furniture and apparatus. 2. The pupils were very irregular and unpunctual ; otherwise, the discipline was tolerably effective. 3. Singing, drawing, and needlework, were not taught ; and the occupation generally was very injudicious. The methods were verbose and ineffectual. 4. The progress and proficiency of the pupils were very small, and their general intelligence slight.

LOCHINVAR :—Visited, 2nd December.

Numbers present at examination :—Boys, 14 ; girls, 14 ; total, 28.

1. The schoolroom is badly ventilated, otherwise the premises are in all respects fairly satisfactory. 2. The moral aspect of the school was fair. 3. The classification was not throughout judicious, but the occupation was fairly appropriate. The methods were earnest, intelligent, and animated ; but tending too much to progress at the expense of thoroughness. 4. Reading, writing, and arithmetic, were fairly known ; the other subjects, poorly. The pupils evinced fair attention and tolerable intelligence.

MAITLAND, EAST (Infant) :—Visited, 2nd and 3rd March.

Numbers present at examination :—Boys, 41 ; girls, 39 ; total, 80.

1. The accommodation of the school is fairly sufficient, and the organization moderate ; but repairs and improvements are much needed, especially in the playground. 2. The pupils were regular and punctual, moderately clean, and in tolerable order. Habits of talking and unsteadiness were prevalent, but the teaching power was insufficient. 3. The subjects were fairly appropriate, and well arranged ; but the methods were not well suited to this class of children, being feeble and monotonous. 4. The general proficiency was moderate, but partial.

MAITLAND, EAST (Primary) :—Visited, 3rd and 12th March.

Numbers present at examination :—Boys, 78 ; girls, 54 ; total, 132.

1. In point of position, size, and general adaptability, the schoolroom is excellent, amply furnished, and provided with all modern appliances ; but it is in bad repair, and the playground very defective. 2. The discipline was very thorough and complete ; and the moral aspect of the school very pleasing. 3. The subjects accorded with the "Course of Secular Instruction," were skilfully arranged and effectively taught, for the most part. Geometry and algebra were studied in the highest class. 4. A satisfactory proportion of good results was evinced in reading, writing, and arithmetic ; in the other subjects the proficiency was from tolerable to fair.

MERRIWA :—

MERRIWA :—Visited, 25th August.

Numbers present at examination :—Boys, 25 ; girls, 21 ; total, 46.

1. The premises are tolerably substantial, but in need of repairs. 2. The discipline had improved within the year ; the moral tone of the school was tolerable. 3. Except singing, the prescribed course was observed ; the occupation was constant, and tolerably judicious. The methods were intelligent, earnest, and effective, but awkwardly applied. 4. The proficiency and general intelligence shewed a marked improvement, and were upon the whole nearly tolerable.

MURRURUNDI :—Visited, 18th August.

Numbers present at examination :—Boys, 25 ; girls, 13 ; total, 38.

1. The buildings are very unsuitable, in bad repair, insufficiently furnished, and altogether quite behind the requirements of the time and the growing importance of the town. 2. Under the circumstances, the moral aspect of the school was tolerable. 3. The occupation, as a whole, was moderate ; and the instruction earnest and intelligent, but not effective. 4. In the junior class, the proficiency ranged from moderate to tolerable ; in the senior classes it was small.

MORPETH :—Visited, 21st and 23rd April.

Numbers present at examination :—Boys, 74 ; girls, 46 ; total, 120.

1. The premises are in excellent condition, and the schoolroom is the best in the district, amply and appropriately furnished, and otherwise effectively provided. 2. Most of the pupils were tolerably regular, punctual, and clean ; but their conduct, attention, and order, were decidedly bad. 3. The subjects were suitable and tolerably well arranged, though rather injudiciously advanced. The methods were fairly skilful, and applied with considerable energy, but so far very ineffectual. The present master had not been long in charge. 4. With a few exceptions, the proficiency was very small.

NELSON'S PLAINS :—Visited, 24th September.

Numbers present at examination :—Boys, 28 ; girls, 22 ; total, 50.

1. The site is inconvenient with respect to water ; otherwise the condition of the premises and the organization of the school are tolerable for the place. 2. Habits of whispering, copying, and inattention were prevalent, but the moral aspect of the school was tolerable. 3. Singing excepted, the subjects accorded with those prescribed, and were tolerably well arranged. The methods were rather direct and suggestive, but reasonably skilful and earnestly applied. 4. The proficiency was, for the most part, moderate, but partial, with slight mental culture.

OSWALD :—Visited, 3rd December.

Numbers present at examination :—Boys, 15 ; girls, 14 ; total, 29.

1. The general state of the buildings, and the organization of the school, are barely moderate. 2. The pupils were unsteady, addicted to prompting and copying, and awkward in their movements. 3. The subjects were tolerably appropriate as to arrangement ; but the methods were hurried, unconnected, and ineffectual. 4. The general knowledge evinced was small, and the answering very thoughtless.

SCONE :—Visited, 7th August.

Numbers present at examination :—Boys, 18 ; girls, 11 ; total, 29.

1. The school is in good condition, and tolerably well furnished ; but the ground is not enclosed. 2. The pupils evinced some objectionable habits, but their appearance and general deportment were tolerable. 3. The instruction was appropriate, and imparted with moderate judgment as a whole, but not sufficiently connected in detail. 4. The proficiency was very moderate and partial, and the mental culture small.

SCOTT'S FLAT :—Visited, 14 December.

Numbers present at examination :—Boys, 30 ; girls, 17 ; total, 47.

1. The situation is awkward ; but the premises are in good repair for the kind. The school is sufficient for present wants, and moderately organized. 2. The pupils were irregular, and in several instances untidy ; otherwise the moral tone of the school was fair. 3. The occupation was fairly appropriate and well arranged ; the methods were tolerably intelligent, and perseveringly applied. 4. In the lower classes, a tolerable proficiency was evinced ; but in the highest, the knowledge of the pupils was small. A moderate intelligence was in general exhibited.

SINGLETON (Infant) :—Visited, 9th June.

Numbers present at examination :—Boys, 24 ; girls, 31 ; total, 55.

1. The room is much too small ; otherwise its character and organization are fair. 2. The pupils were tolerably regular, punctual, and clean ; but the discipline was, in general, neither vigorous nor effective. 3. The instruction was suitable in kind ; but the teaching wanted interest and animation. 4. One-half of the pupils evinced a tolerable knowledge of reading, writing, and arithmetic. The other comprised the youngest children and the least capable of being instructed.

SINGLETON (Primary) :—Visited, 10th and 11th June.

Numbers present at examination :—Boys, 22 ; girls, 25 ; total, 47.

1. The general condition of the premises is good ; but repairs are urgently needed in several parts. The schoolroom is sufficient, suitable, and well organized. 2. Except a habit of whispering, prevalent at intervals, the moral character of the school was fair. Singing was not taught ; but otherwise the subjects accorded with the Standard, and were judiciously arranged. The methods were intelligent, skilful, and fairly effective. 4. The general proficiency was tolerable, and in some instances very fair.

STANHOPE :—Visited, 4th December.

Numbers present at examination :—Boys, 13 ; girls, 12 ; total, 25.

1. The premises are in bad repair but neatly kept, and the school is, for the place, fairly organized. 2. The pupils were irregular, but punctual, tolerably clean, fairly attentive, and orderly. 3. The instruction was appropriate, and imparted with tolerable intelligence, earnestness, and effect. 4. The average proficiency ranged from tolerable to fair.

SUGARLOAF :—

SUGARLOAF :—Visited, 11th December.

Numbers present at examination :—Boys, 9 ; girls, 14 ; total, 23.

1. The schoolroom is in fair condition, and sufficient for the wants of the place ; it is moderately well furnished, but the playground is very deficient of shade. 2. The pupils were noisy, inattentive, and disorderly for the most part ; but the school has only just been reopened after a two-months' recess. 3. The occupation had not been revised, but was tolerable in general. The methods were moderate in all respects. 4. The proficiency and intelligence of the pupils were very low.

VACY :—Visited, 30th April.

Numbers present at examination :—Boys, 12 ; girls, 17 ; total, 29.

1. The schoolroom needs cleansing and additional furniture, and the out-offices are exposed and unfinished ; in other respects the state of the premises is tolerable. 2. The moral tone of the school was tolerable. 3. The occupation was fairly suitable, but the methods were mechanical and ineffective. 4. The proficiency and mental culture of the pupils were small and poor.

WALLALONG :—Visited, 26th March.

Numbers present at examination :—Boys, 14 ; girls, 14 ; total, 28.

1. The buildings are in good condition, and the school is fairly organized. 2. The pupils were very irregular, but tolerably punctual, clean, and tidy, attentive, and in fair order. 3. Drawing and singing were not taught ; otherwise the subjects accorded with the prescribed course, and were arranged with fair judgment. The methods were intelligent, reasonably skilful, and tolerably effective. 4. The general proficiency was nearly tolerable, and the elder pupils evinced a passable degree of intelligence.

WATAGON :—Visited, 19th June.

Numbers present at examination :—Boys, 15 ; girls, 6 ; total, 21.

1. The schoolroom is a rude slab hut, but moderately weatherproof, cleanly kept and provided with a moderate supply of requisites. 2. The discipline was moderately effective in general. 3. The occupation was moderately appropriate, and the teaching earnest and careful, but, in its general nature, mechanical. 4. The general proficiency ranged from moderate to fair, but the accompanying intelligence was small.

WOODBURN :—Visited, 17th July.

Numbers present at examination :—Boys, 9 ; girls, 20 ; total, 29.

1. The school is a roughly-constructed and rudely-furnished building, but moderate for the place, and provided with a reasonable stock of apparatus and books. 2. The moral tone of the school was moderate. 3. The subjects accorded with the Standard, but were not arranged with judgment. The methods were very mechanical, and of slight effect. 4. The proficiency was small in every class and, writing excepted, in every subject.

WOLLOMBI :—Visited, 16th and 20th June.

Numbers present at examination :—Boys, 32 ; girls, 39 ; total, 71.

1. The site is very favourable, the accommodation and organization are fair, but the teacher's residence is very insufficient. 2. The moral aspect of the school was fair. 3. The occupation was suitable, and, for the most part, well arranged ; the instruction was earnest, careful, and effective. 4. The general proficiency was tolerable, and the pupils evinced a reasonable degree of intelligence.

NEWCASTLE DISTRICT.—INSPECTOR'S GENERAL REPORT.

Inspector of Schools, Newcastle District, to the Secretary, Council of Education.

Newcastle, 11 January, 1869.

Sir,

I have the honor to submit, for the information of the Council of Education, my Report, for the year ended 31st December, 1868, on the Public and Certified Denominational Schools in the Newcastle District.

I.—NATURE OF DUTIES.

During the year I have, in addition to duties of a special character, been able to effect the regular and ordinary inspections of most of the schools in the district.

The following is a detailed summary of these duties, and the time occupied therein :—

	Days.
Inspection of schools, including time occupied in travelling to them ...	184
Clerical work, embracing Reports upon schools and special inquiries, general correspondence	88
Examinations of teachers	20
Attending Conference of Inspectors	6
Off duty (public holidays and leave of absence)	16
	314
Sundays	52
	366

II.—EXTENT OF DISTRICT.

The Newcastle District has this year been slightly enlarged, by the addition of certain schools in the locality of Brisbane Water.

The schools that have been in operation during the year are :—

Public Schools	50
Provisional Schools	3
Denominational :—	
Church of England	12
Roman Catholic	5
Presbyterian	2
	72

III.—

III.—CHARACTER OF INSPECTION.

Of the above schools, forty-seven Public, two Provisional, and eighteen Denominational Schools, have undergone the annual examination; and forty-nine Public, one Provisional, and fifteen Denominational Schools have received ordinary inspection, in addition to that of the regular or annual inspection.

The examinations of the moderate sized schools have occupied from five to seven hours, but those of the larger schools required two and three days each. The distances travelled in visiting schools amounted to 2,282 miles.

Ordinary Inspection.—This is really the most important form of visitation; it enables an Inspector to see the inner life of a school, its disciplinary influences, and the character and educative value of the teaching.

The work of the day is left in the hands of the teacher, and the Inspector is in a position to judge whether the school is *taught* by an earnest and faithful educator, or whether it *languishes* under the influences of a mere hireling.

IV.—SCHOOL BUILDINGS.

Although many buildings unfitted for school purposes are of necessity still used, a considerable number has undergone repair and enlargement. The Public School houses on the Manning River have been put into good condition. At Hanbury a handsome brick structure has displaced a slab hut, and the Public School house at Tomago has been renovated. The Church of England School premises at Raymond Terrace and Gosford have been improved; and at the Roman Catholic School, Newcastle, a considerable expense, in the erection of proper out-offices and playground improvement, has been incurred. The Public School houses at Mosquito Island, Pitt Town, Seaham, Teralba, and Wallsend are unsuitable, nearly worthless, and, in some cases, highly dangerous buildings. The only Denominational School that may be reported as unfit for use is the C. E. building at Kincumber, but there are several others much in need of repair.

V.—TEACHERS' RESIDENCES.

In those cases where schoolhouses have been repaired, corresponding improvements have been made in the masters' dwellings; but there are *ten* attached to Public Schools in a very poor condition. *Thirteen* Non-vested Public Schools have no teacher's residences attached; and although, in most cases, rented houses have been provided, they are frequently remote from the schools.

Of the nineteen Denominational Schools, *twelve* of the teachers have good houses; *five* residences are very dilapidated; and, in *two* instances, Newcastle R. C. and Newcastle Presbyterian, the teachers have neither houses nor rent allowance.

Alluding to this latter school, I am at a loss to understand why it is called a Denominational School. It bears the name of a Presbyterian School, yet the tenets of that body are not taught in it; and further, the premises in which the school is held do not belong to the Presbyterian body, but the teacher has to pay rent for them himself.

VI.—OUT-OFFICES AND PLAYGROUNDS.

In these respects about one-third of the Public and one-half of the Denominational Schools are well provided, and in about one-third of each kind of schools the provisions are positively bad. The Public Schools in which these defects exist are Non-vested properties.

I subjoin a tabulated return of the material condition of the respective schools:—

PUBLIC SCHOOLS.

	Good in supply or condition.	Fair and moderate.	Bad or not provided.
<i>a.</i>			
Schoolhouse	30	15	8
Teacher's residence	22	12	19
Playground	20	15	18
Out-offices	15	18	20
<i>b.</i>			
Furniture and apparatus.....	24	23	6
Books, maps, &c.	28	25	...

DENOMINATIONAL SCHOOLS.

	Good in supply or condition.	Fair and moderate.	Bad or not provided.
<i>a.</i>			
Schoolhouse	9	8	2
Teacher's residence	6	7	6
Playground	9	3	7
Out-offices	9	5	5
<i>b.</i>			
Furniture and apparatus.....	4	9	6
Books, maps, &c.	4	14	1

VII.—CLASSIFICATION OF PUPILS.

Under this head I can report favourably. In those schools which formerly presented defects in this feature of school organization, the teachers have succeeded in mastering, to a fair degree, its apparent difficulties, and it is rare that I have to report cases of faulty classification.

VIII.—

VIII.—DISCIPLINE.

A marked improvement has taken place in the internal discipline of the schools of this district, but there is yet room for alteration in the punctuality and regularity of the pupils. Of the numbers enrolled the average attendances in the several kinds of schools are as follow :—

Public and Provisional Schools	Two-thirds.
Denominational Schools, Church of England	Upwards of two-thirds.
" " Roman Catholic.....	One-half.
" " Presbyterian	Two-thirds.

I subjoin a tabular estimate of the discipline which prevailed in the schools at the times of inspection :—

	Good.	Fair.	Moderate.	Bad.
Public Schools.....	18	16	15	3
Denominational Schools.....	2	10	6	...

IX.—INSTRUCTION.

Throughout the schools of this district there is a uniform observance of the Council's "Standard Course." Reading, Writing, Dictation, Arithmetic, Grammar, Geography, Object Lessons, and, in a few schools, Singing and Drawing, form the items of instruction. In most schools considerable proficiency in needlework is attained. The time-tables are fairly devised for systematic instruction. The programmes of lessons do not often exhibit skill of a high order; frequently, they are diffuse and useless documents, and of them it can only be said that they professedly meet the requirements of the regulation thereon. The daily lesson registers are properly kept, and I generally find them to be serviceable aids in the examination of the classes.

Distribution of Teaching Power.—There is still a manifest weakness in this feature of school management; and, as remarked in a previous Report, the younger children receive but a minimum amount of oral teaching, excepting in those schools that are large enough to command the services of an assistant teacher, or where the teachers' wives assist with some degree of regularity.

As far as my observation has extended I am in a position to state that the schools in which the younger children have made marked progress, or exhibited cultivated intelligence, are those in which the teachers' wives systematically engage in the teaching.

I append a table shewing the class distribution of those pupils who were present at the examinations :—

	1st Class.	2nd Class.	3rd Class.	4th Class.	Total.
49 Public Schools.....	1,233	692	450	57	2,432
2 Provisional Schools.....	23	17	.....	.....	40
18 Denominational Schools.....	544	295	185	26	1,050
	1,800	1,004	635	83	3,522

Of those in the first or lowest class, 377 in Public and 166 in Denominational Schools receive instruction as infants from qualified female teachers.

Method.—Marked skill in teaching is a rare gift; but wherever honest effort is put forth, even the teacher of moderate ability will realize reasonably good results. Many schools whose classes had, last year, to be rated as "below the Standard" have now, through the earnest industry of the teachers, earned a more satisfactory verdict; but the prevailing modes of teaching do not, in many instances, enforce due mental activity in the pupil. The teacher does too much, and the pupil is not made to feel his own personality, or the part he should take in the school work. Modern systems of instruction profess to combine the excellencies of the *simultaneous* with those of the *individualizing* methods; but whilst I find numerous schools in which a fair share of *class* intelligence is displayed, I rarely meet with a pupil sufficiently practised to express his ideas, or to reproduce, with anything like correct composition and orthography, the substance of the simplest lesson he is *supposed* to have received. There are some schools in the Colony in which the plan of mutual questioning is used, and with great advantage, and it is surprising how sharpening are its influences.

The fact is, the pupil then knows that he is under the keen criticism of his fellows, and he feels that he *must* trust to himself for success. In connection with this matter of inducing correct individual effort, the Rev. J. Fraser, in his Report upon the Common School System of the United States, says, referring to the High School at Boston :—

"A noticeable feature in the instruction given in these schools is the extent to which the black-board is used, not, as with us, chiefly by the teacher, but almost exclusively by the pupils. All round three sides of the class-room is let into the wall a panel either of slate or covered with some plaster composition, which is the instrument understood by the 'black-board.' It is at a convenient elevation from the floor of the room, and varies from four to six feet in width * * * * * For exercise in Greek and Latin composition, for developing the paradigm of a Greek or French verb, for the analysis of a sentence, for illustrating sketches in anatomy and mechanics, as well as for the more usual purposes of geometrical demonstrations and arithmetical or algebraic examples, the black-board is called into play * * * * * One great advantage in the method is that, when the results come under the critical eye of the teacher, who generally calls upon each pupil to exhibit or explain his own performance, it enables him to contrast before the class (who by the hypothesis of a graded school are equal in their attainments, and each, therefore, competent to understand and criticise his neighbour) different styles of setting out work, besides its further action as a stimulant upon the pupils to do their best, when they know that their work will presently be exposed to the criticism of all their class-mates."

It is true that our schools are not, and perhaps for pecuniary reasons cannot be, so fitted up; but I am of opinion that if the ordinary black-board were placed in the hands of the pupils more frequently the results would be highly satisfactory, and would induce a healthy spirit of competition in the several classes.

Subjects.—

Subjects.—*Reading*.—This subject, as an art, is still a weak one, and is seldom taught in an intelligent style. In the junior classes it is too frequently given in a disjointed manner, whilst in the advanced classes it is delivered in a rapid and sleep-inducing monotone. In a few schools in the district, reading is treated in a rational way, and the teachers have succeeded in evoking a spirit of emulation among the pupils. As a result, the *school drawl* has given place to a natural and expressive style.

Writing.—I am pleased to observe that there is less discrepancy between the styles of the copy-book and slate exercises than formerly; but the defective character of the *composition* of the upper classes reveals a necessity for a greater amount of practice than has been customary. The elder pupils should be encouraged to write simple themes, and upon *unruled* paper.

Dictation.—As far as the dictation of passages from the reading lessons is concerned, the results of the examinations were, on the whole, tolerably satisfactory; but proficient spellers are rarely to be met.

In numerous instances, after a satisfactory examination in formal dictation, have I found the pupils to fail signally when required to write down the heading of a sum from dictation or to produce the substance of a recent lesson.

Arithmetic.—The results of this branch of instruction are but very moderate in comparison with the amount of time generally devoted to it. This weakness is most apparent in the first and third class, but particularly so in the latter. Of the sixty-seven schools that were examined, fifty-six have third classes; yet, of that number, *eleven* third classes only succeeded in solving such sums as the following satisfactorily:—

1. Notate 510020106 and 630010111
2. Take 7295987 from 503790047
3. Multiply 379654 by 50608.
4. Pay the following sums of money—11s. 4½d., £5 0s. 6d., and £2 15s. 6d.—out of £50; say how much remains.
5. Take 30½ cwt. from 5 tons 7 cwt. What remains?

Twelve classes did fairly, *twenty-five* tolerably, and *eight* moderately so; whilst in *eleven* the examination was nearly a failure. With the exception of the notation, the above sums were placed on the black-board. The average age of the pupils exceeded eleven years, and the average time of enrolment in the classes exceeded nine months. Some allowance must, of course, be made for the deteriorating effects of irregularity; but much of the weakness is attributable to a want of searching revision of the work presumed to have been mastered.

Grammar.—As remarked in a previous report, this subject is one in which the Public Schools give fair results, and I have this year to add that promising progress has also been made in the Denominational Schools.

Geography.—The restrictions of the Council's "Standard Course" have greatly checked the diffuse teaching of geography, and the results, as ascertained by the examinations, range from tolerable to fair. In few schools, however, is the subject treated intelligently. Constructive illustrations on the black-board are rarely used, nor could I often detect evidences of deductive teaching. The system of cramming the pupils with facts is too frequently followed.

Object Teaching.—I cannot report favourably of this branch of instruction. Few of the teachers in this district are even fairly skilled in the art. I prefer giving the words of the Rev. J. Frazer rather than comments of my own—the more so, that they so correctly portray my own experiences as an Inspector.

"The beneficial results" of Object Teaching "is admitted on all hands. But here, as elsewhere—indeed more than elsewhere—all depends on the skill of the teacher. Desultory, aimless, object lessons I conceive to be as unprofitable a way of occupying children's time as can be devised. Nor do I think they should be allowed to exclude or throw into the shade other methods—those for instance which discipline and strengthen the memory—which are no less necessary for the due and proportionate development of the youthful mind. In the hands of a lively, systematic, judicious teacher, the object lesson is an educational instrument of vast power; in the hands of one with the reverse of these qualities, it is worse than a waste of time." (Report upon Common Schools System, U. States, page 86.)

I annex tables showing the relative proficiency of the schools in all the subjects upon which I have treated.

PUBLIC SCHOOLS.

Subjects.	Good.	Fair.	Moderate.	Bad or Indifferent.
Reading	11	24	11	2
Writing	16	20	10	1
Dictation	4	20	20	3
Arithmetic	7	17	13	10
Grammar	15	13	10	9
Geography	8	14	15	10
Object Lessons	1	14	20	12
Needlework	15	20	8	4

DENOMINATIONAL SCHOOLS.

Subjects.	Good.	Fair.	Moderate.	Bad or Indifferent.
Reading	4	8	6	...
Writing	7	6	5	...
Dictation	2	7	7	2
Arithmetic .....	...	6	8	4
Grammar	1	5	5	7
Geography	1	7	6	4
Object Lessons .....	...	3	9	6
Needlework	4	7	4	3

X.—TEACHERS.

The teachers in this district, are, as a rule, faithful agents. I have found them glad to receive professional hints, and subsequent visits to their schools testify to the adoption of my suggestions. They are classified as follows :—

2nd Class.		3rd Class.			Probationers.
Sec. A.	Sec. B.	Sec. A.	Sec. B.	Sec. C.	
6	5	30	17	13	13

XI.—SCHOOL FEES.

The total amount of school fees for the year in this district is £2,520 Os. 5½d. In some localities the fees form no inconsiderable augmentation to the teachers' incomes, but in the agricultural parts of the district they are absurdly small. In *eight* schools the fees for the year range from £2 to £5; in twenty-six schools, from £5 to £10; and (omitting those schools that are very large and have two or more teachers each) in three only do the fees exceed £40 for the year. Dividing the fees received by the number of pupils enrolled, I find that the average payments *for the year* per scholar are as follows :—

Public Schools	8s. 3d.
Provisional Schools	6s. 0d.
C. E. Schools	6s. 3d.
R. C. Schools	4s. 3d.
Presbyterian Schools	6s. 9d.

The smallness of these amounts is due to the existence of a numerous body of what may be termed *nominal payers*, most of whom are in a position to pay the fees, but who, whilst sensitively shrinking from seeking admission for their children as *free scholars*, have not an equal sensitiveness about their just liabilities to the teachers.

XII.—FREE SCHOLARS.

According to the Yearly Returns, there are 779 free scholars in the schools of this district, the ostensible ground of exemption being alleged poverty. I am, however, of opinion that the exemption is frequently very injudiciously given. Excepting in cases of absolute poverty, a small fee should be exacted from each pupil if upon no other ground than that of fostering self-respect in the child.

TABULATED Return of Free Scholars.

Schools.	Pupils enrolled.	Free scholars.	Per centage of enrolment.
Public and Provisional	4475	483	10·8
Denominational—C. E.	1485	113	7·6
" R. C.	517	156	30·0
" Presbyterian	319	27	8·5

XIII.—LOCAL SUPERVISION.

As far as the Public Schools are concerned, I am unable to report favourably. In townships the members of the Boards are generally persons whose time is fully occupied in business pursuits, and in the agricultural districts the claims of the field are paramount to the active interests of the school.

In sixteen schools the members of the Local Boards were not present at the examination. Respecting the Denominational School Boards, very little interest in their respective schools is evinced by the lay members; oversight practically devolves upon the clergy. At the examination of the C. E. Denominational Schools, in one instance the clergyman and the lay members of the Board were present; in seven, the clergymen were present during the greater part of the examinations; in one, a lay member of the Board was present; and in three, the School Boards were not represented.

In the R. C. Denominational Schools the clergyman and a lay member of the Board were present in one instance, but in the other schools (three) the School Boards were not present. It is, however, right that I state that in these three places the clergy were non-resident.

In both of the Presbyterian Schools the Boards were present at the examinations.

In conclusion, I have to report that there is a growing disposition on the part of the Church of England Clergy to make systematic visits to the Public Schools in their respective parishes for the purpose of imparting special religious instruction.

Summaries of my detailed reports are appended.

I have, &c.,
J. W. ALLPASS,
Inspector of Schools,
Newcastle District.

ANNEX A.

NEWCASTLE DISTRICT.—TABULATED REPORTS FOR 1868.

PUBLIC SCHOOLS.

BANDON GROVE (Vested) :—Visited, 30th November.

Pupils enrolled :—Boys, 26; girls, 22; total, 48.
Pupils present :—Boys, 18; girls, 17; total, 35.

The school premises are in good condition. There is a proper supply of furniture and appliances. The organization is good; the discipline is effective; the methods of teaching are skilful, and the results range from tolerable to good. The Local Board's visits are rare; one member was present at the examination.

BARRINGTON (Non-vested) :—Visited, 17th November.

Pupils enrolled :—Boys, 18 ; girls, 10 ; total, 28.
Pupils present :—Boys, 14 ; girls, 9 ; total, 23.

The schoolhouse is in a tolerably fair state. The organization and discipline are moderate ; the instruction is methodless, and the progress of the pupils is small ; but the main cause of this is their great irregularity. Local supervision is tolerably frequent, but, owing to the pressure of harvest labour, none of the Public School Board were present at the examination.

BENDOLBA (Vested) :—Visited, 25th November.

Pupils enrolled :—Boys, 8 ; girls, 9 ; total, 17.
Pupils present :—Boys, 5 ; girls, 7 ; total, 12.

The schoolhouse is in but moderate repair. It is kept clean, and is sufficiently furnished and supplied with working appliances. The school management and the teaching appear to be careful. Little interest either in the prosperity or the existence of the school is manifested. The school secretary was present at the examination.

BLUE GUM FLAT (Non-vested) :—Visited, 18th August.

Pupils enrolled :—Boys, 25 ; girls, 24 ; total, 49.
Pupils present :—Boys, 22 ; girls, 16 ; total, 38.

The schoolhouse is in fair condition, is suitably furnished and supplied with working appliances. Out-offices have not been provided. The organization and discipline are fair, but the attainments of the pupils are barely moderate. Local supervision is fairly exercised. The school secretary was present at the examination.

BO BO CREEK (Non-vested) :—Visited, 26th September.

Pupils enrolled :—Boys, 18 ; girls, 12 ; total, 30.
Pupils present :—Boys, 17 ; girls, 12 ; total, 29.

The schoolhouse is much in need of repair, but it is moderately furnished and supplied with working material. The organization is correct, the discipline is fair, and, making due allowance for the detrimental influences of the very irregular attendance, fair progress has been made in the mechanical branches. Local supervision is very rare, but four members of the Public School Board were present at the examination.

BOOLAMBAYTE (Non-vested) :—Visited, 10th November.

Pupils enrolled :—Boys, 21 ; girls, 11 ; total, 32.
Pupils present :—Boys, 19 ; girls, 9 ; total, 28.

The schoolhouse is a substantial building, and the working material sufficient, but the furniture is very unsuitable. The discipline is fair, but the organization and classification of the pupils are defective. The teaching is unskilful, and the results are small. No member of the School Board was present at the examination.

BOORAL (Non-vested) :—Visited, 6th November.

Pupils enrolled :—Boys, 19 ; girls, 14 ; total, 33.
Pupils present :—Boys, 19 ; girls, 10 ; total, 29.

The schoolhouse is an excellent structure, well furnished, and is a model for a village school. The organization is correct ; the discipline is effective ; the instruction is suitable, and the progress of the pupils is very fair. The tone of this school is healthy. Two members of the School Board were present at the examination.

BROOKFIELD (Vested) :—Visited, 3rd December.

Pupils enrolled :—Boys, 23 ; girls, 23 ; total, 46.
Pupils present :—Boys, 16 ; girls, 15 ; total, 31.

The schoolhouse was blown down in the month of October, and at the time of my visit it had not been rebuilt. The teacher's house has but two rooms ; one of these and the verandah have been given up to the school children, but, as may be expected, the work cannot be effectively carried on. The results of the examination were reasonably satisfactory. One member of the School Board was present at the examination.

CLARENCE TOWN (Vested) :—Visited, 7th December.

Pupils enrolled :—Boys, 39 ; girls, 40 ; total 79.
Pupils present :—Boys, 31 ; girls, 31 ; total 62.

The material condition of this school is very good, and the appointments are all that can be desired, but the room is too small. The organization is correct, the discipline excellent, the methods of teaching are intelligent and effective, and the tone of the school is good. Local supervision is very infrequent. Two members of the Public School Board were present at the examination.

COEURUMBONG (Non-vested) :—Visited, 6th August.

Pupils enrolled :—Boys, 16 ; girls, 13 ; total 29.
Pupils present :—Boys, 5 ; girls, 6 ; total 11.

The school is held in the Catholic Church, which is in fair condition, is suitably furnished, and properly supplied with working appliances. The very small attendance was owing to the prevalence of whooping-cough. The organization is correct, and the instruction, as far as I could judge, appears to be painstaking and is fairly effective.

CROKI (Vested) :—Visited, 22nd September.

Pupils enrolled :—Boys, 31 ; girls, 33 ; total, 64.

Pupils present :—Boys, 23 ; girls, 29 ; total, 52.

The schoolhouse is in excellent condition, and there is a good supply of furniture and working appliances. The exterior appointments of the school are good. The organization is correct, the discipline healthy, and the instruction is intelligent, and produces fair results. The School Board exercises occasional supervision, and all the members were present at the examination.

CROOM PARK (Vested) :—Visited, 20th November.

Pupils enrolled :—Boys, 12 ; girls, 21 ; total, 33.

Pupils present :—Boys, 6 ; girls, 14 ; total, 20.

The material state of the school is good. The organization and discipline are highly satisfactory. The teaching is careful, and the results range from tolerable to good. Local visitation is very infrequent, but all the members of the School Board were present at the examination.

CUNDLETOWN (Vested) :—Visited, 9th September.

Pupils enrolled :—Boys, 25 ; girls, 16 ; total, 41.

Pupils present :—Boys, 22 ; girls, 16 ; total, 38.

The schoolhouse has recently undergone repair, and presents a pleasing appearance. There is a proper supply of furniture and appliances. The discipline is fairly effective; the teaching gives very satisfactory results, and the tone of the school is healthy. The school secretary was present at the examination, but local supervision is merely nominal.

DINGO CREEK (Non-vested) :—Visited, 16th September.

Pupils enrolled :—Boys, 22 ; girls, 13 ; total, 35.

Pupils present :—Boys, 20 ; girls, 12 ; total, 32.

The schoolhouse is a satisfactory building, but the rest of the premises are far from creditable. The ground is unfenced, and out-offices have not been provided. The organization is correct, the discipline moderately effective, but the character of the instruction is more mechanical than educative. One member of the School Board was present at the examination.

DUMARESQ ISLAND (Vested) :—Visited, 25th September.

Pupils enrolled :—Boys, 20 ; girls, 26 ; total, 46.

Pupils present :—Boys, 14 ; girls, 23 ; total, 37.

The schoolhouse is an excellent structure, but much too small ; it is, however, well appointed internally and externally. The ground in front of the school is tastefully laid out in flower-beds. The organization is correct, the discipline is effective, and the instruction gives very fair results. Local visitation is very rare, but the members of the Board were present at the examination.

DUNGOO (Vested) :—Visited, 23rd November.

Pupils enrolled :—Boys, 31 ; girls, 32 ; total, 63.

Pupils present :—Boys, 18 ; girls, 28 ; total, 46.

The schoolhouse is in good repair. The furniture is sufficient, and the supply of material is fully equal to the requirements of the school. The organization is correct, and the teaching gives moderate results. The tone of the school is not good, the pupils being unpunctual and far from industrious. All the members of the Public School Board were present at the examination.

EAGLETON (Vested) :—Visited, 4th November.

Pupils enrolled :—Boys, 17 ; girls, 20 ; total, 37.

Pupils present :—Boys, 16 ; girls, 18 ; total, 34.

The material state of this school is very satisfactory. The organization and discipline are effective ; the instruction is careful, and its results are satisfactory to a very fair degree. The School Board evinces considerable interest in the school, and two of its members were present at the examination.

GHINNI GHINNI (Vested) :—Visited, 10th September.

Pupils enrolled :—Boys, 23 ; girls, 26 ; total, 49.

Pupils present :—Boys, 22 ; girls, 25 ; total, 47.

The schoolhouse is small, in ill condition, and indifferently furnished, but a tender has been accepted for the erection of a new schoolhouse. The organization is correct; the discipline is judicious; the teaching is tolerably skilful and effective. All the members of the School Board were present at the examination, but the school is seldom visited by them.

GLENWILLIAM (Vested) :—Visited, 4th December.

Pupils enrolled :—Boys, 14 ; girls, 18 ; total, 32.

Pupils present :—Boys, 13 ; girls, 12 ; total, 25.

The material state of the schoolhouse is good, and it is well furnished and supplied with material. The organization and technical discipline are satisfactory, the teaching is methodical, but the results of the examination were unsatisfactory. The mental tone of the school is low, arising chiefly from the irregularity of attendance. Local supervision is not exercised ; but one member of the School Board was present at the examination.

GOSFORD (Non-vested) :—Visited, 8th August.

Pupils enrolled :—Boys, 14 ; girls, 16 ; total, 30.

Pupils present :—Boys, 14 ; girls, 15 ; total, 29.

The school is held in a portion of the Catholic Church. The premises are clean, suitable, and fairly supplied with working material, but the furniture is very unsuitable. The ground is enclosed, but the out-offices are only in moderate condition. The organization is correct, the discipline is effective, and the instruction fairly so. The tone of the school is very good. No member of the School Board attended the examination.

HANBURY (Vested) :—Visited, 28th and 29th October.

Pupils enrolled :—Boys, 120 ; girls, 129 ; total, 249.
Pupils present :—Boys, 91 ; girls, 95 ; total, 186.

The schoolhouse is an excellent and spacious structure, well furnished, and supplied with good internal and external appliances. The organization is correct, the discipline is fairly effective, and the attainments of the pupils range from tolerable to fair. The visitations of the Local Board are infrequent, but there is a very considerable interest in the welfare of the school shown both by the Public School Board and the general public. All the members of the Board were present at the examination.

LAMBTON (Vested)—Infants' Department :—Visited, 26th October.

Pupils enrolled :—Boys, 88 ; girls, 91 ; total, 179.
Pupils present :—Boys, 75 ; girls, 76 ; total, 152.

The schoolroom is a neat building, well lighted and ventilated ; but it is in great need of proper furniture. The organization is correct, the discipline is tolerably effective, and, considering the inadequacy of the staff of teachers, the progress of the pupils is tolerably satisfactory. The members of the School Board were not present at the examination.

LAMBTON (Vested)—Primary Department :—Visited, 27th and 29th October.

Pupils enrolled :—Boys, 96 ; girls, 98 ; total, 194.
Pupils present :—Boys, 81 ; girls, 96 ; total, 150.

The schoolhouse is an excellent wooden building, well furnished and supplied with appliances, but it is far too small. It was intended to accommodate 120 pupils, but the present average attendance exceeds 150 daily. The organization is correct, the discipline is healthy, the instruction is of modern cast, and is painstaking. The progress of the pupils is fair, and the general tone of the school is healthy. None of the members of the Board were present at the examination ; but the secretary evinces an unmistakable interest in the welfare of the school.

MANGROVE CREEK (Non-vested) :—Visited, 13th August.

Pupils enrolled :—Boys, 16 ; girls, 15 ; total, 31.
Pupils present :—Boys, 15 ; girls, 14 ; total, 29.

The school is taught in the Roman Catholic Church, which is suitable both as regards size and furniture. The ground is properly fenced, but there are no out-offices. The organization is correct, the government is healthy, and the teaching is methodical and intelligent. No member of the School Board was present at the examination.

MINMI (Non-vested) :—Visited, 3rd August.

Pupils enrolled :—Boys, 49 ; girls, 23 ; total, 72.
Pupils present :—Boys, 37 ; girls, 14 ; total, 51.

Excepting that the premises are somewhat small, they are suitable, and the supply of working material and furniture is sufficient. The organization is correct, the discipline is effective, and the instruction is fairly so. Local supervision is seldom exercised. The school secretary was present for a short time during the examination.

MONKEBAI (Non-vested) :—Visited, 19th November.

Pupils enrolled :—Boys, 14 ; girls, 15 ; total, 29.
Pupils present :—Boys, 11 ; girls, 10 ; total, 21.

The schoolhouse is in good repair, and, excepting the want of a black-board, there is a fair supply of furniture and working appliances. The organization is faulty, the discipline is weak, nor is the instruction effective. Local supervision is not exercised, nor were any members of the Public School Board present at the examination.

NEWCASTLE (Vested) :—Visited, 21st, 22nd, and 30th July.

Pupils enrolled :—Boys, 177 ; girls, 97 ; total, 274.
Pupils present :—Boys, 152 ; girls, 70 ; total, 222.

The school premises are in good condition, but are not large enough for the number of pupils in daily attendance. It is well furnished, and properly supplied with working material. The organization is correct, the discipline is effective, and the results of the examination are highly satisfactory. As far as supervision is concerned, the school is practically ignored by the Local Board. The school secretary was present at the examination for a short time.

OXLEY ISLAND (Non-vested) :—Visited, 11th September.

Pupils enrolled :—Boys, 26 ; girls, 33 ; total, 59.
Pupils present :—Boys, 20 ; girls, 29 ; total, 49.

The schoolhouse is substantial and suitable, but the teacher's dwelling is a wretched hovel, and the school has no out-offices. The organization is correct, the discipline is moderately effective, and reasonable progress has been made by the pupils. Local supervision is very nominal. The school secretary was present at the examination.

PARADING GROUND (Vested) :—Visited, 3rd November.

Pupils enrolled :—Boys, 17 ; girls, 22 ; total, 39.
Pupils present :—Boys, 12 ; girls, 14 ; total, 26.

The schoolroom is in a moderate state of repair, but is very dingy in appearance, and the teacher's apartments are ill-conditioned. The school is fairly furnished, but the working stock is old and worn. The organization is defective, and the discipline is fair in its mechanical features. The results of the examination were very unsatisfactory. Local supervision is valueless, but two members of the Board were present at the examination.

PELICAN POINT (Non-vested) :—Visited, 23rd September.

Pupils enrolled :—Boys, 12 ; girls, 6 ; total, 18.
Pupils present :—Boys, 12 ; girls, 6 ; total, 18.

The schoolhouse is a neat and substantial wooden building. It is fairly furnished and supplied with working appliances. The organization and discipline are fair. The results of instruction are far below the standard. Two members of the Board were present at the examination.

PITR TOWN (Vested) :—Visited, 17th and 18th December.

Pupils enrolled :—Boys, 129 ; girls, 115 ; total, 244.

Pupils present :—Boys, 93 ; girls, 60 ; total, 153.

The schoolhouse, besides being small, ill-lighted, and badly ventilated, is positively unsafe, owing to the ravages of the white ant. There is a good supply of furniture and working appliances. The organization is correct, the discipline is judicious, and the results of the instruction range from tolerable to fair. Local supervision is not exercised, nor was any member of the School Board present at the examination. The school has been recently vested in the Council.

PLATTSBURG (Non-vested) :—Visited, 22nd October.

Pupils enrolled :—Boys, 54 ; girls, 32 ; total, 86.

Pupils present :—Boys, 44 ; girls, 24 ; total, 68.

The material state of this school is tolerably good. The organization is correct, the discipline fair, and the teaching is tolerably effective. Local supervision is not exercised, nor was any member of the Board present at the examination.

PURFLEET (Vested) :—Visited, 4th September.

Pupils enrolled :—Boys, 18 ; girls, 18 ; total, 36.

Pupils present :—Boys, 15 ; girls, 15 ; total, 30.

The school premises are in good repair, and there is a fair supply of furniture and working appliances. The organization and discipline are fair, but the instruction requires to be more searching to be effective—especially in the junior class. Two members of the School Board were present at the examination.

RAYMOND TERRACE (Non-vested) :—Visited, 10th December.

Pupils enrolled :—Boys, 35 ; girls, 20 ; total, 55.

Pupils present :—Boys, 24 ; girls, 16 ; total, 40.

The school is held in the Wesleyan Chapel, which is a tolerably suitable building for a schoolroom ; but, although situated in a township, no place of decency is provided for the pupils. I have repeatedly spoken of this serious deficiency, but without effect. The organization is correct, the discipline moderate, and the instruction is methodical and moderately effective. Local supervision is not exercised, nor was any member of the School Board present at the examination.

SEAHAM (Non-vested) :—Visited, 9th December.

Pupils enrolled :—Boys, 24 ; girls, 12 ; total, 36.

Pupils present :—Boys, 13 ; girls, 9 ; total, 22.

The schoolhouse is an ill-conditioned building, inconveniently small, but moderately furnished. The organization is correct, the discipline is weak, and the instruction is not educative. Local supervision is not exercised, nor was any member of the School Board present at the examination.

TAREE (Vested) :—Visited, 3rd December.

Pupils enrolled :—Boys, 55 ; girls, 44 ; total, 99.

Pupils present :—Boys, 50 ; girls, 35 ; total, 85.

The school premises are in excellent condition, and there is a proper supply of furniture and school appliances. The exterior appointments are good, and, by means of a number of flower-beds, the appearance of the school ground is made very pleasing. The organization and classification are satisfactory, the discipline is tolerably effective, and the same may be said of the instruction. Most of the members of the School Board were present at the examination.

TELEGHERRY (Non-vested) :—Visited, 13th November.

Pupils enrolled :—Boys, 34 ; girls, 26 ; total, 60.

Pupils present :—Boys, 27 ; girls, 22 ; total, 49.

The schoolhouse is substantially in good condition ; it is fairly supplied with material, but the furniture, though sufficient, is rickety. The schoolground is unfenced, and out-offices have not been provided, but the Local Board states that both requirements shall be supplied without further delay. The discipline is moderately effective, and the teaching is careful, and moderately productive in its results. Local supervision is rarely exercised, nor were any members of the Board present at the examination.

TERALBA (Non-vested) :—Visited, 21st October.

Pupils enrolled :—Boys, 21 ; girls, 9 ; total, 30.

Pupils present :—Boys, 16 ; girls, 7 ; total, 23.

The school is held in a *bark* hut, the floor of which is of earth, and is below the level of the ground outside. The room is dark and unsuitable. In winter it is piercingly cold, whilst in summer it is oppressively hot. The furniture consists of a table and a few seats ; but it is fairly supplied with books and maps. The place is kept very clean by the teacher. The organization is correct, the discipline good, and the teaching is methodical, and moderately successful. Little interest, if any, is taken by the Board, either in the success or existence of the school, nor was any member present at the examination.

THALABA (Non-vested) :—Visited, 26th November.

Pupils enrolled :—Boys, 19 ; girls, 18 ; total, 37.

Pupils present :—Boys, 15 ; girls, 11 ; total, 26.

The schoolhouse is a tolerably suitable building, and there is a fair supply of furniture and working appliances. The organization is correct, the discipline judicious, and the teaching gives fair results. No member of the School Board was present at the examination.

TINONEE (Vested) :—Visited, 8th September.

Pupils enrolled :—Boys, 30 ; girls, 22 ; total, 52.

Pupils present :—Boys, 21 ; girls, 17 ; total, 38.

The schoolhouse is in a moderate state of repair, but it is scarcely large enough. The appointments of the school are good. The organization is correct, the discipline is fair in its effects, and the progress of the pupils is fairly satisfactory. Supervision by the School Board is frequent and effective. Two members of the Board were present at the examination.

TOMAGO (Vested) :—Visited, 2nd November.

Pupils enrolled :—Boys, 14 ; girls, 18 ; total, 32.

Pupils present :—Boys, 13 ; girls, 15 ; total 28.

The schoolhouse is in good condition, having undergone a thorough repair since the last inspection. It is fairly furnished and tolerably supplied with working appliances, but the maps are very old and worn. The organization is correct ; the discipline is judicious ; the teaching is careful, and the results are fair. The tone of the school is good. A member of the School Board was present at the examination.

WALLESEND (Non-vested) :—Visited, 19th October.

Pupils enrolled :—Boys, 91 ; girls, 79 ; total, 170.

Pupils present :—Boys, 79 ; girls, 65 ; total, 144.

The school is held in temporary premises which are in every sense unsuited for such operations. It is small, dark, and ill-ventilated. The external provisions are wretched. The room is well furnished and supplied with material. The organization is correct ; the discipline is weak ; the instruction is methodical and tolerably successful. Considerable interest in the school is professed by the School Board, all of whom intended to have been at the examination ; but owing to the detention of the notice of visitation, at the post office, for twelve days, it was not received by the school secretary until the day following the examination.

WARATAH (Non-vested) :—Visited, 29th July.

Pupils enrolled :—Boys, 27 ; girls, 20 ; total, 47.

Pupils present :—Boys, 24 ; girls, 20 ; total, 44.

The schoolhouse has undergone repair recently, and is now in a very good condition. There is a proper supply of furniture and working material. The organization and discipline are correct and effective. The results of the examination were good, and the tone of the school is thoroughly healthy. The usual notice was sent, but no member of the Board was present at the examination.

WINGHAM (Vested) :—Visited, 14th September.

Pupils enrolled :—Boys, 23 ; girls, 22 ; total, 45.

Pupils present :—Boys, 16 ; girls, 14 ; total, 30.

As a whole, the material condition of the school is good ; the furniture and working appliances are sufficient, and good also. The organization is fair ; the discipline moderately effective ; the instruction is methodical ; and the results of the examination just moderate. Local supervision is very occasional. Two members of the School Board were present at the examination.

WOOLLA WOOLLA (Non-vested) :—Visited, 7th September.

Pupils enrolled :—Boys, 20 ; girls, 18 ; total, 38.

Pupils present :—Boys, 16 ; girls, 16 ; total, 32.

The school premises are small, unsuitable, and are in very poor condition. There is a proper supply of furniture and apparatus. The organization is correct ; the discipline is healthy ; the instruction is careful ; and the results range from tolerable to good. The spirit of the school is healthy. Local supervision is satisfactorily exercised, and all the members of the Board were present at the examination.

YAYPO (Vested) :—Visited, 17th September.

Pupils enrolled :—Boys, 24 ; girls, 20 ; total, 44.

Pupils present :—Boys, 19 ; girls, 17 ; total, 36.

The material state of this school is good. The organization is correct ; the discipline, effective ; the methods of teaching are intelligent and painstaking ; and fair progress has been made by the pupils. Local supervision is very occasional. All the members of the Board were present at the examination.

J. W. ALLPASS,
Inspector of Schools,
Newcastle District.

PROVISIONAL SCHOOLS.

KURACH FLAT :—Visited, 18th September.

Pupils enrolled :—Boys, 11 ; girls, 9 ; total, 20.

Pupils present :—Boys, 11 ; girls, 9 ; total, 20.

The schoolhouse is in good repair, and is fairly suited to its uses, but the ground is unfenced, and there are no out-offices. The working material is nearly sufficient. This school has been in operation but a few weeks. The organization is satisfactory, the discipline is moderate, and the instruction appears to be careful. One member of the School Board was present at the examination.

UNDERBANK :—Visited, 1st December.

Pupils enrolled :—Boys, 10 ; girls, 12 ; total, 22.

Pupils present :—Boys, 10 ; girls, 10 ; total, 20.

The schoolhouse is a substantial and suitable building. The furniture is subordinated to the Sunday uses of the room, but in other respects the appliances are good and sufficient. There are no out-offices. The organization is correct ; the discipline is gentle, but effective ; and the results of the teaching are very satisfactory. One member of the Board came at the close of the examination.

J. W. ALLPASS,
Inspector of Schools,
Newcastle District.

INSPECTORS' GENERAL REPORT—SYDNEY DISTRICT.

INSPECTORS' REPORT upon the Condition of Public and Certified Denominational Schools in the Sydney District, for the Year 1868.

THE number of schools in this district at the close of the year 1867 was sixty, and consisted of fifteen Public and forty-five Denominational. During the year 1868, two additional schools were opened, namely, Jamison-street Public, and Sussex-street Hebrew, thus making sixteen Public Schools, and forty-six Denominational. The Public Schools comprise thirty departments, and the Denominational seventy.

All these schools, except *Kent-street, R.C. (Girls), underwent general or regular inspection during the year, besides being incidentally visited at different times. The inspection was of a minute and searching character, and, in the case of each department or school, extended over periods ranging from one to five days. The incidental visits were made at irregular intervals, without notice either to teachers or Local Boards. Their chief object was to enable us to see each school in its every-day aspect, to arrive at a correct estimate of the order and general working of each department—to ascertain, in short, whether the Council's regulations were strictly observed. Our experience leads us to attach considerable importance to this kind of inspection. Its uncertainty as to time is not its least recommendation, whilst its frequent repetition not only acts as a formidable check to keep down abuses, but renders the work of the regular inspection less difficult, and its results more reliable. The following table is intended to show the amount and character of inspection done during the year.

	Number of Visits paid to each School, and character of Inspection.		
	General Inspection.	Regular Inspection.	Incidental Inspection.
PUBLIC SCHOOLS.			
Balmain—Primary	1		3
Balmain—Infant	1		3
Botany Road	1		3
Bourke-street—Primary	1		2
Bourke-street—Infant	1		2
Camperdown	1		2
Cleveland-street—Boys	1		4
Cleveland-street—Girls	1		4
Cleveland-street—Infants	1		4
Fort-street—Boys	1		6
Fort-street—Girls	1		6
Fort-street—Infants	1		6
Glebe—Primary	1		2
Glebe—Infants	1		2
Jamison-street	1		2
Newtown—Primary	1		2
Newtown—Infants	1		2
Paddington—Primary	1		4
Paddington—Infants	1		4
Pitt-street—Primary	1		2
Pitt-street—Infants	1		2
Pitt-street, South—Primary	1		3
Pitt-street, South—Infants	1		3
Pymont—Primary	1		2
Pymont—Infants	1		2
Sussex-street	1		3
Watson's Bay	1		...
William-street—Boys	1		3
William-street—Girls	1		3
William-street—Infants	1		3
CERTIFIED CHURCH OF ENGLAND SCHOOLS.			
Balmain	1		2
Christ Church—Primary	1		3
Christ Church—Infant	1		3
Darlinghurst	1		3
Double Bay—Primary	1		...
Double Bay—Infant	1		...
Glebe	1		...
Newtown—Primary	1		3
Newtown—Infant	1		2
Paddington	1		1
Pymont	1		3
Randwick	1		3
Redfern—Primary	1		3
Redfern—Infant	1		3
St. Andrew's—Primary	1		2
St. Andrew's—Infant	1		2
St. Barnabas—Primary	1		1
St. Barnabas—Infant	1		1
St. James—Primary	1		3
St. James—Infant	1		3
St. Leonards—Boys	1		2
St. Leonards—Girls	1		2
St. Philip's—Primary	1		3
St. Philip's—Infant	1		3
Surry Hills—Primary	1		1
Surry Hills—Infant	1		1
Trinity—Primary	1		2
Trinity—Infant	1		2
Waterloo—Primary	1		2
Waterloo—Infant	1		2
Waverley	1		2

* The teacher of Kent-street South R.C. School refused to teach a class in the presence of an Inspector, and the examination was suspended pending the Council's decision on the matter.

	Number of Visits paid to each School, and Character of Inspection.		
	General Inspection.	Regular Inspection.	Incidental Inspection.
CERTIFIED ROMAN CATHOLIC SCHOOLS.			
Balmain—Boys		1	2
Balmain—Girls		1	2
Balmain—Infants		1	2
Camperdown		1	2
Church Hill—Girls		1	3
Church Hill—Infants		1	3
Double Bay		1	.....
Haymarket		1	3
Kent-street, North—Boys		1	2
Kent-street, North—Girls		1	2
Kent-street, South—Boys		1	2
Kent-street, South—Girls .....		.....	2
Newtown		1	2
Paddington		1	3
Parramatta-street—Boys		1	2
Parramatta-street—Girls		1	2
Parramatta-street—Infants		1	2
Pymont	1	.....	2
St. Mary's—Boys		1	2
St. Mary's—Girls		1	2
St. Mary's—Infants		1	2
Surry Hills—Boys		1	2
Surry Hills—Girls		1	2
St. Leonards		1	2
Victoria-street—Girls		1	1
Victoria-street—Infants		1	1
Waterloo		1	2
Waverley		1	2
CERTIFIED PRESBYTERIAN SCHOOLS.			
Erskine-street		1	3
St. Andrew's		1	3
St. Leonards		1	2
Waverley		1	2
Woolloomooloo		1	2
CERTIFIED WESLEYAN SCHOOLS.			
Chippendale		1	2
Newtown		1	2
Surry Hills—Primary		1	2
Surry Hills—Infant		1	2
York-street		1	2
SUSSEX-STREET HEBREW	1	.....	2

Material Condition.—As regards Public Schools, some improvements in their material condition have been effected during the year. The erection of new buildings in Cleveland-street is the most important of these. The necessity for this step was strongly proved by the fact that, within three months after the opening of the new schoolrooms, the average attendance rose fifty per cent. Perhaps the most noticeable feature in connection with the present premises is, the formation of a covered playground. The advantages arising from this provision are various. It economizes space—a paramount consideration in a city where land is dear; it affords a shelter from the weather; it offers facilities for the formation of lavatories; and it is very handy for class teaching. For these reasons, we are strongly of opinion that in all future erections in this district the principle of the covered playground should, if possible, be applied. At William-street School the erection of a classroom has met a twofold want—it has provided increased means for carrying on the work of secular instruction, and afforded the requisite accommodation for special religious teaching. The want of classrooms is much felt in non-vested Public Schools, and in nearly all the Denominational Schools of this district; they are rarely supplied in the first instance, and, no matter how inconveniently crowded the schoolrooms may become, seldom is any action taken to provide them afterwards. Another defect, far too common to our schools is the absence of playgrounds. The evils arising from this want cannot be lightly regarded. Whether as respects the physical education of children, their training to habits of decency, or the higher training of their moral faculties, a playground is an indispensable requisite. Its absence is a formidable obstacle to the carrying on of the business of teaching with order and decorum. For these reasons, it is a matter for consideration whether, in future applications for schools, aid should be granted in cases where playgrounds have not been provided. The proper furnishing of playgrounds is another subject that deserves special remark. In several schools the out-offices are not sufficiently private, or are otherwise in an objectionable state. In few instances have sheds or other means been provided to protect the children from the weather, and the absence of lavatories is a no less common occurrence. Material improvements have been made in the following schools since last report:—Parramatta-street C.E., Surry Hills C.E., Double Bay C.E., Balmain R.C., Kent-street North R.C., Surry Hills R.C., Waverley R.C., Erskine-street Pres., Woolloomooloo Pres. A fine commodious schoolroom has been erected in connection with Redfern C.E., and an infant schoolroom has been built at Waterloo C.E. At Botany Road P., and Pymont P., the accommodation is quite unequal to the educational wants of the localities. Both schools are inconveniently crowded, and it is with great difficulty that the business of teaching is carried on. The same remark applies with nearly equal force to Paddington P., where more roomy and more suitable school buildings are pressing needed. The following schools are either without or are deficient in suitable furniture:—Jamison-street P., Watson's Bay P., Newtown C.E., St. Leonards C.E., Waterloo C.E. (infant), Camperdown R.C., Kent-street South R.C., Newtown R.C., Paddington R.C., Parramatta-street R.C., Pymont R.C., St. Mary's R.C. (infant), Waverley R.C., York-street Wes. The

The peculiar dryness of the past year has favored a regular attendance; at the same time, special causes of an opposite tendency operated during the first six months. Speaking generally, it may be said that some improvement is noticeable in the regularity of the attendance as compared with its character given in a former report. This is best seen from an examination of the average attendances at Public and Certified Denominational Schools during the past and present years. These were as follows:—

	In 1867.	In 1868.
Public Schools	69.8	69.4
Church of England Schools..	69.9	69.2
Roman Catholic	64.4	65.3
Presbyterian	68.2	69.7
Wesleyan	64.1	65.9
Mean Average	66.1	66.3

The number of children on the roll for the quarter ending 31st December, 1867, was 16,300; the number on the roll for the quarter ending 31st December, 1868, was 16,836. This gives an increase for the year of 536, or rather more than 3 per cent. The subjoined table will exhibit how these 16,836 pupils were divided in respect to sex and religious denomination:—

	Boys.	Girls.	Total.	C.E.	R.C.	Pres.	Wes.	O. D.	Total
Total of Public Schools ..	3,824	2,960	6,784	2,851	990	894	730	1,319	6,784
" C.E.	2,603	2,085	4,688	3,794	112	267	312	203	4,688
" R.C.	2,086	1,821	3,907	63	3,830	3	10	1	3,907
" Pres.	357	287	644	268	48	183	92	53	644
" Wes.	420	313	733	175	28	52	397	81	733
" Hebrew	51	29	80	..	..	..	..	80	80
Total of all schools ..	9,341	7,495	16,836	7,151	5,008	1,399	1,541	1,737	16,836

An inspection of the foregoing table discloses the following facts:—That the number of children belonging to the Church of England who attend schools of their own denomination is 53 per cent. of the total number of Church of England children in attendance at all schools under the Council's superintendence; that Roman Catholic Schools are attended by 76 per cent. of children of that denomination, Presbyterian Schools by 14 per cent., and Wesleyan Schools by 25 per cent. Last year, the percentages were 43, 79, 14, and 27 respectively. The Church of England has, therefore, managed to secure an additional 10 per cent. of its children; Roman Catholic Schools have suffered a loss of 3 per cent. of children belonging to that denomination; Wesleyan Schools have suffered a loss of 2 per cent.; and Presbyterian Schools remain unaltered. Another feature worthy of remark in connection with the above table is, that whilst the attendance at Public Schools has increased by 1,034, or at the rate of 18 per cent., the attendance at Denominational Schools has decreased by 494, or at the rate of nearly 5 per cent.

The number of pupils on the rolls of Public Schools at the time of inspection was 5,729, and of these, 4,534 or 79 per cent. were present at examination. Of those examined—

36.9	per cent.	were	7	years	of	age,	or	under.
9.8	"	"	8	years	of	age.		
11.2	"	"	9	"				
11.8	"	"	10	"				
9.9	"	"	11	"				
20.4	"	"	12	years	of	age,	or	above.

The number of pupils on the rolls of Denominational Schools, at the time of inspection, was 8,910, and of these, 6,796 or 76 per cent. were present at examination. Of those examined—

47.2	per cent.	were	7	years	of	age,	or	under.
13.0	"	"	8	years	of	age.		
10.2	"	"	9	"				
9.6	"	"	10	"				
7.9	"	"	11	"				
12.1	"	"	12	years	of	age,	or	above.

It thus appears that whilst 42 per cent. of the children of Public Schools were of ages varying from 10 years and upwards, only 29.6 per cent. of the children in attendance at Denominational Schools were of corresponding ages. This fact, no doubt, has something to do with the disparity of attainments in the two classes of schools noticed in another part of this report.

In character, the punctuality differs little from that described in our report for last year. In some schools an improvement is discernible, in others there has been a falling off. Where the latter process has taken place, it may safely be attributed to laxity of government. Amongst other reasons advanced by teachers for the lateness of pupils, was the opening of morning school at different times. It had been the practice to open the schools of the district either at 9 a.m. or at 9.30 a.m., some teachers adopting one time and some the other. As it was thought that the want of uniformity in this matter might lead to unpunctuality, the time for opening school was fixed generally at 9.30 a.m. It still occasionally happens that time is lost through the material not being given out before the children enter school. There is no excuse for this. It is especially the duty of pupil teachers to have everything in readiness for immediate work after opening school, and it is the fault of teachers if this duty be not properly attended to. It is difficult to over-estimate the value of punctuality,—not merely in its relation to school work, but in the influence it is likely to exercise over the after-life of a child. Everything, therefore, in connection with the management of the school should afford evidence of its observance. The teachers should be scrupulously punctual themselves; the operations of teaching should be faithfully regulated by the time-table, and the whole routine of the school fixed and unvarying. The means adopted by teachers to secure punctuality differ greatly; some send written notices of lateness to parents; some detain late children in school during recess; some punish with the cane; and others employ a combination of these means. Much, however, must depend upon whether the lateness is the fault of the child or the parent, although it is true that the parent may in this matter, as in others, be reached through the child. Teachers, therefore, should be chary about receiving excuses from children unless they are written, or evidence of their genuineness is afforded in the character of those tendering them.

Increased attention is beginning to be paid to cleanliness. The inspection of pupils for this matter is, in most instances, carefully performed; in some it scarcely deserves the name. Untidiness of dress and slovenliness of appearance are fast disappearing. The addition of lavatories to several of the schools during the year has helped to effect some of these beneficial changes. The want of a supply of water in some schools, and the absence of the necessary washing apparatus in others, have prevented the realization of fully satisfactory results. As regards the school premises, much remains to be done before their condition, in respect to cleanliness, can be considered unexceptionable. It still happens that schoolrooms occasionally go unswept for days, that playgrounds and out-offices present an untidy appearance, and that the general keeping of the school property evidences carelessness and neglect.

In Public Schools the order is fair; in Denominational Schools it is much less satisfactory. The ordinary characteristics of a disorderly school are whispering and talking during the lessons, shuffling of feet, rattling of slates, a boisterous demeanour on the part of the pupils, inattention under instruction, and an indisposition to anything like mental exertion. The maintenance of order is the first care of every teacher worthy of the name, as on it mainly depends the successful working of the school. Indeed, it may be affirmed that the teacher who is unable to make order a habit of his school has mistaken his profession. Unless children are trained to yield a prompt and willing obedience, to manifest a proper respect for their superiors, to deport themselves in a becoming manner, it is mere superfluity to talk about educating them. No instruction can be worth the name where these objects are either lost sight of or only partially kept in view. In all Public Schools except two, drill forms a regular feature of the discipline. Its value as a means of promoting order can hardly be over-estimated. Precision and uniformity of movement, and a quick and ready attention on the part of the pupils, are not the least important essentials to good discipline; but these can only be realized in full, where drill forms a regular part of the school routine. It is much to be regretted that its practice is not carried out with greater minuteness, and that the instruction given therein is, in numerous instances, of so meagre, immethodic, and confused a character. Much of the disorder that characterizes many Denominational schools arises from the pupils' ignorance of drill; indeed, we do not see how it is possible to secure or maintain proper discipline without its aid. At the same time, we are aware that the whole order of the school hinges mainly on the government. If the government be feeble or vacillating, the order will be bad; if it be firm—but kind withal—there will be little in the discipline to complain of. If there is any one point which it behoves the teachers of this district to turn their serious attention to, it is the principles on which good government is based. We are painfully conscious that most, if not all, of the defects of school management that usually come under our observation, are attributable to the wide-spread indifference with which this subject is regarded. We hardly remember a case during the year where the attainments of the pupils were reported to be low, in which the government was not lax and feeble, and the order unsatisfactory. In fact, defective discipline and low attainments would appear to stand in the relation of cause and effect.

Much of the ignorance displayed in reference to classification is fast disappearing. A decidedly bad classification has been met with in very few instances. Existing faults have but a partial application. Occasionally, children are found in classes for which their attainments render them unfit—the result, most commonly, of outside pressure. Teachers who entertain a proper regard for their professional reputation are invariably proof against such influence. A fault, perhaps more frequently committed, is the detention of children in classes for unduly long periods. Few teachers seem to adopt any regular system of promotion. The usual practice has been to promote at irregular intervals, and to promote an insignificantly small number of children at a time. It seems to us that a radical change in these respects should be made. There should be at least one promotion every year, such promotion to affect not less than 50 per cent. of the pupils of each class. Teachers who fail to qualify this proportion of pupils for promotion cannot be said to be realizing satisfactory results. By the adoption of this practice, it will be impossible for any pupil to remain longer than two years in any but the highest class.

Instruction.—The documents that regulate the instruction consist of a Time-table and a Programme of Lessons. In constructing a time-table, three important considerations have to be kept in view. These are—first, to make provision for the constant and appropriate occupation of every child; secondly, to see that every subject receives its fair share of attention; thirdly, to provide for a proper alternation of silent and oral lessons. In a very large majority of schools, these considerations have been reasonably well satisfied. Some improvement is visible in the character of the programmes. They are less vague and meagre than formerly, and their arrangement indicates a better acquaintance with practical school-keeping.

Viewed as a whole, the methods may, in point of quality, be described as tolerable. Some fall below this mark, but these are practised chiefly either by untrained teachers or by those who have joined the profession late in life. The more noticeable defects in their application are,—the questioning is not sufficiently individual or searching; it needs to be marked by greater vigour and earnestness; it does not aim enough at developing the intelligence of the pupils. Vigorous and intelligent questioning appears to us the main essential of any method deserving the name. It is of little use teaching, unless proper precautions be taken to ascertain that the instruction is being received; and the best proof that this is the case, is the ability of the pupils to reproduce readily and correctly the substance of their lessons. Suggestive or mechanical questioning is of doubtful value. It is calculated to mislead both teacher and pupils. The true test consists in putting the questions point blank, framing them so that they shall appeal to the intelligence of the pupils and necessitate some amount of thinking, and in leaving no room for guesswork. The teacher who examines his work in this way will have little difficulty in discovering whether his teaching is effective or not. Much of the instruction is of small value, not merely in relation to the mode in which it is taught, but also in respect to its haphazard, poor, and scanty character. Too often teachers neglect to prepare their lessons—an omission most commonly committed by those whose information is the least satisfactory. This want of preparation is usually accompanied by an absence of anything like a proper arrangement of lessons. Both defects are of serious moment, and go far to render sound teaching an impossibility. At the same time, it must be admitted that some advance in the art of teaching is perceptible. Greater energy is infused into the work, a more practical acquaintance with the Council's requirements is evinced, and a disposition to receive information on unknown or doubtful points is very generally apparent.

Reading.—Speaking generally, it may be said that a marked improvement characterizes the teaching of this subject, as compared with the treatment it received during the previous year. In the first place, reading is viewed from a more intellectual stand-point. This is especially noticeable in the better conducted Denominational Schools. The teachers of these are beginning to see that a reading lesson should be something more than a dry, uninteresting mechanical exercise; that it comprehends something more than the mere memory of signs and sounds; and that, to be intelligently taught, due regard must be had to the cultivation and strengthening of the mental faculties. Hence, effort is now made to elucidate the subject-matter, greater attention is devoted to the explanation of the more difficult words and phrases, and, in the case of the higher classes, verbal transposition and paraphrasing are beginning to be regarded as necessary elements in a proper reading lesson. Much, however, remains to be done in these respects. Difficulties have to be encountered in the bad methods in use, crotchets and prejudices have to be overcome, and a good deal has to be unlearned or abandoned by teachers, before a healthy foundation can be laid. Still, the prospect is not altogether unpromising. Some progress has already been made, and it is confidently hoped that the gradual improvement of the material that forms the teaching staff—a process which has already begun—will do much to compass the end desired. Looking at reading as an art, there are grounds for believing that a reasonable effort has been put forth by teachers to improve upon the results recorded in the report for last year. An inspection of Table E., appended to this report, will make this manifest. Still, it cannot be said that reading, regarded from this point of view, is in a satisfactory state. The great fault seems to lie in the desultory and imperfect manner in which the elements are taught. Not only is the reading of the junior classes systematically neglected by teachers, but habits are at this stage contracted that vitiate and render nugatory much of the after teaching. Faults of pronunciation are passed unnoticed; a rapid, indistinct, and unintelligible articulation is acquired; pausation and modulation are almost wholly disregarded; and the result of all these is a monotonous, unsteady, sing-song kind of reading. Apart from these defects, however, the subject is not, in its elementary stages, taught with anything like proper expedition. The phonic method, explained and recommended for adoption in the preface to the Australian Class-book, is rarely tried, and it may be safely predicated that there is less of method in the teaching of the elements of reading than in any other subject.

Annex D.

Annex E.

subject. A very common fault committed is, the placing of books in the hands of children before they can make a proper use of them. Sometimes this is done through ignorance, sometimes to please parents, and sometimes under a mistaken idea that it saves trouble. We have invariably condemned the practice, and have recommended the use of reading-tablets and the black-board till a certain proficiency has been obtained. The two most striking defects in the more advanced reading are, rapidity of utterance and a want of proper expression. Possibly, the second fault arises to some extent from the first. Fluency in reading is not unfrequently confounded with good reading; the idea being, that to read quickly is to read well. It is hardly necessary to combat this notion. Notwithstanding the many instructions given in works on elocution as guides to good reading, it has always appeared to us that these practically resolve themselves to three, namely,—audible articulation, a deliberate and distinct enunciation, and the nearest approximation to ordinary speaking.

Writing.—We are unable to report any great improvement in the teaching of the elements of writing. This arises from several causes. The slates are frequently unrulled, the methods are haphazard and irrational, and the supervision is casual and imperfect. The results are, ill-formed letters and words, and a want of adequate progress. It not unfrequently happens that the materials supplied to children for writing consist of fragments of slates, and bits of pencil barely an inch long. The absence of a suitable, uniform copy-book in most schools is, perhaps, one of the chief hindrances to good writing. Parents and children are too commonly permitted to make their own selections, and instances occur where several kinds of books are used in the same class. There is no reason why this should be. The fault is entirely the teacher's; for where tolerable care, interest, and forethought are exhibited, there is little in this respect to complain of. In one or two essentials of good writing, some improvement is visible—greater attention is paid to neatness, and cleanliness is seldom entirely disregarded.

Dictation.—Considerable prominence is given to the teaching of dictation. It holds a position in the routine of almost every school. Occasionally it is omitted from the time-table of the first or lowest class, but this happens chiefly in schools where the general attainments are below the average. In primary schools, it should be taught side by side with reading and writing. A child of seven years of age, competent to read words of three letters, may reasonably be expected to write from dictation words of two. Dictation is now almost universally acknowledged to be the best means of teaching spelling. Although not intended to supersede entirely the teaching of spelling in connection with the reading lesson, it is rightly considered to reduce the evils inseparable from that mode to a minimum, besides offering special advantages of its own. We should be glad to see dictation on paper practised in the higher classes. Slates are universally used, and with these it is not always easy to prevent copying. At the same time, it must be distinctly understood that the value of a dictation lesson will depend mainly upon the care with which the exercises are revised by the teacher.

Arithmetic.—Of all subjects, arithmetic is perhaps the least successfully taught. Several reasons may be given for this. There is a wide-spread tendency to individualize the teaching, to ignore method and to trust too exclusively to the unaided efforts of the pupils. This is particularly true of the junior classes, in which the process of subdivision is carried on almost *ad libitum*, and oral explanation by the teacher is rarely given. To teach the elementary rules effectively, a more rational mode of procedure will have to be adopted. It is quite unnecessary to have more than two divisions in a class; each rule should be carefully and fully explained, abundance of examples given, and ample use made of the black-board. A very common fault is, to allow too much time for the working of questions—this not only leads to disorder, but affords opportunity for copying. Assuming that a class is arranged in two divisions for arithmetic,—a separate question should be dictated, or written on the black-board, for each. When a reasonable time has been allowed for its solution, the pupils of one division should be called to attention, and the question worked by the teacher, with the help of the children, on the board. Another question should then be given; and whilst it is being done the teacher proceeds with the second division as he did with the first. By adopting this mode, all the pupils will be kept actively employed; they will receive ample oral teaching; difficulties will be explained; doubts removed; and, by a vigorous and rapid questioning, the principles of each rule will become indelibly impressed on their minds. This, however, will not obviate the necessity of frequent recapitulation of work done. A good teacher will take care that his instruction is retained; that whilst he is breaking fresh ground with his pupils, a good knowledge is retained of that passed over. With this object, he will hold regular weekly examinations in the rules gone through. The foregoing remarks apply to the teaching of the higher arithmetic, as well as to the teaching of the elements. Two great faults mark the results noted in the higher rules. These are, a want of expertness in manipulating numbers, and a want of correctness in the details of work. We are inclined to attribute, in a measure, both faults to an inadequate appreciation of the value of mental arithmetic. With the increased importance which is beginning to be given to the latter branch, larger results may be reasonably hoped for. Still, it must be confessed that greater originality and versatility need to be infused into the teaching of the higher arithmetic, before the standards laid down by the Council can be fully met. Text-books are still too closely relied upon; there is a want of intelligent and lucid explanation of principles; examples are not multiplied with sufficient rapidity—they are too often superficial and aimless; the reasoning powers of the pupils are only feebly brought into play; there is a want of thoroughness in the methods used; and, whether it be the amount of mental training produced or the extent of knowledge communicated, arithmetic as a branch of school instruction is but poorly taught.

Grammar.—Some improvement is discernible in the teaching of this subject. Text-books are now very generally disused, and more rational methods of teaching are beginning to be adopted. In a large majority of schools, the principles are explained with tolerable intelligence and skill. Parsing, however, requires to be more frequently practised in connection with the reading lessons. The results disclosed by the year's examinations, so far as they affect Denominational Schools, are far from satisfactory. Analysis of sentences receives passable attention; but whether from the defective information of some teachers, or from the faulty manner in which the subject is handled by others, the progress hitherto made therein is inconsiderable. In a few of the better schools, we are glad to find that an effort is being made to impart a knowledge of English composition. We should be pleased if this effort were more general, as, after all, composition is the most important and practical form in which the value of grammatical teaching is exhibited.

Geography.—The same defects mark the teaching of this branch as were noted in our report for last year. Many teachers do not keep pace with the progress of geographical science. The information is too often culled from antiquated text-books, is frequently incorrect as to facts, and as frequently fragmentary and incoherent. The lessons lack connectedness and arrangement, and the teaching is, for the most part, desultory, and wanting in intelligent aim. Teaching the subject from outline maps on the black-board has been attempted in several schools with good results. The elements, however, are still taught mechanically as a mere exercise of the memory. There is, to quote from our former Report, "a sad dearth of intellectual questioning, of ready and appropriate illustration, and of power to make lasting impressions." Still, it must be admitted that fair progress has been made in a knowledge of the geography of the Colony, which is, no doubt, attributable to Mr. Wilkins's excellent little work on the subject. The higher physical geography—the most interesting, and unquestionably the most useful part of the science—is taught in few instances.

Object Lessons.—This subject is professedly taught in every school, with varying degrees of success, according to the methods in use. These, as a whole, may be described as crude and commonplace. There is a very general reliance placed upon stereotyped forms of arrangement, and an absence of originality and resource is too widely apparent. Certain stock subjects constantly appear on the programmes

of almost every school, and these are repeated again and again, *ad nauseam*. In a few instances, however, the aim of object lessons is viewed from higher ground. Here an attempt is made to cultivate the children's power of observation, to lead them to compare and classify, to develop and strengthen their reasoning faculties, rather than burden their memories with dry disjointed facts. With this view, common objects are selected, placed before the children, and subjected to an extensive process of examination. Their composition and properties are prominently set forth, and the connection of these, with their uses, is clearly indicated. So far as object lessons are useful in conveying mere information, very respectable results have been produced in the subject. This is especially true of Denominational Schools, in which the subject has only within the last year or two received anything like general attention.

Drawing.—A great impulse has been given to the teaching of drawing during the year. There is but one school in which it is not systematically taught. The proficiency already attained in the subject is considerable. This result is the more gratifying when the difficulties that have met the introduction of drawing, as an essential branch of school instruction, are duly estimated. Not the least of these have been the ignorance and prejudice of parents, and, in some instances, of teachers. The great value of drawing as a part of ordinary education is now very widely admitted. It is eminently a practical subject, one which, even if regarded from a parent's point of view, will equip a child all the better for the battle of life. In this sense, it is perhaps more useful than history or geography—usually regarded as indispensable to any complete school course—whilst the influence it may exercise in raising the taste of a people for the more useful arts gives to it an importance hardly inferior to that which attaches to any other subject. Much of the success that has attended the teaching of drawing is due to the zealous and active labours of Mr. Fowles, the gentleman employed by the Council specially to supervise the teaching of the subject.

Singing.—This subject, like drawing, has been placed under the supervision of a special teacher, whose duty it is to visit the schools as often as possible, and aid, by his advice and assistance, to make singing a part of the regular instruction. The Tonic Sol fa method of teaching to sing is that which has been approved and sanctioned by the Council. Some difficulties have been experienced in introducing this method, partly from its novelty, but chiefly from the impossibility of always finding teachers possessing the ability to sing. The latter obstacle, however, is being gradually overcome by a judicious disposition of the assistant teachers and pupil teachers throughout the schools of the district. Singing by ear is now very generally practised; but a knowledge of the Tonic Sol-fa method, as required by the Standard of Proficiency, is exhibited in very few instances. Indeed, the results hitherto produced in the theory of Music are far from satisfactory, and not at all proportionate to the means employed.

Scripture Lessons.—These are carefully read in almost all our Public Schools. They have also been introduced, with the approval of Local Boards, into several Denominational Schools. A fair acquaintance is exhibited by the pupils of Public Schools with the leading facts of Scripture.

Needlework.—Due prominence is given to the teaching of this branch in Public and Church of England Schools. The displays of needlework which we have witnessed in several instances have been of a very creditable description. In other Denominational Schools, needlework does not command that attention which its importance demands.

Proficiency.—The following Tables of percentages will show the relative proficiency in Public and Denominational Schools in the various branches of instruction :—

PUBLIC SCHOOLS.

Annex E.

Actual Proficiency.	Reading.				Writing.			Arithmetic.				Grammar.			Geography.			Object Lessons.	Vocal Music.	Drawing.
	Monosyllables.	Easy Narrative.	Ordinary Prose.	Total.	On Slates.	In Copy-books.	Total.	Simple Rules.	Compound Rules.	Higher Rules.	Total.	Elementary.	Advanced.	Total.	Elementary.	Advanced.	Total.			
Indifferent.	10.4	1.8	...	12.2	1.7	4.3	6	31.4	6.5	5.4	43.3	9.1	5.1	14.2	9.4	4.6	14	9.2	52.2	8.2
Tolerable ...	7.2	6.7	2.2	16.1	5.7	6.8	12.5	11.7	3.7	4.3	19.7	18.1	12.5	30.6	27.5	13.8	41.3	28.3	20.8	28.1
Fair	7.7	8.8	4.8	21.3	11.1	19.2	30.3	9.3	4.7	5.1	19.1	7.6	17.1	24.7	16.2	7.1	23.3	32.7	13.9	19.4
Good	9.3	12.7	28.4	50.4	8.9	42.3	51.2	6.4	8.4	3.1	17.9	14	16.5	30.5	3.7	17.7	21.4	29.8	13.1	44.3
	34.6	30	35.4	100	27.4	72.6	100	58.8	23.3	17.9	100	48.8	51.2	100	56.8	43.2	100	100	100	100

DENOMINATIONAL SCHOOLS.

Actual Proficiency.	Reading.				Writing.			Arithmetic.				Grammar.			Geography.			Object Lessons.	Vocal Music.	Drawing.
	Monosyllables.	Easy Narrative.	Ordinary Prose.	Total.	On Slates.	In Copy-books.	Total.	Simple Rules.	Compound Rules.	Higher Rules.	Total.	Elementary.	Advanced.	Total.	Elementary.	Advanced.	Total.			
Indifferent.	24.1	2.4	2.1	28.6	9.8	4	13.8	53.9	10.6	2	66.5	23.9	24.7	48.6	25.5	12.9	38.4	9.2	69	24.6
Tolerable ...	10.6	8.4	5.1	24.1	11.2	15.1	26.3	11.7	3.8	1.1	16.6	21.4	14.9	36.3	26.9	11.9	38.8	28.3	17.3	47.5
Fair.....	11.9	12.7	12.5	37.1	13.6	25.2	38.8	6.7	6.3	1	14	12.1	2.3	14.4	11.8	5	16.8	32.6	12.1	17.1
Good	4.1	3.7	2.4	10.2	6.7	14.4	21.1	1.4	1.3	.2	2.9	7	...	7	3.1	2.9	6	29.9	1.6	10.8
	50.7	27.2	22.1	100	41.3	58.7	100	73.7	22	4.3	100	58.1	41.9	100	67.3	32.7	100	100	100	100

It may be useful to compare these tables with those published in last year's Report; and first, as they apply to Public Schools.

In 1867, 67 per cent. of the Reading ranged from fair to good; in 1868, 71 per cent. was of this quality.

" 63	"	Writing	"	"	81	"	"
" 36	"	Arithmetic	"	"	37	"	"
" 52	"	Grammar	"	"	55	"	"
" 53	"	Geography	"	"	44	"	"
" 54	"	Object Lessons	"	"	62	"	"

An improvement is visible, therefore, in the results produced in each subject except Geography, in which there is a marked falling off.

A similar comparison, pursued in reference to Denominational Schools, discloses the following:—
In 1867, 33 per cent. of the Reading ranged from fair to good; in 1868, 47 per cent. was of this quality.

" 37	"	Writing	"	"	39	"	"
" 17	"	Arithmetic	"	"	17	"	"
" 15	"	Grammar	"	"	15	"	"
" 14	"	Geography	"	"	22	"	"
" 25	"	Object Lessons	"	"	61	"	"

In all the subjects, therefore, except Arithmetic and Grammar, substantial progress has been made. That a corresponding improvement has not been produced in Arithmetic and Grammar may be ascribed to the more intellectual nature of these branches, and the higher demands which they make on the intelligence and skill of teachers.

Teachers.—The first general examination of teachers holding a lower classification than Class III, Section A, and of others who had failed to obtain classification, was held in July last. Some 52 attended. The examination lasted four days. The results were not of a satisfactory kind, but proved the great necessity for that part of the Council's Regulations bearing upon teachers' examinations. The number of teachers and assistant teachers employed in Public Schools is 55, an increase of 3 upon the number employed last year. The number of teachers and assistant teachers attached to Denominational Schools is 103, an increase of 4 on the number employed in the year 1867. These teachers and assistant teachers are classified as follows:—

	First Class.		Second Class.		Third Class.			Not Classified.
	Section A.	Section B.	Section A.	Section B.	Section A.	Section B.	Section C.	
Public Schools	1	7	11	8	18	4	2	4
Denominational Schools	...	...	2	12	29	22	17	21
	1	7	13	20	47	26	19	25

Changes have been made in the teaching staff of several schools during the year. Some teachers, who proved unequal to the efficient management of their schools, have been removed, and more competent persons appointed in their places. Several still remain who are deficient in the necessary skill, and who will have to be removed unless they exhibit greater energy, intelligence, and efficiency in the discharge of their duties. The general body, however, are earnest, zealous, and painstaking; a few have shown themselves to be possessed of high attainments, and gifted with rare teaching ability. The pupil teachers number 115, an increase of 5 on the number employed in the district last year. 47 of these are attached to Public Schools, and 68 to Denominational. They form an important part of the teaching staff of this district. They are only appointed after they have afforded evidence, during a three months' probation, that they possess aptitude and general fitness for the office of teacher. Their work generally is of a very satisfactory kind.

Local Supervision.—It is gratifying to be able to report that the local supervision of the schools of this district is, in numerous instances, of an active, intelligent, and beneficial character. Most commonly the duties of Local Boards practically devolve upon one particular member, and whilst we heartily wish it were otherwise, the circumstance need not be taken as evidence that no interest is felt by the rest of the members. One of the principal duties of a Local Board is to make regular periodical visits to the school under its supervision, and thus, by its presence, to encourage teachers and pupils in the important work in which both are engaged. This duty is performed only in few instances. Still, in the main, the good done by the agency of Local Boards during the year has been large and substantial. New buildings have been erected, not a few have been enlarged or repaired, and various other material improvements have been effected. These beneficial results have only been achieved at much personal expense of time, trouble, and money. To those who have been engaged in such self-sacrificing and benevolent labours, too much praise cannot be given. For ourselves, we have experienced a uniform courtesy from members of Local Boards; our suggestions have been received in the best possible spirit, and reasonable effort has been made to give them practical effect. The feeling thus manifested has afforded us much encouragement, and has led us to entertain the belief that our anxiety to improve the condition of the schools under our charge is correctly understood and fully appreciated.

Free Scholars.—In a former report allusion was made to the large number of children educated gratuitously in Denominational Schools. Having, in obedience to instructions received from the Council, made inquiries into the grounds on which exemption from payment was made, we have arrived at the following conclusions:—

1. That, as a rule, children were exempted from payment upon the individual orders of members of Local Boards.
2. That fully one-third of the total number were exempted upon insufficient grounds.

The number of free children educated in Public Schools during the year was 263, or 2½ per cent. of the total number of children on the roll for the year. The number educated in Denominational Schools was 1,530, or 10 per cent. of the total number of children on the roll for the year. In 1867, the percentages were 2½ and 14 respectively. There has, therefore, been a decided falling off—a healthy sign, and probably caused in a measure by our inquiries.

The following table will shew at a glance the approximate cost of each Child's education in Public and Denominational Schools during the year :—

	Salary or Cost to the State.	Fees or Cost to Parents.	Total.
	£ s. d.	£ s. d.	£ s. d.
Public Schools	0 16 7½	0 18 7½	1 15 4
Church of England Schools.....	0 17 11¾	0 14 5½	1 12 5
Roman Catholic Schools	0 17 9¾	0 10 0¾	1 7 10½
Presbyterian Schools.....	1 1 10	0 13 6¾	1 15 4¾
Wesleyan Schools	1 1 8½	0 15 0¼	1 16 8¾

Summary.—The results of the year's inspection may be briefly summed up as follows :—The material condition of Public and Denominational Schools has improved ; the discipline of the former is very fair, and of the latter, tolerable ; in Public Schools the proficiency is fair, in Denominational it approaches tolerable ; the local supervision in both is moderately effective ; and both exhibit, in point of general efficiency, a decided improvement upon their condition as described in last year's Report.

Sydney, 27 January, 1869.

E. JOHNSON,
E. H. FLANNERY, } Inspectors.

ANNEX A.

TABLE, shewing the Material Condition of Public Schools.

Organization.	Good.	Fair.	Tolerable.	Indifferent.
Situations	15	7	2	6
Buildings	13	9	5	3
Playgrounds	12	4	4	7
Furniture	16	4	6	4
Apparatus	15	11	2	2
Books	25	4	.....	1
Registers	21	5	2	2

TABLE, shewing the Material Condition of Church of England Schools.

Organization.	Good.	Fair.	Tolerable.	Indifferent.
Situations	19	12	.....	.....
Buildings	20	9	2	.....
Playgrounds	11	16	2	2
Furniture	9	14	5	3
Apparatus	15	14	2	.....
Books	20	9	1	1
Registers	13	13	3	2

TABLE, shewing the Material Condition of Roman Catholic Schools.

Organization.	Good.	Fair.	Tolerable.	Indifferent.
Situations	6	5	6	8
Buildings	3	8	5	9
Playgrounds	2	3	7	10
Furniture .....	.....	7	8	10
Apparatus	2	10	10	3
Books	9	10	4	2
Registers	4	10	3	8

TABLE, shewing the Material Condition of Presbyterian Schools.

Organization.	Good.	Fair.	Tolerable.	Indifferent.
Situations	2	.....	2	1
Buildings	1	3	1
Playgrounds	1	3
Furniture	1	2	2
Apparatus	1	3	1
Books	3	2
Registers	2	1	1	1

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TABLE, shewing the Material Condition of Wesleyan Schools.

Organization.	Good.	Fair.	Tolerable.	Indifferent.
Situations	3	1	.....	1
Buildings	4	.....	.....	1
Playgrounds .....	.....	3	1	.....
Furniture	1	3	.....	1
Apparatus	1	4	.....	.....
Books	3	1	1	.....
Registers	2	3	.....	.....

TABLE,* shewing the Material Condition of Denominational Schools generally.

Organization.	Good.	Fair.	Tolerable.	Indifferent.
Situations	30	18	8	11
Buildings	28	21	7	11
Playgrounds	13	23	10	16
Furniture	11	26	15	15
Apparatus	19	31	14	3
Books	35	23	6	3
Registers	21	27	8	11

* In this table Sussex-street Hebrew is included.

ANNEX B.

TABLE, shewing the Moral Character of Public Schools.

Discipline.	Good.	Fair.	Tolerable.	Indifferent.
Regularity	13	16	.....	1
Punctuality	17	7	3	3
Cleanliness	22	3	3	2
Order	16	9	4	1
Government	17	9	2	2

TABLE, shewing the Moral Character of Church of England Schools.

Discipline.	Good.	Fair.	Tolerable.	Indifferent.
Regularity	8	19	4	.....
Punctuality	5	18	6	2
Cleanliness	19	9	3	.....
Order	9	12	7	3
Government	9	14	6	2

TABLE, shewing the Moral Character of Roman Catholic Schools.

Discipline.	Good.	Fair.	Tolerable.	Indifferent.
Regularity	5	6	9	5
Punctuality	2	7	9	7
Cleanliness	5	10	8	2
Order	3	5	8	9
Government	4	3	9	9

TABLE, shewing the Moral Character of Presbyterian Schools.

Discipline.	Good.	Fair.	Tolerable.	Indifferent.
Regularity	1	3	1	.....
Punctuality	2	.....	3	.....
Cleanliness .....	.....	4	1	.....
Order .....	.....	3	.....	2
Government .....	.....	3	.....	2

TABLE, shewing the Moral Character of Wesleyan Schools.

Discipline.	Good.	Fair.	Tolerable.	Indifferent.
Regularity	5	...	.....
Punctuality	3	2	.....
Cleanliness	4	1	.....
Order	4	1	.....
Government	4	1	.....

TABLE,* shewing the Moral Character of Denominational Schools generally.

Discipline.	Good.	Fair.	Tolerable.	Indifferent.
Regularity	15	33	14	5
Punctuality	9	32	17	9
Cleanliness	25	27	13	2
Order	13	23	16	15
Government	14	23	16	14

*Sussex-street Hebrew is included in this table.

ANNEX E.

TABLE, shewing the Ages of the Pupils on the Roll, and present at Examination, in Public Schools.

	7 years and under.		8 years.		9 years.		10 years.		11 years.		12 years and over.		Total.	
	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.
Numbers on the Roll	1249	948	324	237	390	234	394	263	316	230	591	553	3264	2465
Present at Examination	949	725	266	179	323	186	323	209	264	183	476	451	2601	1933

TABLE, shewing the Ages of the Pupils on the Roll, and present at Examination, in Certified Church of England Denominational Schools.

	7 years and under.		8 years.		9 years.		10 years.		11 years.		12 years and over.		Total.	
	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.
Numbers on the Roll	1122	947	276	245	237	190	238	177	200	146	342	213	2415	1918
Present at Examination	894	754	226	209	178	140	195	112	159	108	272	155	1924	1478

TABLE, shewing the Ages of the Pupils on the Roll, and present at Examination, in Certified Roman Catholic Denominational Schools.

	7 years and under.		8 years.		9 years.		10 years.		11 years.		12 years and over.		Total.	
	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.
Numbers on the Roll	844	665	253	192	207	154	201	144	146	112	204	190	1855	1457
Present at Examination	672	492	199	148	146	128	156	107	112	92	153	131	1438	1098

TABLE, shewing the Ages of Pupils on the Roll, and present at Examination, in Certified Presbyterian Denominational Schools.

	7 years and under.		8 years.		9 years.		10 years.		11 years.		12 years and over.		Total.	
	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.
Numbers on the Roll	199	143	44	27	35	37	27	22	16	11	28	37	349	277
Present at Examination	146	107	31	16	27	28	20	13	15	11	21	26	260	201

APPENDIX.

TABLE, shewing the Ages of the Pupils on the Roll, and present at Examination, in Certified Wesleyan Denominational Schools.

	7 years and under.		8 years.		9 years.		10 years.		11 years.		12 years and over.		Total.	
	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.
Numbers on the Roll	137	87	40	38	48	23	41	32	25	20	47	35	338	235
Present at Examination	80	36	24	27	28	14	24	20	19	11	32	22	207	130

*TABLE, shewing the Ages of the Pupils on the Roll, and present at Examination, in Certified Denominational Schools generally.

	7 years and under.		8 years.		9 years.		10 years.		11 years.		12 years and over.		Total.	
	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.
Numbers on the Roll	2318	1856	618	504	527	405	514	376	397	291	625	479	4999	3911
Present at Examination	1806	1401	485	402	379	311	402	253	315	224	482	336	3869	2927

* Sussex-street Hebrew is included in this Table.

ANNEX D.

TABLE, shewing the Character of the Instruction.—Public Schools.

Details.	Good.	Fair.	Tolerable.	Indifferent.
Classification.....	15	12	.....	3
Occupation.....	18	10	1	1
Methods.....	16	11	1	2

TABLE, shewing the Character of the Instruction.—Church of England Schools.

Details.	Good.	Fair.	Tolerable.	Indifferent.
Classification.....	8	15	5	3
Occupation.....	8	16	4	3
Methods.....	4	10	14	3

TABLE, shewing the Character of the Instruction.—Roman Catholic Schools.

Details.	Good.	Fair.	Tolerable.	Indifferent.
Classification.....	3	5	9	8
Occupation.....	2	6	13	4
Methods.....	3	2	12	8

TABLE, shewing the Character of the Instruction.—Presbyterian Schools.

Details.	Good.	Fair.	Tolerable.	Indifferent.
Classification.....	2	2	1
Occupation.....	4	.....	1
Methods.....	1	3	1

TABLE, shewing the Character of the Instruction.—Wesleyan Schools.

Details.	Good.	Fair.	Tolerable.	Indifferent.
Classification.....	3	2	.....
Occupation.....	3	2	.....
Methods.....	1	4	.....

TABLE,* showing the Character of the Instruction.—Denominational Schools generally.

Details.	Good.	Fair.	Tolerable.	Indifferent.
Classification	11	25	18	12
Occupation	10	29	20	8
Methods.....	7	14	33	13

*Sussex-street Hebrew is included in this table.

ANNEX E.

TABLE showing the Proficiency of the Pupils in the Subjects of Instruction.—Public Schools.

Actual Proficiency.	Reading.				Writing.			Arithmetic.				Grammar.		Geography.			Object Lessons.	Vocal Music.	Drawing.	Euclid.	Algebra.	Latin.	Scripture.		
	Mono-syllables.	Easy Narrative.	Ordinary Prose.	Total.	On Slates.	On Paper.	Total.	Simple Rules.	Compound Rules.	Higher Rules.	Total.	Elementary.	Advanced.	Total.	Elementary.	Advanced.								Total.	
Indifferent ..	453	81	...	534	64	155	219	1067	220	183	1470	267	151	418	317	154	471	401	1981	240	53	107	84	227	
Tolerable ..	313	291	...	702	207	243	450	396	124	156	876	530	567	897	921	463	1384	1233	790	827	162	26	136	814	
Fair	337	585	207	929	396	678	1074	314	159	172	645	294	500	724	542	240	782	1433	528	573	33	65	61	754	
Good.....	407	557	1238	2302	320	1511	1831	218	285	104	607	411	485	396	125	592	717	1293	497	1302	12	767
	1510	1314	1543	4367	987	2587	3574	1995	788	615	3398	1432	1503	2935	1905	1449	3354	4356	3796	2941	266	198	281	2562	

TABLE, showing the Proficiency of the Pupils in the Subjects of Instruction.—Denominational Schools generally.

Actual Proficiency.	Reading.				Writing.			Arithmetic.				Grammar.		Geography.			Object Lessons.	Vocal Music.	Drawing.	Euclid.	Algebra.	Latin.		
	Mono-syllables.	Easy Narrative.	Ordinary Prose.	Total.	On Slates.	On Paper.	Total.	Simple Rules.	Compound Rules.	Higher Rules.	Total.	Elementary.	Advanced.	Total.	Elementary.	Advanced.							Total.	
Indifferent	1631	165	147	1943	536	221	757	2627	515	98	3240	857	882	1739	1152	583	1735	2563	3909	838	73	...	...	...
Tolerable	709	570	351	1630	617	830	1447	573	185	53	811	767	535	1302	1215	535	1750	1884	982	1622	...	...	...	...
Fair	802	856	843	2501	746	1385	2131	324	307	49	680	432	76	508	530	226	756	1208	685	584	13	13	13	...
Good.....	274	246	162	682	370	790	1160	68	64	11	143	25	...	25	142	129	271	303	369	...	...	...	...	...
	3416	1837	1503	6766	2369	3226	5495	3592	1071	211	4874	2081	1493	3574	3039	1473	4512	5958	5668	3413	86	18	...	...

TABLE, showing the Proficiency of the Pupils in the Subjects of Instruction.—Certified Church of England Schools.

Actual Proficiency.	Reading.				Writing.			Arithmetic.				Grammar.		Geography.			Object Lessons.	Vocal Music.	Drawing.	Euclid.	Algebra.	Latin.		
	Mono-syllables.	Easy Narrative.	Ordinary Prose.	Total.	On Slates.	On Paper.	Total.	Simple Rules.	Compound Rules.	Higher Rules.	Total.	Elementary.	Advanced.	Total.	Elementary.	Advanced.							Total.	
Indifferent	816	82	25	923	71	44	115	1289	268	45	1602	314	438	752	563	255	818	1259	2119	220	45	...	...	...
Tolerable	430	311	293	1034	343	308	651	224	90	31	345	371	208	579	667	278	945	1001	419	844	...	...	...	...
Fair	426	301	281	1008	493	710	1203	99	136	34	269	254	37	291	410	99	509	600	550	349	...	...	...	...
Good	218	135	84	437	297	489	786	31	16	11	58	25	...	25	117	51	168	197	67	291	...	...	...	...
	1890	829	683	3402	1204	1551	2755	1643	510	121	2274	964	683	1647	1757	683	2440	3057	3155	1704	45	...	...	...

TABLE, showing the Proficiency of the Pupils in the Subjects of Instruction.—Certified Roman Catholic Schools.

Actual Proficiency.	Reading.				Writing.			Arithmetic.				Grammar.		Geography.			Object Lessons.	Vocal Music.	Drawing.	Euclid.	Algebra.	Latin.		
	Mono-syllables.	Easy Narrative.	Ordinary Prose.	Total.	On Slates.	On Paper.	Total.	Simple Rules.	Compound Rules.	Higher Rules.	Total.	Elementary.	Advanced.	Total.	Elementary.	Advanced.							Total.	
Indifferent	582	83	122	787	411	168	579	997	173	53	1223	351	379	730	364	214	578	924	1439	579	28	...	...	...
Tolerable	216	223	58	497	215	435	650	291	64	19	374	868	238	606	472	199	671	704	391	537	...	...	...	...
Fair	269	349	419	1037	145	426	571	127	121	15	263	68	...	93	82	127	209	436	79	145	13	18	...	...
Good	27	111	53	191	16	247	263	37	38	...	75	...	...	25	78	103	83	83	25	58	...	...	...	...
	1094	766	652	2512	787	1276	2063	1452	396	87	1935	787	642	1429	943	618	1561	2147	1934	1319	41	18

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TABLE showing the Proficiency of the Pupils in the Subjects of Instruction—Certified Presbyterian Schools.

Actual Proficiency.	Reading.				Writing.			Arithmetic.				Grammar.			Geography.			Object Lessons.	Vocal Music.	Drawing.	Euclid.	Algebra.	Latin.
	Mono-syllables.	Easy Narrative.	Ordinary Prose.	Total.	On Slates.	On Paper.	Total.	Simple Rules.	Compound Rules.	Higher Rules.	Total.	Elementary.	Advanced.	Total.	Elementary.	Advanced.	Total.						
Indifferent.....	151	...	...	151	54	9	63	165	39	...	204	106	15	121	94	31	125	291	187	16	...	...	...
Tolerable.....	...	9	...	9	12	...	12	23	29	...	52	12	56	68	33	58	91	70	86	121	...	...	...
Fair.....	95	97	60	252	52	128	180	50	17	...	67	...	14	14	...	...	...	...	...	51	...	...	...
Good.....	19	...	25	44	47	54	101	...	...	...	...	...	...	...	...	...	...	...	...	20	...	...	...
	265	106	85	456	165	191	356	238	85	...	323	118	85	203	127	89	216	435	317	208	...	...	...

TABLE showing the Proficiency of the Pupils in the Subjects of Instruction—Certified Wesleyan Schools.

Actual Proficiency.	Reading.				Writing.			Arithmetic.				Grammar.			Geography.			Object Lessons.	Vocal Music.	Drawing.	Euclid.	Algebra.	Latin.
	Mono-syllables.	Easy Narrative.	Ordinary Prose.	Total.	On Slates.	On Paper.	Total.	Simple Rules.	Compound Rules.	Higher Rules.	Total.	Elementary.	Advanced.	Total.	Elementary.	Advanced.	Total.						
Indifferent.....	82	...	...	82	...	...	...	131	25	...	156	76	38	114	121	71	192	79	264	23	...	...	...
Tolerable.....	35	27	...	62	47	77	124	35	...	3	38	16	33	49	43	...	43	97	35	120	...	...	...
Fair.....	12	99	71	182	38	109	147	45	33	...	78	72	...	72	...	...	...	60	...	39	...	...	...
Good.....	...	...	...	...	...	...	...	10	...	10	...	...	...	...	...	...	...	23	...	...	...	...	...
	129	126	71	326	85	186	271	211	68	3	282	164	71	235	164	71	235	259	302	182	...	...	...

ANNEX F.

DETAILED Statement of the condition of Public Schools in the Sydney District, inspected during the year 1868.

The remarks under head 1 relate to the material condition of the schools,—
2 to their moral character,—
3 to the subjects and methods of instruction,—
4 to the proficiency of the pupils.

BALMAIN (Primary):—Visited, 16th, 17th, and 18th June.

Numbers present at examination:—Boys, 84; girls, 65; total, 149.

1. The schoolroom is of a superior kind, in good repair: it is well found in educational appliances. The whole property is carefully kept. 2. The attendance at examination was smaller than usual, on account of the rain. The pupils are clean, punctual, regular, and orderly. The government is rather harsh. 3. The usual branches are taught. The instruction is properly regulated. The methods are of fair average merit. 4. The attainments range from fair to good.

BALMAIN (Infants):—Visited, 16th June.

Numbers present at examination:—Boys, 31; girls, 23; total, 54.

1. The school is small, and a few desks are needed to complete its equipment; these are the only noticeable defects. An air of neatness and comfort pervades the department. 2. Sickness has latterly interfered with the attendance. The pupils are very clean, tidy-looking, and in good order. The aspect and tone of the department are calculated to impress favourably. 3. The instruction comprises appropriate subjects, and is regulated by the usual documents. The methods are suitable, and are applied with zeal, energy, and intelligence. 4. The general attainments may be regarded as very fair. The teacher has worked hard and successfully during the past year.

BOTANY ROAD (Primary):—Visited, 16th and 17th June.

Numbers present at examination:—Boys, 75; girls, 59; total, 134.

1. A good weatherboard building, but much too small for the present attendance. A supply of new and suitable furniture is required; otherwise, the school is fairly found in the necessary appliances. 2. The discipline is very fair. 3. The instruction is judiciously regulated, and the teaching is conducted with zeal and fair intelligence. 4. The proficiency ranges from tolerable to fair.

BOURKE-STREET (Primary):—Visited, 20th and 24th August.

Numbers present at examination:—Boys, 118; girls, 78; total, 196.

1. Most of the material defects pointed out in last year's report still exist. The school is awkwardly situated, and the playground is so small as scarcely to deserve the name. 2. Many of the pupils are untidy in appearance. The government is deficient in tact and firmness. Restlessness, talking, and inattention are far too prevalent. 3. Some improvement is possible in the arrangement and keeping of the lesson documents; and the methods, although of modern cast, require to be applied with greater energy and skill. 4. The attainments range from tolerable to fair. The pupils' answering needs to be more prompt, accurate, and general.

BOURKE-STREET (Infants):—Visited, 20th August.

Numbers present at examination:—Boys, 50; girls, 47; total, 97.

1. A bad schoolroom; the gallery is unsuitable, and a supply of furniture is needed. 2. The pupils are not very punctual; in other respects, the discipline is healthy, and the moral tone pleasing. 3. The instruction is very fairly regulated, and the methods are modern and applied with fair skill. 4. The proficiency varies from fair to very fair.

CAMPERDOWN (Primary):—Visited, 15th June.

Numbers present at examination:—Boys, 42; girls, 24; total, 66.

1. The fences need repair, and the walls of the schoolroom are not weatherproof. A classroom is required. There is a fair amount of furniture and apparatus. 2. The discipline is tolerable. 3. The instruction is fairly regulated, and the teaching is conducted with reasonable skill. 4. The average proficiency is fair.

CLEVELAND-STREET (Boys):—Visited, 14th, 15th, and 16th October.

Number of pupils present:—314.

1. An excellent schoolroom, but too small for the number of pupils in attendance. The organization is very complete. 2. The attendance is rapidly on the increase. The moral aspect of the school is satisfactory. 3. Algebra, Euclid, and Latin are included in the Course of Instruction. The methods are suitable, and applied with zeal, energy, and fair average skill. 4. The proficiency ranges from tolerable in the lower classes to good in the higher. The disparity in attainments is accounted for partly by a difference in the professional skill of the teachers, but chiefly by the large influx of new scholars into the lower section of the school.

CLEVELAND-STREET (Girls):—Visited, 14th, 15th, and 16th October.

Number of pupils present:—214.

1. A new schoolroom, liberally provided with the requisite appliances, and excellently organized. 2. The order is satisfactory, the government judicious, and the moral tone high. 3. The instruction is well regulated, the methods are appropriate, and applied with much intelligence. 4. The general proficiency approaches very fair.

CLEVELAND-STREET (Infants):—Visited, 13th and 14th October.

Numbers present at examination:—Boys, 148; girls, 107; total, 255.

1. A model schoolroom, fully equipped. 2. The pupils recently admitted are disposed to be troublesome; otherwise, the discipline is sound. 3. The usual infant school course is followed; the lesson documents are well compiled, and the teaching is marked by intelligence and skill. 4. All things considered, the proficiency may be regarded as satisfactory.

FORT-STREET (Boys):—Visited, 11th, 12th, 13th, 14th, and 15th May.

Number present at examination:—531.

1. The material condition and organization are very good. 2. The pupils are punctual and regular in attendance. They manifest a becoming demeanour, a ready attention, and a willing and prompt obedience. The government is vigorous and effective. 3. An appropriate classification obtains, and the instruction, which embraces Euclid, Latin, and Algebra, in addition to the ordinary branches, is judiciously regulated. The methods are skilful, and applied with energy and effect. 4. The average attainments are very fair. The pupils of the third and fifth classes acquit themselves extremely well under examination.

FORT-STREET (Girls):—Visited, 4th, 5th, 6th, 7th, and 8th May.

Number present at examination:—452.

1. The schoolroom is fully equipped with the best educational appliances, but is not large enough for the number of pupils in attendance. 2. The crowded appearance of the school detracts from its otherwise orderly aspect. The government is mild, but vigilant and effective. The demeanour of the pupils is modest and subdued, and their general behaviour unexceptionable. 3. In addition to the usual subjects, French is taught by a special master. The methods are modern, and range, in point of skill, from tolerable to very good. They are applied with vigour and much intelligence. 4. On the whole, the attainments of the classes are satisfactory; those of the upper second, third, and fifth, especially so. The pupils are attentive under examination, and answer with thoughtfulness and spirit.

FORT-STREET (Infants):—Visited, 27th and 29th April.

Numbers present at examination:—Boys, 193; girls, 167; total, 360.

1. The material condition and organization are susceptible of little improvement. 2. The pupils are clean, punctual, and regular. Good order is maintained. A cheerful and healthy spirit pervades the school. 3. The methods are appropriate, and are applied with earnestness and skill. 4. The attainments range from tolerable, in the baby department, to very fair in the senior infant school. Compared with last year, these results are satisfactory. The pupils are self-reliant, and answer with promptness and accuracy. They afford evidence of careful and judicious mental cultivation.

GLEBE (Primary):—Visited, 12th August.

Numbers present at examination:—Boys, 91; girls, 42; total, 133.

1. The fences and roof of the schoolhouse require repairs. Separate accommodation for the infants is a great desideratum. 2. The discipline has greatly improved, and is now very good. 3. The instruction comprises Euclid, Algebra, and Latin, besides the usual subjects. The methods are appropriate, and are applied with energy and skill. 4. The attainments range from fair to very good. The pupils are attentive, self-reliant, and answer with intelligence and spirit.

GLEBE (Infants):—Visited, 12th August.

Numbers present at examination:—Boys, 44; girls, 27; total, 71.

1. The business of this department is conducted in a portion of the primary schoolroom. The supply of working materials is good. 2. Considering the unsuitableness of the accommodation, the order is very fair, and the discipline is in other respects healthy. 3. The instruction is judiciously regulated, and the teaching is intelligent and effective. 4. The average proficiency is fair.

JAMISON-STREET:—Visited, 21st October.

Numbers present at examination:—Boys, 37; girls, 29; total, 66.

1. The schoolhouse is out of repair, and presents, inside and outside, a very uninviting appearance. The playground requires to be fenced, furnished with out-offices for each of the sexes, a lavatory, and a shed to protect the children from the weather. An old double desk and some chapel seats compose the furniture. The school premises are dirty and neglected. 2. The pupils are regular, but neither punctual

punctual nor clean. They are in bad order. The government is feeble and ineffective. 3. Drawing, music, and Scripture lessons are omitted from the subjects of instruction. The teacher has very little knowledge of the correct principles on which children should be classified, and is ignorant of the proper mode of compiling the lesson documents. His methods of teaching are mechanical, and but feebly applied. 4. The proficiency is small. The teacher requires training.

NEWTOWN (Primary):—Visited, 22nd July.

Numbers present at examination:—Boys, 58; girls, 35; total, 93.

1. The schoolroom is in need of whitewash, and some of the furniture is unsuitable; otherwise, the material condition of the school is very fair. 2. Wet weather and juvenile sickness have temporarily affected the attendance. Generally speaking, the moral aspect of the school is fairly satisfactory. 3. French and Latin are taught in addition to the usual subjects. The classification is appropriate. The lesson documents are compiled in a careful and intelligent manner. The methods are rational, and are applied with diligence and skill. 4. The attainments vary from fair to very fair. The pupils evince a high degree of mental culture.

NEWTOWN (Infants):—Visited, 22nd July.

Numbers present at examination:—Boys, 30; girls, 17; total, 47.

1. The schoolroom is rather small, and is unprovided with desks; otherwise, the organization is very fair. 2. The pupils are punctual, regular, and neatly attired. The order is good, and the moral tone pleasing. 3. The instruction is suitable and well regulated. The methods are appropriate, and are applied with zeal and fair intelligence. 4. The average proficiency is fair.

PADDINGTON (Primary):—Visited, 21st July.

Numbers present at the examination:—Boys, 79; girls, 50; total, 129.

1. The schoolhouse is unsuitable, and in disrepair. New buildings are much needed. The supply of working materials is sufficient. 2. The attendance is temporarily affected by wet weather. As a rule, the pupils are punctual and regular. Fair order is maintained. 3. Euclid and Algebra are included in the subjects of instruction. The methods are of fair average merit. 4. The attainments vary from tolerable to fair. The pupils are self-reliant, and evince a fair degree of mental culture.

PADDINGTON (Infants):—Visited, 21st July.

Numbers present at examination:—Boys, 43; girls, 24; total, 67.

1. The schoolroom is a detached iron building, rather low, but in other respects suitable. There is a full supply of the requisite appliances. 2. The pupils are punctual and regular. The order is good, and the moral tone healthy. 3. The instruction accords with that prescribed for infant schools. The methods are modern, and are marked by a fair degree of skill. 4. The proficiency is fair.

PITT-STREET (Primary):—Visited, 24th June.

Numbers present at examination:—Boys, 35; girls, 26; total, 61.

1. The defects noticeable in the material condition of this school are, the absence of suitable furniture, and the want of playground. 2. The discipline is healthy, and the moral tone of the school pleasing. 3. The methods are of modern cast, and are successfully applied. 4. The general proficiency approaches fair.

PITT-STREET (Infants):—Visited, 21st June.

Numbers present at examination:—Boys, 33; girls, 30; total, 63.

1. This department is conducted in the same room with the primary school. Suitable desks are wanted. There is a fair supply of working materials. 2. The government is judicious, and the pupils are punctual and orderly. 3. The methods are tolerably suitable, but are deficient in force and penetrativeness. 4. The proficiency is moderate.

PITT-STREET, SOUTH (Primary):—Visited, 18th June.

Numbers present at examination:—Boys, 21; girls, 14; total, 35.

1. The playground is small, and the size of the room prevents a proper arrangement of the furniture. There is a sufficiency of the necessary appliances. 2. The order is good, and the moral tone of the school sound. 3. The instruction is well regulated, and the methods are calculated to produce substantial results. 4. The proficiency is satisfactory, and the mental powers of the pupils are carefully cultivated.

PITT-STREET, SOUTH (Infants):—Visited, 22nd June.

Numbers present at examination:—Boys, 21; girls, 14; total, 35.

1. The furniture is very old and unsuitable, and a gallery has yet to be provided. There is an insufficiency of object cards. 2. The discipline is fairly satisfactory. 3. The classification is too individual. The teaching is painstaking and tolerably skilful. 4. The attainments are tolerable.

PYEMONT (Primary):—Visited, 10th July.

Numbers present at examination:—Boys, 55; girls, 30; total, 85.

1. The schoolroom is a weatherboard building, much too small, in indifferent repair, and inconveniently situated. The fencing is in a bad state. New and more commodious school premises are urgently needed. 2. Sickness, combined with the late vacation, has temporarily reduced the attendance. The pupils are clean, punctual, and regular. Very fair order is maintained, and the moral tone is tolerably high. 3. The classification is almost unexceptionable. As a whole, the lesson documents are arranged with fair judgment. The methods are fairly skilful. 4. The attention of some of the pupils requires to be strengthened. Their answering in Arithmetic, Geography, and Euclid, is neither sufficiently ready nor general.

PYRMONT (Infants):—Visited, 10th July.

Numbers present at examination:—Boys, 18; girls, 24; total, 42.

1. The situation is indifferent. The schoolroom is too small, and needs repairs. There is a fair supply of books and apparatus. 2. The pupils are punctual and regular, but the order admits of considerable improvement. 3. The classification is somewhat inappropriate; the instruction is fairly arranged, and the methods are of a passable kind. 4. The proficiency varies from tolerable to fair.

SUSSEX-STREET:—Visited, 14th July.

Numbers present at examination:—Boys, 47; girls, 49; total, 96.

1. A fair schoolroom, suitably furnished. The out-offices are incomplete, and objectionably arranged. There is no playground. 2. The pupils are fairly punctual, but irregular. The order is passable, and the moral tone of the school healthy. 3. The instruction is fairly arranged, and the teaching is conducted with diligence and reasonable skill. 4. The attainments are fair in the lower classes, and tolerable in the higher.

WATSON'S BAY:—Visited, 13th July.

Numbers present at examination:—Boys, 5; girls, 6; total, 11.

1. The school is unprovided with suitable furniture. In other respects, the organization is tolerable. 2. The order is indifferent, and the moral tone low. 3. The classification is faulty, the course of instruction is incomplete, and the teaching is wanting in method and energy. 4. The proficiency is indifferent.

WILLIAM-STREET (Boys):—Visited, 30th July, and 4th and 7th August.

Number present at examination:—240.

1. The organization is fairly satisfactory. 2. Measures need to be adopted to improve the punctuality. The government is harsh, and the prevailing tone of the school is not pleasing. 3. The course of instruction includes Euclid and Latin. The classification is tolerably judicious. Entries in the lesson registers require to be fuller and more explicit. The methods are fairly suitable, but need to be applied with more spirit and energy. 4. The attainments range from tolerable to very fair. Arithmetic grammar, and Scripture lessons, are the weak subjects.

WILLIAM-STREET (Girls):—Visited, 28th and 29th July.

Number present at examination:—141.

1. The drainage of the schoolground is defective. A class room is pressingly needed. The organization is, in other respects, good. 2. The pupils are regular, but unpunctual. They are restless in the classes, and disposed to be talkative and inattentive. The government is deficient in uniform firmness. 3. French is taught, along with the usual subjects. The classification is appropriate; the lesson documents are intelligently constructed; the methods are suitable, but are, owing to defective discipline, productive of only partial results. 4. The average attainments are tolerable.

WILLIAM-STREET (Infants):—Visited, 27th, 28th, and 29th July.

Numbers present at examination:—Boys, 157; girls, 140; total, 297.

1. A lavatory is needed; otherwise, the organization is very fair. 2. The pupils are unpunctual. In the junior infant school the order admits of improvement; in the senior department the discipline is excellent. 3. The instruction is well regulated, and the teaching is conducted with energy and intelligence. 4. The proficiency ranges from tolerable to good, the average being very fair.

APPENDIX K.

RECEIPTS and DISBURSEMENTS of the Council of Education, from 1st January to 31st December, 1868.

RECEIPTS.		DISBURSEMENTS.			
	£ s. d.	£ s. d.			
To Balance from 1867		2,350 14 8	GENERAL MANAGEMENT.		
„ Church and School Estates Revenue		3,266 18 10	Salaries	8,713 18 9	
„ Amount received from Treasury, on account of Vote for 1868.....	90,000 0 0		Sundries—		
„ Less amount deducted for printing.....	7 6 11		Buildings, repairs, rent, &c....	409 3 0	
		89,992 13 1	Travelling expenses	1,433 6 8	
			Books, printing, &c.	631 18 8	
			Miscellaneous expenses	407 2 9	
					11,595 9 10
			SCHOOLS.		
			Salaries	57,833 2 9	
			Sundries—		
			Buildings, repairs, rent, &c....	18,960 4 0	
			Travelling expenses	920 13 11	
			Books, printing, &c.	3,534 12 7	
			Training allowances	2,675 18 3	
			Miscellaneous expenses	82 4 11	
					84,008 16 5
			Balance to 1869		8 0 4
		£ 95,610 6 7			£ 95,610 6 7

JOHN EVANS,
Accountant.

1869.

NEW SOUTH WALES.

REPORT

OF THE

COUNCIL OF EDUCATION

UPON THE CONDITION

OF THE

CERTIFIED DENOMINATIONAL SCHOOLS

FOR

1868.

Presented to both Houses of Parliament, by Command.

By Authority:

SYDNEY: THOMAS RICHARDS, GOVERNMENT PRINTER.

1869.

THE COUNCIL OF EDUCATION TO HIS EXCELLENCY THE GOVERNOR,

SUBMITTING

REPORT ON DENOMINATIONAL SCHOOLS FOR 1868.

To His Excellency the Right Honorable SOMERSET RICHARD, Earl of Belmore, Member of Her Majesty's Most Honorable Privy Council in Ireland, Governor and Commander-in-Chief of the Colony of New South Wales, and Vice-Admiral of the same.

MAY IT PLEASE YOUR EXCELLENCY,

In compliance with the provisions of the Public Schools Act of 1866, section 27, we, the Council of Education, beg to submit to your Excellency this our Second Annual Report upon the condition of the Certified Denominational Schools of the Colony.

In our Report upon the Public Schools, we have fully described the general condition of all the schools under our superintendence. The statements contained in that Report apply equally to Public and to Denominational Schools, except in those cases in which remarks are expressly limited to schools of one class.

The total number of Certified Denominational Schools in operation in 1868 was 289; but of these, 25 were either closed at the end of the year, or, if continued, had changed their character and designation. The return appended to this Report exhibits the names of the schools in operation, with their respective attendances, and distinguishes those which were closed prior to the expiration of the year. Further statistical information is contained in a second return.

Appendix A.

Appendix B.

Applications for certificates to new Denominational Schools were received in 1868 from the undermentioned places, viz. :—

Appendix C.

Locality.	Denomination.
Sydney	Hebrew.
Nimitabelle	Roman Catholic.
Crown Flat, Araluen	do.
Villa Maria	do.

The Council acceded to the first of these applications, although the grant of a certificate was declined in 1867. The additional information furnished when the applicants brought the matter under notice the second time, in 1868, enabled the Council to entertain the application and issue a certificate. The reason stated for declining this application in the first instance was, that the Council could not widen the ground of support to Denominational Schools. It was represented to the Council, however, by the applicants in this case, that, except in Sydney, it would be impossible to form a Hebrew School, owing to the small number of persons of that persuasion, and that consequently there would be no probability that any further applications of this kind would be made.

The provisions of the Public Schools Act having been fully met in the application from Villa Maria, the Council granted a certificate to that school. The application from Nimitabelle was declined, because of the non-existence of a Public School within the distance prescribed by law. At the end of the year, the application from Crown Flat was still under consideration.

The Denominational Schools at Tumut (Church of England), and Lane Cove (Presbyterian), have been allowed to lapse by the respective Local Boards. It is to be remarked

remarked of these schools that they were in reality private adventure schools, their connection with the denominations to which they professed to belong being of a slight and formal nature. Their continued existence depended, therefore, upon the will of the teachers who had possession of the school premises; and as the teachers, in the cases under consideration, tendered their resignations to the Council, the schools lapsed as Certified Denominational Schools.

The buildings appertaining to the Church of England School at Sackville Reach, Hawkesbury River, having been destroyed by the flood of 1867, teaching has not been carried on there since that time. The Church of England School at Bolwarra has also been closed, on account of the dilapidated condition of the school buildings.

Applications were made for the conversion of the Church of England Schools at Bankstown and Dural, and the Wesleyan School at Currajong, into Public Schools. The Council having acceded to the applications, these schools are now in operation in their altered character.

Appendix D.

During the year, certificates were withdrawn, by notification in the form of the annexed circular, from the undermentioned Denominational Schools, on account of the number of pupils falling below that required by the 29th section of the Public Schools Act, viz. :—

<i>Church of England Schools.</i>					
School.					Average attendance.
Adaminaby	...	...	...	...	14·8
Bolong	...	...	...	...	10·3
Bungendore	...	...	...	...	15·
Burrowa	...	...	...	...	18·2
Collector	...	...	...	...	18·5
Crookwell	...	...	...	...	12·7
Cudgegong	...	...	...	...	21·
Illalong	...	...	...	...	22·
Goonoo Goonoo	...	...	...	...	8·5
Gresford	...	...	...	...	17·3
Gundaroo	...	...	...	...	18·3
Guntawang	...	...	...	...	23·
Macdonald River	...	...	...	...	22·1
Millfield	...	...	...	...	19·8
Mulwala	...	...	...	...	16·3
Tarago	...	...	...	...	20·
<i>Roman Catholic Schools.</i>					
Bungonia	...	...	...	...	18·3
Breadalbane	...	...	...	...	15·5
Gerringong	...	...	...	...	17·5
Laggan	...	...	...	...	14·8
Michalago	...	...	...	...	18·7
Spring Valley	...	...	...	...	19·7
<i>Presbyterian Schools.</i>					
Bamarang	...	...	...	...	18·6
Wallaby Hill	...	...	...	...	19·2

It must not be supposed, however, that the withdrawal of certificates from these schools deprived the localities in which they are situated of the means of education; applications for the establishment of Public Schools having been received from six, and fifteen others being now in operation as Provisional or Half-time Schools.

Certificates were also withdrawn from the following schools, which had been practically closed for some time, viz. :—

<i>Church of England.</i>	<i>Roman Catholic.</i>
Breadalbane.	Picton.
Gunning.	
Holsworthy.	
Kippelaw.	
Pejar.	
Picton.	

DENOMINATIONAL SCHOOLS.

The small attendances at the schools undermentioned during the first quarter of 1868 rendered them liable to have the certificates withdrawn, but the Council preferred to bring the matter under the notice of the Local Boards, before taking any other steps, viz. :—

Church of England.

School.	Average attendance.
Blandford	21·9
Canberra	29·7
Frederick's Valley	23·
Ginninderra	17·5
Guntawang	25·1
Hexham	21·4
Kincumber	23·
Kiora	29·
Mulgoa	20·6
Nundle	22·7
O'Connell	26·
Port Maitland	22·2
St. Leonard's	29·
Tirranna	22·4

Roman Catholic.

Bungendore	28·
Cabramatta	29·8
Greendale	21·7
Lane Cove	25·7
Liverpool	28·8
Oaks... ..	22·3
Raymond Terrace	27·6
Ryde	24·7
Wellington	23·

Presbyterian.

Dingo Creek	27·1
Lane Cove	29·2

Wesleyan.

Currajong	23·
Hornsby	24·2
Lane Cove	20·

The Local Boards were accordingly addressed by circular in the form appended. Appendix E.

The Inspectors' reports appended to our Report upon Public Schools will supply information as to the condition of the Certified Denominational Schools. Further information on this head may be obtained from the detailed statements furnished by the Inspectors on the condition of the schools visited in 1868. The Council is of opinion that, in general, the Denominational Schools have improved in efficiency during the year. Appendix F.

The number of free scholars reported by the teachers to be in attendance at Certified Denominational Schools has fallen from 5,635 in 1867, to 4,607 in 1868—a diminution of 1,028. The inquiries instituted by our Inspectors, in the case of 179 schools, showed that 2,118 professed free scholars were in attendance. The teachers acknowledged having, on their own authority, admitted 878 of these, though this course is irregular; and in 1,208 cases, the children were admitted by order of the Local Boards. A small number (32) appear to have obtained no sanction to their attendance without payment. The general excuse for non-payment was the poverty of parents. In 1,108 cases, the Inspectors report that this plea is sustained by the facts.

In addition to the free scholars already mentioned, 1,139 children attend the schools in which the inquiries were made, whose parents, though professing to pay, actually withheld payment of school fees. The reason advanced in explanation of this course was, generally, inability to pay at the time, though future payment was usually promised. In the case of 626 children, the Inspectors expressed themselves satisfied with the validity of this plea, but stated their belief that a large number of parents who could well afford to pay were obtaining free education for their children, either by misrepresenting their circumstances, or by trusting to the indifference of teachers and Local Boards for exemption from payment.

The sum of £1,633 9s. 5d., derived from the Church and School Estates Revenue, having been placed at the Council's disposal for Certified Denominational Schools, that amount was apportioned to them in proportion to the number of persons of each Denomination as disclosed by the Census of 1861. The sums allotted to the several Denominations were—

Church of England	£822 18 2
Roman Catholic	510 4 1
Presbyterian	178 9 4
Wesleyan.....	121 17 10

We submit this as our Report upon the Certified Denominational Schools, for the year ending 31st December, 1868; and, in testimony thereof, we have caused our corporate seal to be affixed hereto, this twenty-fourth day of March, one thousand eight hundred and sixty-nine.

(L.S.)

{ HENRY PARKES, President.
 GEORGE ALLEN.
 W. M. ARNOLD.
 JAMES MARTIN.
 J. SMITH.

W. WILKINS,
 Secretary.

APPENDIX.

7

APPENDIX A.

RETURN of the Attendance of Children at the Certified Denominational Schools of New South Wales, as certified by the Local Boards, for the Quarter ending 31st December of the Year 1868, or for the last Quarter in which the Schools were in operation, respectively.

Name of School. I.	Number of Children on Rolls.									Average Weekly Attendance.		
	Boys.	Girls.	Total.	Church of Eng.	Roman Catholic	Presby-terians.	Wesley-ans.	Others.	Total.	Boys.	Girls.	Total.
	II.	III.	IV.	V.	VI.	VII.	VIII.	IX.	X.	XI.	XII.	XIII.
CHURCH OF ENGLAND SCHOOLS.												
Adaminaby	9	15	24	16	8	..	..	..	24	6.19	6.99	13.18
Araluen	30	24	54	47	..	..	7	..	54	18.90	16.80	35.70
Armidale	48	50	98	78	4	3	10	3	98	31.5	34.4	65.9
Albury	20	14	34	25	1	4	4	..	34	17.80	11.20	29.
Ashfield	45	26	71	52	9	4	2	4	71	33.6	17.	50.6
Balmain	87	39	126	73	..	16	35	2	126	58.4	29.7	88.1
Bathurst	67	71	138	127	..	..	7	4	138	50.80	46.50	97.30
Bega	40	29	69	64	..	4	..	1	69	27.68	19.80	47.48
Bendolba	32	30	62	27	12	8	15	..	62	16.92	20.33	37.25
Bishopsbridge	17	23	40	36	..	4	..	..	40	15.	19.5	34.5
Blandford	15	20	35	35	..	..	..	..	35	11.5	15.	26.5
Bombala	23	28	51	40	4	7	..	..	51	20.80	22.70	43.50
Braidwood	35	27	62	53	4	4	1	..	62	24.28	19.23	43.51
Broke	25	25	50	45	5	..	..	..	50	16.3	16.6	32.9
Buchanan	38	38	76	36	31	6	3	..	76	21.3	17.8	39.1
Burwood	41	32	73	55	1	..	..	17	73	28.3	20.2	48.5
Cabramatta	31	21	52	36	14	2	..	..	52	23.9	16.	39.9
Camden	50	57	107	73	..	1	29	4	107	39.4	43.6	83.
Campbelltown	59	31	90	71	8	5	..	6	90	45.2	23.	68.2
Canberra	23	19	42	33	3	6	..	..	42	17.60	15.30	32.90
Canterbury	41	30	71	51	10	2	8	..	71	30.2	21.1	51.3
Castle Hill	43	32	75	46	5	..	24	..	75	31.2	23.4	54.6
Cassilis	19	13	32	23	6	..	3	..	32	13.7	10.1	23.8
Christ Church	354	230	584	408	13	71	46	46	584	248.4	145.3	393.7
Cobbitty	20	21	41	34	7	..	..	..	41	11.8	14.4	26.2
Corowa	47	32	79	57	21	5	..	2	79	32.02	19.43	51.45
Cook's River	105	82	187	98	23	8	57	1	187	73.8	54.8	128.6
Darlinghurst	93	73	166	139	3	9	13	2	166	71.	49.	120.
Denman	33	25	58	40	18	..	..	..	58	22.2	14.4	36.6
Dapto	17	12	29	22	3	4	..	..	29	11.1	8.6	19.7
Denham Court	21	15	36	26	7	..	..	3	36	10.	9.	19.
Dungog	34	42	76	56	7	5	2	6	76	23.66	32.16	55.82
Dural	26	24	50	16	2	..	32	..	50	16.53	15.65	32.18
Emu Plains	46	29	75	60	4	..	11	..	75	32.3	19.7	52.
Enfield	38	49	87	65	13	2	5	2	87	18.6	25.7	44.3
Erina	21	23	44	41	3	..	..	..	44	13.7	14.9	28.6
Enfield, N. R.	26	29	55	44	..	5	5	1	55	20.6	19.6	40.2
Fox Ground	25	31	56	39	3	4	10	..	56	15.7	21.3	37.
Fredericton	24	21	45	36	4	..	5	..	45	14.10	14.	28.10
Frederick's Valley	30	25	55	36	5	..	14	..	55	18.39	13.63	32.02
Gerringong	27	23	50	25	5	..	20	..	50	22.	18.	40.
Glebe	72	55	127	68	4	5	39	11	127	58.2	38.7	96.9
Glen Innes	38	32	70	48	16	6	..	..	70	26.2	21.5	47.7
Gosford, East	28	16	44	39	5	..	..	..	44	22.65	13.62	36.27
Goulburn	54	41	95	88	..	1	6	..	95	39.34	29.37	68.71
Goulburn, N.	39	42	81	61	3	1	8	8	81	27.50	24.10	51.60
Gunnedah	30	22	52	47	..	5	..	..	52	22.89	12.39	35.28
Guntawang	18	26	44	41	3	..	..	..	44	8.86	12.26	21.12
Gundagai, S.	28	31	59	30	16	..	13	..	59	19.42	22.05	41.47
Ginninderra	13	22	35	14	9	6	6	..	35	8.20	16.50	24.70
Hexham	17	29	46	23	6	4	13	..	46	13.8	21.4	35.2
Hinton	30	28	58	44	..	4	2	8	58	19.	17.7	36.7
Hunter's Hill	31	6	37	35	2	..	..	..	37	22.4	3.1	25.5
Jamberoo	29	20	49	33	..	14	2	..	49	22.1	14.7	36.8
Jerry's Plains	34	32	66	30	28	4	4	..	66	25.5	22.4	47.9
Kelso	28	32	60	56	3	..	1	..	60	21.66	24.66	46.32
Kempsey	31	35	66	33	15	9	9	..	66	19.3	22.9	42.2
Kiama	64	26	90	55	..	22	13	..	90	46.4	16.6	63.
Kiara	18	27	45	44	..	1	..	..	45	13.20	16.10	29.30
Kincumber	19	11	30	21	9	..	..	..	30	14.5	6.8	21.3
Kurrajong, N.	28	23	51	46	..	3	2	..	51	18.3	15.8	34.1
Do. S.	14	21	35	33	..	2	..	..	35	11.2	15.2	26.4
Laguna	20	22	42	32	10	..	..	..	42	13.2	16.7	29.9
Liverpool	66	61	127	124	..	..	3	..	127	48.2	42.6	90.8
Lord's Forest	29	29	58	42	5	7	4	..	58	18.5	18.8	37.3
Macquarie River	28	25	53	20	16	15	2	..	53	18.3	16.6	34.9
Maitland, East	74	65	139	103	1	17	18	..	139	53.1	38.9	92.
Do. West	114	91	205	162	5	8	24	6	205	81.05	61.8	142.63
Do. West	50	51	101	93	3	1	2	2	101	34.8	34.5	69.3
Marsfield	56	40	96	75	4	11	6	..	96	40.2	27.62	67.4
Marulan	35	38	73	65	8	..	..	..	73	23.7	21.6	45.3
Menangle	26	17	43	35	3	..	5	..	43	16.9	9.5	26.4

APPENDIX A—continued.

Name of School. I.	Number of Children on Rolls.									Average Weekly attendance.			
	Boys.	Girls.	Total.	Church of Eng.	Roman Catholic	Presby- terians.	Wesley- ans.	Others.	Total.	Boys.	Girls.	Total.	
	II.	III.	IV.	V.	VI.	VII.	VIII.	IX.	X.	XI.	XII.	XIII.	
CHURCH OF ENGLAND SCHOOLS—continued.													
Miller's Forest	38	42	80	42	14	10	14	..	2	80	24·6	26·6	51·2
Morpeth	66	77	143	105	7	10	19	..	2	143	46·5	48·3	94·8
Moruya	38	38	76	40	3	21	12	..	..	76	27·89	26·99	54·88
Mudgee	93	56	149	99	7	28	12	3	..	149	61·40	35·69	97·09
Mulgoa	23	10	33	18	15	..	..	..	..	33	16·	4·8	20·8
Muswellbrook	83	59	142	119	4	18	1	..	..	142	57·8	33·1	90·9
Do.	71	56	127	107	4	15	1	..	..	127	45·6	32·4	78·
Narrellan	21	21	42	24	14	..	4	..	..	42	13·	12·	25·
Newcastle	102	73	175	101	17	31	5	21	..	175	75·3	45·8	121·1
Do.	68	45	113	80	7	7	5	14	..	113	53·9	35·2	89·1
Newtown	116	84	200	179	6	5	5	5	..	200	79·6	49·7	129·3
Nundle	19	14	33	15	8	10	..	..	..	33	11·11	9·10	20·21
O'Connell	29	19	48	34	5	..	9	..	..	48	15·62	14·55	30·17
Paddington	52	48	100	62	4	16	13	5	..	100	31·1	23·5	54·6
Parramatta	73	55	128	99	9	6	14	..	..	128	43·1	34·7	77·8
Paterson	21	22	43	33	..	10	..	..	..	43	16·42	14·48	30·9
Pennant Hills	52	43	95	77	..	1	17	..	..	95	39·	32·5	71·5
Pitt Town	30	34	64	43	11	10	..	..	..	64	15·	20·5	35·5
Port Maitland	22	31	53	22	1	..	12	18	..	53	13·4	18·6	32·
Pymont	66	42	108	56	..	39	11	2	..	108	48·3	29·2	77·5
Queanbeyan	18	11	29	27	..	..	2	..	..	29	7·65	4·71	12·36
Raymond Terrace	55	37	92	65	2	10	11	4	..	92	39·7	24·6	64·3
Randwick	32	17	49	43	4	2	..	..	..	49	22·7	10·4	33·1
Redfern	263	207	470	444	..	7	9	10	..	470	201·9	151·7	353·6
Richmond	63	56	119	117	..	..	2	..	..	119	39·	35·7	74·7
Rouse Hill	24	15	39	37	2	..	..	..	..	39	15·6	11·9	27·5
Ryde	30	25	55	47	..	6	2	..	..	55	18·7	18·2	36·9
Rylestone	15	23	38	18	8	2	10	..	..	38	11·5	18·37	29·87
Seven Hills	37	22	59	45	8	..	1	5	..	59	26·2	18·8	45·
Scone	42	50	92	76	4	8	4	..	..	92	29·6	32·7	62·3
South Creek	38	37	75	64	8	1	2	..	..	75	27·4	26·5	53·9
Sofala	47	48	95	76	4	5	7	3	..	95	39·16	37·67	76·83
Singleton	111	83	194	179	3	1	5	6	..	194	85·16	57·36	142·52
St. Philip's	188	215	403	332	11	23	18	19	..	403	141·6	152·5	294·1
St. Leonards (Boys)	65	..	65	55	..	1	9	..	..	65	52·0	..	52·0
Do. (Girls) .....	..	35	35	26	4	3	2	..	..	35	..	24·0	24·0
St. Mark's	96	83	179	153	..	10	8	8	..	179	70·3	61·1	131·4
St. Andrew's	136	130	266	224	7	8	9	18	..	266	88·1	81·2	169·3
St. Barnabas's	273	199	472	426	4	16	15	11	..	472	194·1	126·1	320·2
St. James's	250	211	461	376	21	12	18	34	..	461	180·5	131·5	312·0
Stroud	21	20	41	35	..	6	..	..	..	41	17·9	15·1	33·
Surry Hills	122	95	217	162	13	7	22	13	..	217	89·1	70·1	159·2
Sutton Forest	38	28	66	47	9	4	3	3	..	66	24·61	22·34	46·95
Tamworth	41	34	75	57	13	3	2	..	..	75	29·6	24·3	53·9
Terara	23	21	44	28	4	8	3	1	..	44	15·3	12·8	28·1
Tirrama	18	17	35	15	..	9	6	5	..	35	14·5	12·34	26·84
Trinity	180	148	328	288	14	10	14	3	..	328	118·8	94·0	212·8
Tumut	37	43	80	53	25	..	..	2	..	80	26·	30·3	56·3
Wallsend	97	83	80	88	16	33	14	29	..	180	70·1	57·2	127·3
Waterloo	119	103	222	191	4	4	9	14	..	222	84·4	71·4	155·8
Waverley	45	65	110	89	..	3	17	1	..	110	28·7	40·5	69·2
Wilberforce	25	33	58	45	2	3	8	..	..	58	17·1	24·9	42·
Windsor	52	43	95	81	..	4	7	3	..	95	34·6	27·3	61·9
Wingecarribbee	26	26	52	15	13	9	1	14	..	52	15·30	16·8	32·1
Wollongong	77	32	109	54	6	11	34	4	..	109	58·2	20·8	79·
Woodville	21	35	56	23	5	9	19	..	..	56	15·73	26·87	42·6
Woonoona	42	62	104	46	11	25	16	6	..	104	26·3	42·7	69·
Yass	54	47	101	73	..	4	18	6	..	101	50·75	42·83	93·58
Young	37	43	80	66	8	2	3	1	..	80	25·41	24·04	49·45
Total	6,927	5,847	12,774	9,659	809	841	1,034	431	12,774	4,902·85	3,920·99	8,823·84	
<i>Open for portion of the year only.</i>													
Bankstown	7	7	14	13	1	..	..	..	..	14	2·29	2·35	4·64
Burrowa	26	19	45	34	..	5	6	..	..	45	15·7	8·1	23·8
Bungendore	7	7	14	14	..	..	..	..	..	14	6·22	5·60	11·82
Bolong	7	7	14	10	2	2	..	..	..	14	5·4	3·6	9·
Collector	10	7	17	13	4	..	..	..	..	17	5·6	5·	10·6
Crookwell	12	8	20	15	..	..	5	..	..	20	6·	5·	11·
Cudgegong	15	12	27	20	7	..	..	..	..	27	10·8	7·6	18·4
Ellalong	20	10	30	25	2	..	3	..	..	30	10·4	5·3	15·7
Gresford	12	16	28	27	1	..	..	..	..	28	6·2	8·6	14·8
Goonoo Goonoo	5	2	7	7	..	..	..	..	..	7	2·9	1·2	4·1
Gundaroo	15	11	26	24	2	..	..	..	..	26	9·78	7·14	16·92
Millfield	15	17	32	29	2	1	..	..	..	32	7·19	9·4	16·59
M'Donald River	30	25	55	20	18	15	2	..	..	55	24·55	17·78	42·33
Mulwala	9	13	22	13	9	..	..	..	..	22	8·	9·2	17·2
Pejar	18	11	29	10	16	..	3	..	..	29	7·3	4·7	12·
Tarago	19	14	33	27	3	3	..	..	..	33	13·3	8·7	22·
Total	227	186	413	301	67	26	19	..	413	141·63	109·27	250·9	

APPENDIX A—continued.

Name of School. I.	Number of Children on Rolls.										Average Weekly Attendance.		
	Boys.	Girls.	Total.	Church of Eng.	Roman Catholic	Presby-terians.	Wesley-ans.	Others.	Total.	Boys.	Girls.	Total.	
	II.	III.	IV.	V.	VI.	VII.	VIII.	IX.	X.	XI.	XII.	XIII.	
ROMAN CATHOLIC SCHOOLS.													
Albury	53	..	53	..	53	..	..	..	53	39.50	..	39.50
Appin	30	19	49	..	49	..	..	..	49	18.7	9.2	27.9
Araluen	56	93	149	1	148	..	..	..	149	37.02	64.62	101.64
Armidale	42	32	74	3	71	..	..	..	74	36.18	25.37	61.55
Balmain	117	110	227	..	227	..	..	..	227	76.4	60.	136.4
Bargo, East	20	15	35	6	29	..	..	..	35	17.	12.	29.
Bathurst (Boys)	120	..	120	..	120	..	..	..	120	91.20	..	91.2
Do. (Girls and Infants)	31	224	255	3	252	..	..	..	255	19.05	176.96	196.01
Bega	21	22	43	..	43	..	..	..	43	14.33	16.18	30.51
Berrima	36	40	76	36	38	2	..	..	76	30.20	31.50	61.7
Blandford	41	26	67	3	64	..	..	..	67	27.2	18.2	45.4
Braidwood	37	44	81	..	81	..	..	..	81	29.62	27.50	57.43
Burrowa	49	41	90	27	55	..	4	4	90	34.33	30.49	64.82	
Bungendore	20	24	44	..	44	..	..	..	44	15.40	19.30	34.7
Cabramatta	20	19	39	..	39	..	..	..	39	14.5	16.3	30.8
Camden	27	40	67	..	67	..	..	..	67	17.	29.	46.
Camperdown	108	74	182	3	179	..	..	..	182	78.1	48.3	126.4
Campbelltown	53	50	103	11	92	..	..	..	103	34.5	29.5	64.
Church Hill	73	200	273	..	273	..	..	..	273	53.0	135.	188.
Charcoal Creek	31	25	56	5	43	8	..	..	56	20.3	19.2	39.5
Clarence Town	24	21	45	1	44	..	..	..	45	19.2	16.1	35.3
Concord	38	19	57	..	57	..	..	..	57	24.	10.8	34.8
Cooma	34	22	56	1	55	..	..	..	56	26.16	15.63	41.79
Cook's River	36	28	64	4	40	..	20	..	64	29.	22.	51.	
Dapto	31	32	63	8	55	..	..	..	63	22.2	21.3	43.5
Double Bay	52	34	86	1	85	..	..	..	86	33.4	19.1	52.5
Ermington	24	21	45	1	44	..	..	..	45	16.1	12.9	29.
Goulburn (Boys)	80	..	80	1	79	..	..	..	80	61.20	..	61.2
Do. (Infants) .....	..	114	114	4	110	..	..	..	114	..	75.3	75.3
Grafton	33	28	61	18	37	..	3	3	61	22.9	17.6	40.5	
Greendale	18	19	37	13	21	2	1	..	37	8.8	13.	21.8	
Gunnedah	18	32	50	16	34	..	..	..	50	13.	22.	35.
Hartley	22	23	45	16	27	2	..	..	45	15.20	18.1	33.3
Haymarket	210	..	210	..	210	..	..	..	210	109.5	..	109.5
Jamberoo	35	17	52	9	39	3	1	..	52	25.	12.	37.	
Irishtown	39	25	64	12	52	..	..	..	64	18.9	13.4	32.3
Jembaicumbene	37	43	80	8	72	..	..	..	80	19.	20.	39.
Jugiong	29	22	51	8	40	2	1	..	51	15.56	12.75	28.31	
Kent-street, N. S.	227	124	351	22	329	..	..	..	351	150.4	82.8	233.2
Do. S.	115	137	252	2	250	..	..	..	252	71.5	82.7	154.2
Kincumber	13	26	39	7	32	..	..	..	39	9.2	16.9	26.1
Kurrajong	31	37	68	21	39	..	8	..	68	18.5	23.	41.5	
Lambing Flat	37	34	71	3	63	..	5	..	71	22.5	23.	45.5	
Lane Cove	21	20	41	4	35	..	2	..	41	14.1	10.9	25.	
Liverpool	21	27	48	1	46	..	..	1	48	16.2	17.9	34.1
Lochinvar	49	32	81	7	74	..	..	..	81	30.1	19.8	49.9
Maitland, East	60	78	138	5	133	..	..	..	138	47.43	58.99	106.42
Do. West	174	182	356	..	355	..	1	..	356	129.1	134.	263.1	
Menangle	28	28	56	2	54	..	..	..	56	18.	18.	36.
Miller's Forest	25	26	51	..	46	4	1	..	51	18.6	15.3	33.9	
Mittagong	26	21	47	9	34	..	4	..	47	20.82	16.35	37.17	
Morpeth	70	63	133	..	133	..	..	..	133	50.8	48.	98.8
Moruya	53	55	108	2	91	3	12	..	108	30.73	35.13	65.86	
Mudgee	52	37	89	5	83	1	..	..	89	35.38	22.66	58.04
Muswellbrook	37	35	72	3	69	..	..	..	72	27.5	27.9	55.4
Nelson	19	17	36	..	36	..	..	..	36	15.7	14.2	29.9
Newcastle	99	104	203	2	201	..	..	..	203	63.25	63.98	127.23
Nerrigundah	39	24	63	19	40	4	..	..	63	26.9	14.9	41.8
Newtown	29	28	57	7	50	..	..	..	57	16.5	15.5	32.
Oaks	17	31	48	5	43	..	..	..	48	9.	16.	25.
Orange	43	60	103	7	94	..	2	..	103	27.56	43.11	70.67	
Paddington	42	63	105	5	100	..	..	..	105	27.8	48.2	76.
Parramatta	78	48	126	..	126	..	..	..	126	47.6	23.2	70.8
Parramatta-street	235	234	469	2	467	..	..	..	469	142.8	149.7	292.5
Penrith	26	25	51	7	42	..	2	..	51	16.9	15.3	32.2	
Petersham	33	26	59	1	58	..	..	..	59	22.4	17.3	39.7
Phoenix Park	29	21	50	..	46	..	4	..	50	20.4	13.3	33.7	
Pymont	64	56	120	4	116	..	..	..	120	45.3	34.7	80.
Queanbeyan	37	38	75	8	63	2	2	..	75	24.38	20.78	45.16	
Raymond Terrace	21	26	47	4	43	..	..	..	47	11.2	14.6	25.8
Reidsdale	30	38	68	4	64	..	..	..	68	19.	21.	40.
Richmond	38	37	75	13	49	..	13	..	75	25.9	26.6	52.5	
Rocky Point	8	8	16	4	6	..	6	..	16	5.3	3.6	8.9	
Ryde	29	16	45	7	38	..	..	..	45	22.6	11.6	34.2
Shoalhaven	28	18	46	..	46	..	..	..	46	16.3	11.9	28.2
Singleton	86	85	171	8	159	..	..	4	171	64.8	64.7	129.5
Sofala	32	62	94	8	84	..	2	..	94	25.1	52.6	77.7	
South Creek	19	19	38	6	32	..	..	..	38	13.7	15.1	28.8
Spaniard's Hill	26	23	49	18	29	2	..	..	49	14.6	15.2	29.8
St. Mary's (Boys)	315	..	315	..	315	..	..	..	315	192.3	..	192.3
Do. (Girls) .....	..	286	286	..	286	..	..	..	286	..	204.	204.
St. Leonards	55	34	89	10	65	3	10	1	89	44.3	26.1	70.4	
Surry Hills	214	164	378	1	377	..	..	..	378	138.4	96.5	234.9

APPENDIX A—continued.

Name of School. I.	Number of Children on Rolls.									Average Weekly Attendance.		
	Boys.	Girls.	Total.	Church of Eng.	Roman Catholic	Presby- terians.	Wesley- ans.	Others.	Total.	Boys.	Girls.	Total.
	II.	III.	IV.	V.	VI.	VII.	VIII.	IX.	X.	XI.	XII.	XIII.
ROMAN CATHOLIC SCHOOLS—continued.												
Sutton Forest	27	10	37	9	28	..	..	..	37	21·33	7·7	29·03
Taralga	29	22	51	..	51	..	..	..	51	21·70	14·1	35·8
Tumut	39	31	70	7	63	..	..	..	70	35·7	27·1	62·8
Ulladulla	22	11	33	5	28	..	..	..	33	20·3	9·2	29·5
Villa Maria	24	19	43	..	41	..	2	..	43	18·5	14·7	33·2
Victoria-street	60	155	215	..	215	..	..	..	215	42·3	114·3	156·6
Wagga Wagga	37	16	53	8	45	..	..	..	53	23·56	10·24	38·8
Waterloo	113	73	186	6	180	..	..	..	186	81·6	52·4	134·
Waverley	57	49	106	..	106	..	..	..	106	40·8	37·8	78·6
Wellington	26	31	57	1	56	..	..	..	57	15·1	19·40	34·5
Windsor	86	63	149	32	112	2	..	3	149	66·5	46·9	113·4
Wollongong	50	34	84	..	84	..	..	..	84	36·8	25·8	62·6
Yass, (Boys)	58	..	58	..	58	..	..	..	58	45·16	..	45·16
Do. (Girls) .....	..	59	59	1	58	..	..	..	59	..	44·5	44·50
Total	5,103	4,724	9,827	531	9134	40	106	16	9,827	3469·85	3220·05	6689·9
<i>Open for portion of the year only.</i>												
Breadalbane	20	20	40	12	28	..	..	..	40	8·3	7·5	15·8
Bungonia	13	15	28	3	25	..	..	..	28	7·	11·	18·
Laggan	9	19	28	13	15	..	..	..	28	6·	9·	15·
Michalago	11	11	22	..	20	..	2	..	22	5·2	7·4	12·6
Spring Valley	18	15	33	1	32	..	..	..	33	10·7	6·3	17·
Total	71	80	151	29	120	..	2	..	151	37·2	41·2	78·4
PRESBYTERIAN SCHOOLS.												
Bathurst	26	36	62	15	32	14	..	1	62	22·9	29·8	52·7
Campbelltown	13	10	23	5	8	9	..	1	23	9·7	6·	15·7
Charcoal Creek	24	29	53	31	15	7	..	..	53	16·7	21·5	38·2
Dapto	41	21	62	26	10	11	..	..	62	31·8	16·2	48·
Dingo Creek	21	22	43	16	1	26	..	..	43	14·8	14·5	29·3
Erskine-street	36	61	97	71	7	10	5	4	97	27·4	39·4	66·8
Kempsey	17	24	41	10	6	13	8	4	41	14·2	18·1	32·3
Lane Cove	11	23	34	20	7	4	3	..	34	6·2	14·3	20·5
Maitland, West	43	37	80	41	10	17	3	9	80	29·4	20·2	49·6
Newcastle	113	74	187	35	18	29	11	94	187	86·	48·2	134·2
Parramatta	38	36	74	33	1	21	15	4	74	29·6	26·8	56·4
Do. Junction	41	47	88	48	10	4	26	..	88	28·1	28·8	56·9
Portland Head	24	14	38	12	..	24	2	..	38	17·1	12·5	29·6
St. Leonards	68	32	100	46	..	31	20	3	100	49·2	16·6	65·8
St. Andrew's	88	65	153	85	13	41	6	8	153	65·8	40·6	106·4
Shoalhaven	32	18	50	10	10	17	13	..	50	22·2	12·2	34·4
Waverley	44	36	80	16	9	9	31	15	80	33·7	29·3	63·0
Windsor	21	9	30	5	..	13	1	11	30	17·9	5·2	23·1
Woolloomooloo	121	93	214	50	19	92	30	23	214	82·3	64·8	147·1
Yass	39	23	62	8	3	35	15	1	62	29·21	12·75	41·96
Total	861	710	1,571	583	137	452	221	178	1,571	634·21	477·75	1,111·96
<i>Open for portion of the year only.</i>												
Bamarang	15	8	23	13	5	3	2	..	23	12·	6·	18·
Huntingdon	9	13	22	7	5	10	0	..	22	3·9	7·2	11·1
Wallaby Hills	18	11	29	17	..	12	..	..	29	11·5	6·7	18·2
Total	42	32	74	37	10	25	2	..	74	27·4	19·9	47·3
WESLEYAN SCHOOLS.												
Botany	26	26	52	10	1	2	18	21	52	21·2	18·5	39·7
Carr's Creek	29	25	54	16	8	7	21	2	54	16·53	13·53	30·06
Castlereagh	25	25	50	7	9	..	34	..	50	14·2	11·8	26·
Chippendale	98	104	202	51	..	8	123	15	202	69·3	63·3	132·6
George's River	24	27	51	33	4	..	8	6	51	13·4	14·6	28·
Hornsby	28	12	40	15	8	..	17	..	40	22·1	10·2	32·3
Lane Cove	22	26	48	26	4	..	18	..	48	13·	15·6	28·6
Maitland	31	16	47	6	..	2	36	3	47	19·8	11·2	31·
Newtown	121	92	213	47	12	11	103	40	213	84·4	58·6	143·
Parramatta	51	6	57	23	..	1	33	..	57	40·8	5·	45·8
Rocky Point	31	20	51	11	2	..	28	10	51	21·2	12·4	33·6
Surry Hills	149	71	220	46	4	27	124	19	220	109·3	41·	150·3
Ulmarra	25	23	48	17	6	7	18	..	48	18·3	19·4	37·7
Windsor	48	45	93	21	..	..	66	6	93	38·4	33·2	71·6
York-street	52	46	98	31	12	6	42	7	98	32·5	24·5	57·
Total	760	564	1,324	360	70	71	694	129	1,324	534·43	352·83	887·26
<i>Open for portion of the year only.</i>												
Currajong	15	16	31	5	8	1	17	..	31	11·9	11·7	23·6
HEBREW SCHOOL.												
Sussex-street	51	29	80	..	..	..	..	80	80	36·6	16·4	53·

APPENDIX.

APPENDIX B.

ABSTRACT of Returns from Certified Denominational Schools under the Council of Education.

Quarter ending—	Number of Children on the Rolls.									Average Daily Attendance.			Amount of School Fees paid.			
	Boys.	Girls.	Total.	C. E.	R. C.	Pres.	Wes.	Others.	Total.	Boys.	Girls.	Total.				
MARCH, 1868.														£	s.	d.
C. E. Schools ..	6,954	5,686	12,640	9,348	927	790	1,108	472	12,640	4,318·81	3,252·11	7,570·92	2,036	2	1	
R. C. do. ..	4,943	4,724	9,667	433	9,060	50	103	21	9,667	3,011·27	2,745·95	5,757·22	1,029	4	6	
Pres. do. ..	965	788	1,753	659	186	540	207	161	1,753	625·05	474·98	1,100·03	240	18	1	
Wes. do. ..	822	587	1,409	398	75	58	736	142	1,409	523·8	338·5	862·3	217	19	8	
	13,684	11,785	25,469	10,838	10,248	1,438	2,149	796	25,469	8,478·93	6,811·54	15,290·47	3,524	4	4	
JUNE, 1868.																
C. E. Schools ..	7,120	5,876	12,996	9,638	912	823	1,143	480	12,996	4,739·41	3,701·31	8,440·72	2,186	10	8	
R. C. do. ..	5,148	4,775	9,923	467	9,312	40	96	8	9,923	3,331·79	3,018·15	6,349·94	1,205	8	9	
Pres. do. ..	1,003	841	1,844	703	186	547	231	177	1,844	679·68	547·03	1,226·71	258	4	6	
Wes. do. ..	826	604	1,430	408	70	62	742	148	1,430	562·2	366·4	928·6	252	13	3	
	14,097	12,096	26,193	11,216	10,480	1,472	2,212	813	26,193	9,313·08	7,632·89	16,945·97	3,902	17	2	
SEPTEMBER, 1868.																
C. E. Schools ..	6,753	5,584	12,337	9,250	801	790	1,030	466	12,337	4,567·52	3,579·22	8,146·74	2,146	15	5	
R. C. do. ..	4,975	4,591	9,566	498	8,909	39	108	12	9,566	3,262·86	2,971·25	6,234·11	1,208	6	7	
Pres. do. ..	871	739	1,610	592	170	463	199	186	1,610	603·42	471·42	1,074·84	227	10	9	
Wes. do. ..	737	523	1,260	342	59	70	658	131	1,260	501·7	322·5	824·2	248	14	1	
Hebrew do. ..	46	30	76	..	..	..	..	76	76	29·	16·	45·	15	8	6
	13,382	11,467	24,849	10,682	9,939	1,362	1,995	871	24,849	8,964·50	7,360·39	16,324·89	3,846	15	4	
DECEMBER, 1868.																
C. E. Schools ..	6,740	5,696	12,436	9,413	776	817	1,001	429	12,436	4,770·73	3,821·62	8,592·35	2,242	6	9	
R. C. do. ..	5,123	4,704	9,827	531	9,134	40	109	13	9,827	3,481·945	3,207·595	6,689·54	1,348	8	8	
Pres. do. ..	850	687	1,537	563	130	448	218	178	1,537	628·01	463·45	1,091·46	257	8	4	
Wes. do. ..	760	564	1,324	360	70	71	694	129	1,324	534·4	352·8	887·2	264	2	1	
Hebrew do. ..	51	29	80	..	..	..	..	80	80	36·6	16·4	53·	12	1	1
	13,524	11,680	25,204	10,867	10,110	1,376	2,022	829	25,204	9,451·685	7,861·865	17,313·55	4,124	6	11	

APPENDIX C.

SCHEDULE of Applications for the Establishment of Denominational Schools received during the year 1868.

Name of Place.	Distance of nearest School.	Number of Children residing in the Locality.								Number of Children promised to attend.								Number of Parents or Guardians undertaking to send Children.								Council's Decision.
		Boys.	Girls.	Total.	C. E.	R. C.	Pres.	Wes.	Others.	Total.	Boys.	Girls.	Total.	C. E.	R. C.	Pres.	Wes.	Others.	Total.	C. E.	R. C.	Pres.	Wes.	Others.	Total.	
Crown Flat, R. C. ...	30	20	50	7	43	...	...	...	50	54	29	83	7	76	...	...	...	83	2	31	...	...	...	33
Nimitybelle, R. C.	16	16	32	1	31	...	...	...	32	1	31	...	...	...	32		
Sydney Hebrew School		
Villa Maria, R. C.	24	16	40	...	40	...	...	...	40	...	19	...	...	...	19		
TOTAL.....	...	30	20	50	7	43	...	...	50	94	61	155	8	147	...	...	...	155	3	81	...	...	...	84

APPENDIX D.

APPENDIX D.

Council of Education Office,
Sydney, 186 .

Sir,

I am directed by the Council of Education to invite your attention to the condition of the Certified Denominational School () at during the past

Quarters. By the provisions of the Public Schools Act, Sections 9 and 28, it is clearly contemplated that at least thirty children should be in regular attendance at a Denominational School receiving support from the Parliamentary grant. By Section 28, the Council is empowered to withdraw the Certificate from any School of this class not having thirty children in regular attendance, after the first day of January of the year 1868.

The Council has hitherto abstained from exercising this power, in order to see, for a further period, the progress of the Schools with an attendance below the minimum number. It is found that the School above referred to has had, according to the Returns certified as correct by the Local Board, for the

Quarters since the Public Schools Act came into operation, an average attendance as hereunder stated :—

		1867.
First Quarter	.. .. .	..
Second "	.. .. .	..
Third "	.. .. .	..
Fourth "	.. .. .	..
		1868.
First Quarter	.. .. .	..
Second "	.. .. .	..
Third "	.. .. .	..
Fourth "	.. .. .	..

Under these circumstances, the Council has decided to withdraw the Certificate at the close of the Quarter ending , and accordingly will not be responsible for any expense incurred in support of the School after that date.

I have the honor to be,
Sir,
Your most obedient Servant.

Secretary.

To

Chairman of the Local Board,
Certified Denominational School ()
at

APPENDIX E.

Council of Education Office,
Sydney, 186 .

Sir,

I am directed by the Council of Education to invite your attention to the condition of the Certified Denominational School () at during the past

Quarters. By the provisions of the Public Schools Act, Sections 9 and 28, it is clearly contemplated that at least thirty children should be in regular attendance at a Denominational School receiving support from the Parliamentary grant. By Section 28, the Council is empowered to withdraw the Certificate from any School of this class not having thirty children in regular attendance, after the first day of January of the year 1868.

The Council has hitherto abstained from exercising this power, in order to see, for a further period, the progress of the Schools with an attendance below the minimum number. It is found that the School above referred to has had, according to the Returns certified as correct by the Local Board, for the

Quarters since the Public Schools Act came into operation, an average attendance as hereunder stated :—

		1867.
First Quarter	.. .. .	..
Second "	.. .. .	..
Third "	.. .. .	..
Fourth "	.. .. .	..
		1868.
First Quarter	.. .. .	..
Second "	.. .. .	..
Third "	.. .. .	..
Fourth "	.. .. .	..

It will thus be seen that the Certificate of this School is liable to be withdrawn.

I have the honor to be,
Sir,
Your most obedient Servant,

Secretary.

To

Chairman of the Local Board,
Certified Denominational School ()
at

APPENDIX F.

APPENDIX F.

1. Inspector's Reports upon Schools in the Albury District.
2. Inspector's Report upon Schools in the Armidale District.
3. Inspector's Report upon Schools in the Bathurst District.
4. Inspector's Report upon Schools in the Camden District.
5. Inspector's Report upon Schools in the Cumberland District.
6. Inspector's Report upon Schools in the Goulburn District.
7. Inspector's Report upon Schools in the Maitland District.
8. Inspector's Report upon Schools in the Newcastle District.
9. Inspector's Report upon Schools in the Sydney District.

ALBURY DISTRICT.

DETAILED STATEMENT of the Certified Denominational Schools inspected.

CERTIFIED DENOMINATIONAL SCHOOLS.

ALBURY (C.E.) :—Visited, 8th September.

Numbers present at inspection :—Boys, 18 ; girls, 11 ; total, 29.

The organization is still defective in the matter of the distribution and extent of the subjects, and in the absence of some of the documents relating thereto. Maps, and a larger black-board are wanted. The pupils are orderly, but the government is too severe. Reading and writing are well taught ; but object lessons, singing, and drawing, are entirely omitted from the "Course of Instruction."

ALBURY (R.C.) :—Visited, 10th September.

Number present at inspection, 35 boys.

Since the month of August the girls have been withdrawn, and placed under the charge of teachers unconnected with the Council. Considering the double purpose the building serves, the organization is very fair. The discipline is not sufficiently even and firm. The teacher possesses fair skill, and he is zealous in the performance of his duties. The general state of the attainments is very fair.

COROWA (C.E.) :—Visited, 20th October.

Numbers present at inspection :—Boys, 36 ; girls, 26 ; total, 62.

There is still an insufficient stock of furniture, which is a serious drawback now the attendance has increased. The discipline and general management have greatly improved since the appointment of the present teacher. He has, however, been too short a time in charge to raise the standard of the attainments in an equal degree.

GUNDAGAI SOUTH (C.E.) :—Visited, 22nd July.

Numbers present at inspection :—Boys, 15 ; girls, 9 ; total, 24.

The building is unsightly, the walls being propped up. There is sufficient furniture, but it is not placed in the best position. The discipline is bad, the tone of the school low, and the state of the attainments is unsatisfactory. Since the inspection, however, another teacher has been appointed, and the school is, in every respect, improved. Singing and drawing were not taught at the date of my visit.

JUGIONG (R.C.) :—Visited, 24th July.

Numbers present at inspection :—Boys, 15 ; girls, 16 ; total, 31.

The school has not yet been provided with out-offices. The shape and position of the furniture are not good. The classification has been improved, and the discipline is fair. The authorized books are now in use, but the methods employed are defective. The attainments are not high, but the pupils are making improvement. Singing and drawing are not taught.

TUMUT (R.C.) :—Visited, 29th July.

Numbers present at inspection :—Boys, 21 ; girls, 15 ; total, 36.

The school is now held in a rented cottage, of fair shape and size. The furniture is not sufficient, but its shape is very fair. The discipline is not sufficiently firm and sustained. The method is not very skilful, but the teacher is painstaking. The supply of the proper books was only received to-day. The teacher has not had charge for any length of time. The attainments range from tolerable to fair ; but the "Course of Secular Instruction" does not include, at present, object lessons, singing, or drawing.

WAGGA WAGGA (R.C.) :—Visited, 17th August.

Numbers present at inspection :—Boys, 26 ; girls, 15 ; total, 41.

The church is still used as the schoolroom. In the matter of the classification of the pupils, the organization is defective. The discipline is not sufficiently thorough, and the method is capable of being improved. The state of the attainments is fairly satisfactory. Singing has not yet been introduced.

ARMIDALE DISTRICT.

DETAILED Statement of the Denominational Schools inspected in 1868.

ARMIDALE (C.E.) :—Visited, 3rd September, 1868.

Numbers at the examination :—Boys, 31 ; girls, 43 ; total, 74.

1. The schoolhouse is suitable and in good condition, but not neat in external appearance. The playground requires to be kept in better order. A few desks are required ; otherwise there is an adequate supply of material appliances. The organization is very fair. 2. The pupils are not sufficiently regular in attendance, and but moderately orderly in their movements. The out-door supervision of the pupils is not satisfactory. The moral tone of the school is fair. 3. The prescribed subjects are taught throughout with tolerable efficiency ; the classification and lesson documents being arranged with fair skill ; but the teaching of the lower classes too mechanical, and deficient in animation and energy. 4. The average proficiency of the pupils ranges from tolerable to fair.

FREDERICTON

FREDERICTON (C.E.) :—Visited, 14th December, 1868.

Numbers at the examination :—Boys, 23 ; girls, 16 ; total, 39.

1. This school is conducted in a church, and is supplied with adequate material appliances except diagrams. Some of the forms require altering to suit the younger pupils. The organization is fair. 2. The moral character of the school is fair. The playground needs to be kept in better order, and the discipline of the first class to be more effective. 3. The prescribed course of instruction is followed ; the lesson documents are neatly and intelligently constructed, but the classification is too minute to be effective. The teaching is earnest and painstaking ; but it is too mechanical, and too deficient in power and vivacity. 4. The attainments and mental culture of the lower classes are moderate—of the upper class, tolerable.

GLEN INNES (C.E.) :—Visited, 6th July, 1868.

Numbers at the examination :—Boys, 27 ; girls, 13 ; total, 40.

1. The building is small, ill-conditioned, and unsuitable for school purposes. The schoolroom is uncomfortable and encumbered with church furniture. The fence and out-offices are in an unsatisfactory condition. There is no residence for the teacher. The supply of material appliances is fair. 2. The children are cheerful and clean in appearance, but unpunctual in their attendance, and not properly regulated in their movements. Under examination, however, they conduct themselves with fair propriety. Sufficient attention is not bestowed upon the schoolroom, as regards neatness and cleanliness. 3. The prescribed subjects are taught, with barely tolerable skill and efficiency. The classification is defective ; but the lesson documents are, on the whole, arranged with fair intelligence. The teaching requires to be more equally distributed among the classes. 4. The attainments of the pupils in the primary subjects of instruction are moderate—in the secondary, fair.

GOONOO GOONOO (C.E.) :—Visited, 25th May, 1868.

Numbers at the examination :—Boys, 6 ; girls, 4 ; total, 10.

1. The building is suitable, but is not properly furnished. The playground is not fenced in, and the out-offices are inadequate. There is a tolerable supply of working materials, but unauthorized books are used in the school. The organization is moderate. 2. The pupils are irregular in their attendance, diffident in their manner, but clean, attentive, and well-behaved. The moral character of the school is fairly satisfactory. 3. The prescribed subjects are taught, with the exception of singing, sewing, and object lessons. The classification is very defective ; and the teaching, though regulated by tolerably arranged lesson documents, is feeble and moderately efficient. 4. The attainments and mental culture of the pupils are small.

GUNNEDAH (C.E.) :—Visited, 1st June, 1868.

Numbers at the examination :—Boys, 24 ; girls, 25 ; total, 49.

1. This school is conducted in a church, the internal appearance of which is not satisfactory as regards lighting and neatness of appearance. There are no out-offices and supply of water, and the playground is not fenced in. Additional furniture is required ; otherwise there is a fair supply of material appliances. The organization is moderate. 2. The moral character of the school is not satisfactory as regards the conduct of the pupils, the appearance of the schoolroom, and the performance of the school operations. 3. The prescribed subjects are taught with moderate efficiency ; the lesson documents, however, are on the whole arranged with fair skill. The classification is somewhat defective. 4. The attainments and mental culture of the pupils are moderate.

KEMPSEY (C.E.) :—Visited, 9th December, 1868.

Numbers at the examination :—Boys, 21 ; girls, 30 ; total, 51.

1. This school is conducted in a church, which is very suitable as regards airiness, lighting, and accommodation ; the playground is not fenced in nor provided with out-offices. Additional furniture is needed ; otherwise there is an adequate supply of working materials. 2. The moral character of the school is in most respects pleasing. 3. The prescribed course of instruction is, with the exception of singing, followed, and is also regulated with fair skill. The efficiency of the teaching is barely tolerable. 4. The proficiency of first and third classes is tolerable, that of the second class moderate.

NUNDLE (C.E.) :—Visited, 26th May, 1868.

Numbers at the examination :—Boys, 12 ; girls, 13 ; total, 25.

1. Repairs to the building are needed. The furniture is defective both in quality and quantity. The character of the organization is, on the whole, only moderately satisfactory. 2. The attendance is low, irregular, and unpunctual ; and the pupils, though well-behaved, are awkward in their movements and deficient in self-reliance. The moral character of the school is tolerable. 3. Singing is not practised ; otherwise the prescribed course of instruction is followed and tolerably well regulated, though the teaching is only moderately effective. 4. The average proficiency of the pupils is very moderate.

TAMWORTH (C.E.) :—Visited, 22nd May, 1868.

Numbers at the examination :—Boys, 26 ; girls, 29 ; total, 55.

1. The building is in good condition, but bare, dirty, and disorderly in its internal appearance. The apparatus is tolerably adequate, but the furniture is insufficient and unsuitable. The out-offices are in a very objectionable condition. 2. The moral aspect of the school is not satisfactory. 3. The prescribed subjects are taught ; the classification is judicious, and the lesson documents are intelligently constructed. The teaching is defective in energy and efficiency. 4. The proficiency of the pupils is moderate.

ARMDALE (R.C.) :—Visited, 4th September, 1868.

Numbers at the examination :—Boys, 33 ; girls, 24 ; total, 57.

1. The schoolhouse and residence belong to the teacher, and are kept in exemplary good order. A playground with adequate out-office accommodation is needed. There is a good supply of material appliances, but the desks are unsuitable both in design and arrangement. The organization is passable. 2. Sufficient attention is not paid to the out-door supervision of the pupils and to the orderly performance of the school operations ; otherwise, the moral character of the school is fairly satisfactory. 3. The prescribed subjects are taught, but not in strict accordance with the standard course. Unauthorized text-books are in use. The teaching is painstaking and tolerably well regulated, but the methods are too mechanical, and are not applied with sufficient animation. 4. The average attainments of the first class are moderate, and of the second and third classes tolerable. Moderate self-reliance and mental culture are evinced by the pupils under examination.

APPENDIX.

15

GRAFTON (R.C.) :—Visited, 24th September, 1868.

Numbers at the examination :—Boys, 24 ; girls, 16 ; total, 40.

1. This school is conducted in a spacious but rather gloomy room, formerly occupied as a store, and fitted with barred windows instead of glazed. The playground is neither fenced in nor provided with out-offices. Additional furniture is needed ; otherwise, there is a fair supply of material appliances. 2. The moral character of the school is fair. 3. With the exception of singing, sewing, and drawing, the prescribed course of instruction is followed and regulated with tolerable intelligence. The condition of the lesson documents and school records as regards neatness and cleanliness is not pleasing ; the teaching is too empirical to be properly effective. 4. The proficiency of the pupils ranges from small to tolerable.

GUNNEDAH (R.C.)

This school was not in operation at the date of my visit to the district.

KEMFSEY (Pres.)

Numbers at the examination :—Boys, 15 ; girls, 18 ; total, 33.

1. This school is conducted in a church, and is well found in material appliances. The organization is fairly satisfactory. 2. The moral tone of the school is respectable. 3. The prescribed course of instruction is followed and intelligently regulated. The teaching is painstaking and tolerably skilful. 4. The general proficiency of the lower classes is moderate, and that of the upper class tolerable.

CARR'S CREEK (Wes.) :—Visited, 29th September, 1868.

Numbers at the examination :—Boys, 17 ; girls, 14 ; total, 31.

1. The building is in fair condition, but being used as a chapel it is not suitably furnished. There is no supply of water, and, properly speaking, no playground. The organization is barely tolerable. 2. The prevailing tone of the school is tolerably satisfactory. 3. With the exception of singing and drawing, the prescribed subjects are taught, and the teaching is tolerably skilful and effective. 4. The proficiency of the pupils ranges from moderate to fair.

ULMARRA (Wes.) :—Visited, 1st October, 1868.

Numbers at the examination :—Boys, 20 ; girls, 18 ; total, 38.

1. The building is in good condition, and well furnished, pleasantly placed, and, though used as a chapel, suitable for school purposes. The out-offices are in a neglected condition. The organization is fair. 2. The discipline is mild, firm, and effective ; and the moral tone of the school is, in other respects, fairly satisfactory. 3. The prescribed subjects are taught, except singing and sewing ; the lesson documents are arranged with fair ability, and the teaching, though not equally distributed, is tolerably skilful. 4. The proficiency of the pupils ranges from moderate to tolerable.

BATHURST DISTRICT.

DETAILED STATEMENT of Denominational Schools inspected in 1868.

BATHURST (Pres.) :—Visited, 16th November.

Numbers present :—Boys, 22 ; girls, 34 ; total, 56.

A good building, but the internal arrangements awkward for teaching purposes. The furniture is not of the best kind, and the playground is much too small. The discipline is effective ; the moral tone is tolerable, but promising. The instruction is careful and industrious ; the attainments are, on the whole, only tolerable.

BATHURST (C.E.—Infants) :—Visited, 17th November.

Numbers present :—Boys, 27 ; girls, 33 ; total, 60.

An excellent building, with a good playground attached. A few desks and hat-pegs are needed. The discipline is mild, but firm and effective ; the general spirit of the school is pleasing. The subjects are suitable, and the methods are fairly appropriate. The proficiency is satisfactory.

BATHURST (C.E.—Primary) :—Visited, 17th November.

Numbers present :—Boys, 32 ; girls, 21 ; total, 53.

Hat-pegs and suitable furniture are needed ; otherwise, the material condition is excellent. The government is not effective ; the moral tone is barely tolerable. The instruction is energetic and fairly intelligent, but lacks penetrative force. The average proficiency is tolerable.

BATHURST (R.C.—Boys) :—Visited, 25th November.

Number present :—Boys, 94.

The schoolroom is suitable, but too small for the attendance, a portion of the room being partitioned off for another school. There is no playground, and the desks are not of the best description. The teaching is intelligent and energetic, the discipline is effective, and the results are satisfactory. The subjects do not include singing or drawing.

BATHURST (R.C.—Infants) :—Visited, 26th November.

Numbers present :—Boys, 18 ; girls, 100 ; total, 118.

There is no separate room for the infants, who are taught in the same room with the girls ; the teachers of both schools therefore labour under disadvantages. The want of a suitable playground for the infants is a serious defect in the organization. The order and discipline are fairly effective, the instruction is careful and industrious, and the proficiency is, in the circumstances, satisfactory. New premises are in the course of erection.

BATHURST

BATHURST (R.C.—Girls):—Visited, 27th November.

Number present:—Girls, 65.

A good building, fairly furnished, but not provided with a suitable playground. The discipline is mild, but effective; the general spirit of the school is very pleasing. The teaching is systematic, earnest, and intelligent. The results are satisfactory, and substantial progress may be expected.

BURROWA (R.C.):—Visited, 10th June.

Numbers present:—Boys, 22; girls, 28; total, 50.

The organization is fair. The discipline is healthy. The teaching is earnest and intelligent; and the methods are suitable and effective. The proficiency varies from tolerable to good.

BURROWA (C.E.):—Visited, 10th June.

Numbers present:—Boys, 17; girls, 9; total, 26.

The organization is tolerable. The government is mild, and defective in energy. The instruction is sound, and the methods suitable. The proficiency is from tolerable to fair.

FREDERICK'S VALLEY (C.E.):—Visited, 8th December.

Numbers present:—Boys, 11; girls, 11; total, 22.

The building is suitable, but not properly or sufficiently furnished. The playground, which is a good one, is unfenced. The discipline is prompt and vigorous—thoroughly effective. The instruction is conducted with great energy, and the results are, in the circumstances, satisfactory.

GUNTAWANG (C.E.):—Visited, 21st October.

Numbers present:—Boys, 13; girls, 18; total, 31.

The building is suitable, and in good repair. The furniture is sufficient, but badly arranged. The supply of books is scanty. The government is tolerably effective; the teaching is earnest, but the instructional documents are only moderately regulated. In the circumstances, the results are passable.

HARTLEY (R.C.):—Visited, 9th September.

Numbers present:—Boys, 17; girls, 19; total, 36.

The playground is unfenced, and the furniture is insufficient and unsuitable. The building itself is only tolerable. The discipline is tolerably effective. The instruction is industrious and tolerably intelligent. The pupils evince tolerable proficiency, but are wanting in animation.

KELSO (C.E.):—Visited, 1st December.

Numbers present:—Boys, 26; girls, 28; total, 54.

The material condition of this school is, on the whole, good. The discipline is effective; the general spirit of the school is pleasing. The instruction is careful and industrious; and the proficiency is, as a whole, reasonably satisfactory.

LAMBING FLAT (R.C.):—Visited, 1st June.

Numbers present:—Boys, 20; girls, 21; total, 41.

The school is still conducted in the church. It is now fairly supplied with apparatus, but the furniture is scanty. In the circumstances, the discipline is tolerable. The teaching is marked by industry, but fails in energy. The methods are suitable, and the attainments are tolerable.

MUDGE (R.C.):—Visited, 30th September.

Numbers present:—Boys, 36; girls, 25; total, 61.

The closets need repair, and the teacher's residence is quite unfit for use. New furniture has just been obtained. The government is mild, but firm. The moral tone is fair, and likely to improve. The teaching is intelligent and industrious; and the methods are suitable. The proficiency ranges from tolerable to good; the average may be estimated as fair.

MUDGE (C.E.—Primary):—Visited, 1st October.

Numbers present:—Boys, 43; girls, 27; total, 70.

An excellent building, well furnished and supplied with working materials. The playground needs fencing. The government is prompt and vigorous; the general spirit of the school is pleasing. The instruction is intelligent and well regulated; the methods are suitable, and applied with energy. The proficiency is satisfactory. In addition to the ordinary subjects, geometry and algebra are taught.

MUDGE (C.E.—Infants):—Visited, 2nd October.

Numbers present:—Boys, 22; girls, 14; total, 36.

A tolerable building, but without a gallery or suitable furniture for an infant school. The discipline is tolerable. The instruction is only moderately regulated, and lacks animation and energy. The attainments are not, on the whole, satisfactory.

O'CONNELL (C.E.):—Visited, 24th August.

Numbers present:—Boys, 16; girls, 15; total, 31.

There is a deficiency in furniture; otherwise, the organization is reasonably satisfactory. The discipline is prompt, energetic, and vigilant. The instruction is intelligent and industrious, and the methods are good. The attainments are satisfactory—substantial work is being done.

ORANGE (R.C.) :—Visited, 10th December.

Numbers present :—Boys, 30 ; girls, 53 ; total, 83.

The school is conducted in a rented building, which is tolerably suitable, but too small and not well situated. The furniture is insufficient, there is no proper playground, and hat-pegs are much needed. The discipline is effective ; the instruction is careful and industrious ; and the attainments are satisfactory.

RYLSTONE (C.E.) :— Visited, 28th September.

Numbers present :—Boys, 13 ; girls, 19 ; total, 32.

The building is not a proper schoolroom, but is tolerably suitable ; it is the property of a private person, who gives the use of it free. The furniture is bad. The discipline and moral tone are fair. The instruction is tolerably regulated ; and the methods are judicious. The proficiency is reasonably satisfactory.

SOFALA (R.C.) :—Visited, 29th October.

Numbers present :— Boys, 25 ; girls, 55 ; total, 80.

A good building, but too small for the attendance, and very imperfectly furnished. The playground is also unfenced. A supply of school materials had just been received ; previously the supply was very scanty. The discipline is tolerably effective ; the instruction is moderately regulated, but is wanting in penetrative power. The average attainments are nearly tolerable.

SOFALA (C.E.) :—Visited, 30th October.

Numbers present :—Boys, 44 ; girls, 39 ; total, 83.

Infants.—A very unfit building, without gallery or other suitable furniture. The discipline is mild ; the instruction is careful ; and the attainments are reasonably satisfactory. The general spirit of the school is pleasing.

Primary.—The school is well furnished and supplied with apparatus ; but a new building is urgently required. The discipline is thoroughly effective ; the moral tone is good ; and the instruction is well regulated. The proficiency is creditable.

WELLINGTON (R.C.) :—Visited, 16th December.

Numbers present :—Boys, 13 ; girls, 17 ; total, 30.

An indifferent building, in bad repair, and insufficiently supplied with furniture, which is badly arranged. The government is kindly, and tolerably effective. The teaching is marked by care and tact ; but the methods need improvement. The results range from moderate to fair ; the average being nearly tolerable.

J. M'CREIDIE,
Inspector, Bathurst District.

CAMDEN DISTRICT.

DETAILED STATEMENT of the condition of Certified Denominational Schools inspected in 1868.

The remarks under head 1 relate to the material condition of the schools.
2 to their moral condition.
3 to the subjects and methods of instruction.
4 to the proficiency of the pupils.

ASHFIELD (C.E.) :—Visited, 29th May, 1868.

Numbers present :—Boys, 31 ; girls, 20 ; total, 51.

1. The furniture is not suitably arranged, otherwise the material condition of the schoolhouse is good. There is no teacher's residence. 2. The discipline is good. 3. The instruction is carried on with intelligence and skill. 4. The proficiency is very fair.

CAMPBELLTOWN (C.E.) :—Visited, 25th November, 1868.

Numbers present :—Boys, 52 ; girls, 27 ; total, 79.

1. The out-offices are in need of repairs, and the teacher's residence should be enlarged and reshingled. 2. The discipline is healthy. 3. The instruction is carried on with fair skill and efficiency. The teacher is intelligent and painstaking. 4. The proficiency ranges from tolerable to very fair.

COOK'S RIVER (C.E.) :—Visited, 27th and 28th May, 1868.

Numbers present :—Boys, 51 ; girls, 33 ; total, 84.

1. Some slight repairs are needed, otherwise the material condition of the school is fair. 2. The discipline is tolerably healthy. 3. The methods are fairly satisfactory, and the teaching is carried on with earnestness. 4. The proficiency is tolerable.

COOK'S RIVER (C.E.) (Infants) :—Visited, 27th May, 1868.

Numbers present :—Boys, 37 ; girls, 23 ; total, 60.

1. The material condition of the school is good. 2. The pupils are clean, and fairly orderly and attentive. 3. The instruction is carried on with industry and tolerable skill. The methods are moderately appropriate. 4. The proficiency is moderate.

COBBITY (C.E.) :—Visited, 10th June, 1868.

Numbers present :—Boys, 15 ; girls, 18 ; total, 33.

1. A teacher's residence is needed, otherwise the material condition is reasonably good. 2. The discipline is healthy. 3. The teacher is earnest and industrious, and the methods are tolerably appropriate. 4. The proficiency is moderate.

ENFIELD (C.E.) :—Visited, 8th July, 1868.

Numbers present :—Boys, 25 ; girls, 33 ; total, 58.

1. A supply of new furniture is greatly needed, otherwise the material condition is good. 2. The discipline is only moderately healthy. 3. The ordinary subjects are taught with industry. The methods are weak and ineffective. 4. The proficiency is unsatisfactory.

FOX GROUND (C.E.) :—Visited, 11th September, 1868.

Numbers present :—Boys, 15 ; girls, 21 ; total, 36.

1. The out-offices need rebuilding. In other respects, the school premises are in good repair, and they are tolerably suitable. 2. The discipline is defective. 3. The teacher is earnest and industrious. The methods are mechanical and ineffective. 4. The results produced are small.

GERRINGONG (C.E.) :—Visited, 11th September, 1868.

Numbers present :—Boys, 22 ; girls, 16 ; total, 38.

1. The material condition is fair. 2. The pupils are clean, and fairly orderly and attentive. 3. The teacher is careful and industrious. The methods are mechanical. 4. The results are tolerably satisfactory.

JAMBEROO (C.E.) :—Visited, 9th and 10th September, 1868.

Numbers present :—Boys, 24 ; girls, 15 ; total, 39.

1. The furniture is good, otherwise the material condition is very unsatisfactory. 2. The pupils' attendance is unsatisfactory. They are, as a whole, fairly clean, orderly, and attentive. 3. The teaching, though apparently carried on with fair intelligence and skill, is not effective. 4. The proficiency is moderate.

LORD'S FOREST (C.E.) :—Visited, 17th December, 1868.

Numbers present :—Boys, 23 ; girls, 22 ; total, 45.

1. New out-offices have been erected. There is no residence provided for the teacher; otherwise the material condition is good. 2. The discipline is healthy. 3. The teacher is intelligent and industrious. The methods are fairly appropriate. 4. The progress made is fairly satisfactory.

TERARA (C.E.) :—Visited, 3rd September, 1868.

Numbers present :—Boys, 14 ; girls, 15 ; total, 29.

1. There is no teacher's residence. The playground needs fencing, and the schoolhouse should be cleaned and painted. 2. The discipline is only moderately healthy. 3. The teaching is weak and ineffective. The methods are not appropriate. 4. The results—except in the 1st class—are very moderate.

WOLLONGONG (C.E.) :—Visited, 15th December, 1868.

Numbers present :—Boys, 58 ; girls, 25 ; total, 83.

1. The material condition is fairly satisfactory. 2. The discipline is very good. 3. The instruction is carried on with earnestness and intelligence. The methods are suitable. 4. The proficiency is satisfactory.

WOONONA (E.C.) :—Visited, 10th December, 1868.

Numbers present :—Boys, 26 ; girls, 47 ; total, 73.

1. The material condition, furniture excepted, is fair. 2. The discipline is only tolerably healthy. 3. The instruction is feeble and ineffective. The classification is not judicious. The methods are inappropriate. 4. The results are unsatisfactory.

BARGO EAST (R.C.) :—Visited, 24th September, 1868.

Numbers present :—Boys, 16 ; girls, 10 ; total, 26.

1. The building is not central, and the furniture is but moderately suitable, otherwise the material condition is fair. 2. The discipline is not effective. 3. The prescribed subjects are nominally taught, but the methods used are very unsuitable. 4. The proficiency is very moderate.

CABRAMATTA (R.C.) :—Visited, 22nd July, 1868.

Numbers present :—Boys, 20 ; girls, 18 ; total, 38.

1. The playground is not fenced, and out-offices have not been provided. Additional furniture is needed. In other respects, the material condition is tolerably satisfactory. 2. The discipline is fair. 3. The teacher is earnest and industrious, and the instruction is carried on with tolerable skill. 4. The proficiency ranges from tolerable to fair.

CAMPBELLTOWN (R.C.) :—Visited, 26th November, 1868.

Numbers present :—Boys, 44 ; girls, 39 ; total, 83.

1. New closets have been erected. The material condition is very fair. 2. The discipline is good. 3. The teachers are earnest and painstaking. The methods are fairly appropriate. 4. The results produced are very fair.

CHARCOAL (R.C.) :—Visited, 11th December, 1868.

Numbers present :—Boys, 19 ; girls, 19 ; total, 38.

1. No improvement has been made in the material condition of the school since last inspection. The premises are altogether unsuitable for school purposes. 2. The discipline is moderate. 3. The teacher is energetic and industrious, but his methods are defective, and the instruction is therefore unsatisfactory. 4. The proficiency is only moderate.

COOK'S RIVER (R.C.) :—Visited, 26th May, 1868.

Numbers present :—Boys, 23 ; girls, 24 ; total 47.

1. Furniture is needed ; otherwise the material condition of the school is satisfactory. 2. The discipline is moderate. 3. The teacher is earnest, but unskilful. 4. The proficiency is very moderate.

DAPTO (R.C.) :—Visited, 14th December, 1868.

Numbers present :—Boys, 21 ; girls, 18 ; total, 39.

1. The furniture is unsuitable ; otherwise the material condition is fair. 2. The pupils are fairly regular and punctual, and their cleanliness, order, and attention, are tolerably satisfactory. 3. The methods are tolerably judicious, and they are applied with much earnestness. 4. The proficiency is fair.

JAMBEROO (R.C.) :—Visited, 9th September, 1868.

Numbers present :—Boys, 28 ; girls, 14 ; total, 42.

1. Out-offices have been erected since last inspection. The material condition is now tolerably satisfactory. 2. The discipline is moderately healthy. 3. The instruction is weak and inefficient. The methods are tolerably suitable, but more energy and tact are required in their application. 4. The proficiency is only tolerable.

IRISHTOWN (R.C.) :—Visited, 18th December, 1868.

Numbers present :—Boys, 22 ; girls, 18 ; total, 40.

1. New furniture is greatly needed ; otherwise the material condition of the school is fair. 2. The discipline is moderately healthy. 3. The teacher is earnest and industrious, but his methods are ineffective. 4. The proficiency—except in the third class—is only moderate.

THE OAKS (R.C.) :—Visited, 12th June, 1868.

Numbers present :—Boys, 15 ; girls, 21 ; total, 36.

1. There is no residence for the teacher, and the furniture is insufficient and unsuitable ; in other respects the material condition is good. 2. The discipline is fair. 3. The methods are very defective—little beyond rote learning being attempted. 4. The proficiency is very moderate.

ROCKY POINT (R.C.) :—Visited, 16th December, 1868.

Number present :—7.

1. A supply of suitable furniture is much needed. A residence has not been provided for the teacher ; otherwise the material condition is very fair. (No examination was held, nearly all the pupils having been withdrawn by their parents from the school.)

SPANIARD'S HILL (R.C.) :—Visited, 23rd July, 1868.

Numbers present :—Boys, 13 ; girls, 12 ; total, 25.

1. The out-buildings and the teacher's residence are greatly in need of repairs. The school furniture is badly arranged. 2. The discipline is fair. 3. The ordinary subjects are taught with some skill, but more systematic effort on the part of the teacher is required to render the work effective. 4. The proficiency is not satisfactory.

ULLADULLA (R.C.) :—Visited, 4th August, 1868.

Numbers present :—Boys, 25 ; girls, 15 ; total, 40.

1. There are no out-offices, the playground is not cleared, and the school furniture is very unsuitable. 2. The discipline is healthy. 3. The methods are suitable, and the teaching is carried on with care and industry. 4. The proficiency is very fair.

WOLLONGONG (R.C.) :—Visited, 9th December, 1868.

Numbers present :—Boys, 37 ; girls, 27 ; total, 64.

1. The material condition of the school—furniture excepted—is tolerably satisfactory. 2. The discipline is moderately healthy. 3. The ordinary subjects are taught with industry, but the methods are mechanical and ineffective. 4. The proficiency is only tolerable.

CHARCOAL (Pres.) :—Visited, 11th December, 1868.

Numbers present :—Boys, 20 ; girls, 24 ; total, 44.

1. The buildings are in need of repairs, and the furniture is unsuitable. 2. The discipline is fair. 3. The teacher is earnest and tolerably skilful. The ordinary subjects are taught. 4. The proficiency ranges from tolerable to fair. Satisfactory progress has been made since last inspection.

DAPTO (Pres.) :—Visited, 14th December, 1868.

Numbers present :—Boys, 32 ; girls, 16 ; total, 48.

1. The material condition is only moderate. 2. The discipline is healthy. 3. The prescribed subjects are taught with intelligence and earnestness. The methods are appropriate. 4. The proficiency is very fair. Satisfactory progress has been made under the present teacher.

SHOOLHAVEN (Pres.) :—Visited, 1st September, 1868.

Numbers present :—Boys, 24 ; girls, 13 ; total, 37.

1. The furniture has been repaired, improved, and rearranged by the teacher, but, in all other respects, the material condition is still very unsatisfactory. 2. The pupils are only moderately regular ; in other respects the discipline is good. 3. The teaching is carried on with much earnestness. The methods are fairly appropriate. 4. The proficiency ranges from fair to good.

BOTANY (Wes.) :—Visited, 6th July, 1868.

Numbers present :—Boys, 22 ; girls, 16 ; total, 38.

1. There is no residence provided for the teacher, and the furniture is unsuitable. 2. The discipline is only tolerably healthy. 3. The instruction is carried on with much earnestness, but the methods are chiefly mechanical. 4. The proficiency is very moderate.

ROCKY POINT (Wes.) :—Visited, 16th December, 1868.

Numbers present :—Boys, 23 ; girls, 13 ; total, 36.

1. There is no teacher's residence, and the furniture is unsuitable ; otherwise the material condition is good. 2. Discipline is moderate. 3. The methods are defective. The ordinary subjects are taught. 4. The proficiency is moderate.

J. HUFFER,
Inspector.

DETAILED STATEMENT of the Condition of Denominational Schools in the Cumberland District inspected during the year 1868.

1.—CHURCH OF ENGLAND SCHOOLS.

BURWOOD :—Visited, 20th August.

Present at examination :—Boys, 21 ; girls, 21 ; total, 42.

1. The schoolroom is good, but not well furnished. 2. The pupils do not attend regularly or punctually ; they are given to talking, and not self-reliant. 3. An improvement has taken place in the character of the teaching since last year ; the methods are less mechanical, and more intelligent and skilful. 4. The proficiency is now tolerable.

CABRAMATTA :—Visited, 26th February.

Present at examination :—Boys, 6 ; girls 9 ; total, 15.

1. The schoolroom is rather small, but in tolerably good condition, and fairly furnished. 2. Discipline, properly so called, is unknown ; the pupils are noisy and rude, and under no proper restraint. 3. The instruction is ill-regulated, and unskilfully imparted. 4. As a whole, the proficiency is bad. (The teacher has been removed.)

CASTLE HILL :—Visited, 30th July.

Present at examination :—Boys, 40 ; girls, 25 ; total, 65.

1. The condition of the schoolroom is in all respects fairly satisfactory. 2. The pupils are noisy, talkative, inattentive, and in some instances, rude ; the moral aspect is very unsatisfactory. 3. The instruction is unskilfully regulated, and the methods of imparting it are too mechanical and obsolete. 4. The attainments generally are very moderate.

DURAL :—Visited, 31st July.

Present at examination :—Boys, 18 ; girls, 20 ; total, 38.

1. The schoolroom requires to be lined inside ; in other respects it is in fair condition and suitably furnished. 2. The pupils in their attendance are neither regular nor punctual ; they are tolerably clean, but not orderly and industrious. 3. The ordinary subjects are taught, but not with much effect. 4. The proficiency is but moderate.

EMU PLAINS :—Visited, 18th March.

Present at examination :—Boys, 39 ; girls, 31 ; total, 70.

1. Nothing has yet been done to render the schoolroom internally more seemly and comfortable ; lining to cover the bare unfinished walls is much needed ; it is fairly furnished. 2. The discipline is not exercised in a polished, genial manner ; for this reason, it fails in developing that gentle, subdued, and respectful demeanour, coupled with cheerful industry, which should be a main result of all school discipline and training. 3. It may be readily inferred from the description of the discipline, that the instruction is not effective ; the methods are not interesting and penetrative. 4. The proficiency is but moderate as a whole.

ENFIELD :—Visited, 14th May.

Present at examination :—Boys, 20 ; girls, 24 ; total, 44.

1. The building is good, but very unsuitably furnished. 2. The moral aspect of the school is fairly healthy. 3. The methods are appropriate, and applied with considerable skill. 4. The proficiency ranges from moderate to fair.

HUNTER'S HILL :—Visited, 13th November.

Present at examination :—Boys, 24 ; girls, 4 ; total, 28.

1. The material condition and furnishing of the school are very fair. 2. The discipline is tolerably effective, and the moral tone on the whole pleasing. 3. The prescribed subjects are taught ; the methods are fairly skilful. 4. The proficiency is nearly fair.

KURRAJONG NORTH :—Visited, 21st April.

Present at examination :—Boys, 17 ; girls, 8 ; total, 25.

1. The schoolhouse is in tolerably good repair, and supplied with fairly suitable furniture. 2. The attendance is irregular and unpunctual ; the moral aspect is not so healthy, in consequence, as it should be. 3. The work of teaching is carried on with energy and tolerable skill. 4. The proficiency ranges from moderate to fair.

KURRAJONG SOUTH :—Visited, 15th May.

Present at examination :—Boys, 15 ; girls, 13 ; total, 28.

1. The building is in fair condition, but ill arranged and furnished for school purposes. 2. The discipline is aimless and ineffective. 3. The instruction is unskilfully regulated, and as unskilfully imparted. 4. The proficiency is very indifferent.

MARSFIELD :—

MARSFIELD :—Visited, 13th August.

Present at examination :—Boys, 44 ; girls, 22 ; total, 66.

1. The building is good and suitable ; it is also suitably furnished. 2. The moral tone is not entirely satisfactory. 3. The methods are tolerably intelligent, but not applied with that life and tact which are requisite to render them fully penetrative and effective. 4. Upon the whole, the proficiency is above tolerable.

MULGOA :—Visited, 4th March.

Present at examination :—Boys, 15 ; girls, 10 ; total, 25.

1. The building is in bad condition ; the furniture is fair. 2. The discipline is feeble. 3. The ordinary subjects are unskilfully and ineffectively taught. 4. The attainments are but indifferent.

PARRAMATTA :—Visited, 18th August.

Present at examination :—Boys, 51 ; girls, 43 ; total, 94.

1. The material condition of the school is very satisfactory. 2. The discipline does not realize good results ; the moral tone is not very elevated. 3. As to matter, the instruction is appropriate, but the prevailing manner in which it is being imparted is too noisy. 4. The proficiency is not satisfactory, nor are the attainments as a whole more than barely tolerable.

PENNANT HILLS :—Visited, 26th August.

Present at examination :—Boys, 36 ; girls, 27 ; total, 63.

1. The whole material organization of the school is fairly satisfactory. 2. The discipline is not sufficiently firm, but taken as a whole, the moral character of the school stands fair. The instruction is carefully and conscientiously imparted. The methods are moderately skilful. 4. The proficiency is generally about tolerable.

PITT TOWN :—Visited, 21st October.

Present at examination :—Boys, 25 ; girls, 31 ; total, 56.

1. The material appliances are fairly suitable and satisfactory. 2. The discipline is improved, and the moral character, on the whole, pleasing. 3. The course of secular instruction is followed, and the teaching is conducted with fair skill and effect. 4. The progress made is in the main reasonable, and the attainments range between tolerable and fair.

RICHMOND :—Visited, 20th May.

Present at examination :—Boys 44 ; girls, 37 ; total, 81.

1. Since the date of last examination, the furniture has been altered and improved, but it is still short of what it ought to be. The room is inconveniently small. In other respects the organization is tolerable. 2. Whilst, as regards regularity, punctuality, cleanliness, order, and self-reliance, there is room for improvement, the discipline is upon the whole carefully exercised and tolerably effective. 3. The methods are reasonably skilful. 4. The results of the teaching reach to nearly fair upon the whole ; in arithmetic attainments do not rise to this estimate.

ROUSE HILL :—Visited, 29th July.

Present at examination :—Boys, 17 ; girls, 17 ; total, 34.

1. The building is good, but the furniture is not in keeping with it. 2. The discipline is not good, and the moral tone of the school, especially as indicated by the upper class, is anything but healthy. 3. The instruction cannot be said to be either carefully or skilfully regulated, nor are the methods definite and effective. 4. The attainments range from indifferent to nearly fair.

RYDE :—Visited, 12th November.

Present at examination :—Boys, 8 ; girls, 6 ; total, 14.

1. The schoolhouse needs repairing and cleaning. There is a sufficient supply of suitable furniture and apparatus, but a deficiency of books. 2. The discipline is fair. 3. The instruction is not well regulated, nor very systematically imparted. 4. The proficiency is nearly fair.

SEVEN HILLS :—Visited, 22nd May.

Present at examination :—Boys, 30 ; girls, 19 ; total, 49.

1. The building requires some repairs ; but for this, the material organization is satisfactory. 2. The discipline is defective, and the moral tone but moderately healthy. 3. The classification is injudicious, the programmes are too general, and the teaching is devoid of earnestness. 4. Viewed as a whole, the proficiency is barely tolerable.

SOUTH CREEK :—Visited, 25th June.

Present at examination :—Boys, 32 ; girls, 30 ; total, 62.

1. The schoolhouse is fairly furnished, but too small. 2. Order is defective. 3. The instruction is tolerably well regulated, and the methods of imparting it are intelligent. 4. The proficiency is tolerable in one or two subjects, and fair in the majority.

WILBERFORCE :—Visited, 17th June.

Present at examination :—Boys, 20 ; girls, 31 ; total, 51.

1. But that a considerable portion of the furniture is unsuitable, the condition of the school materially is tolerably good. 2. The moral character of the school is fair. 3. The methods are tolerably appropriate, and the instruction is careful and earnest. 4. The proficiency ranges generally from tolerable to fair.

WINDSOR :—Visited, 11th June.

Present at examination :—Boys, 33 ; girls, 18 ; total, 51.

1. The schoolroom has been considerably improved. The material organization is now reasonably good. 2. The discipline is not sufficiently firm and effective. 3. In some of the subjects the proficiency is fair, and in others moderate.

2.—ROMAN CATHOLIC SCHOOLS.

CONCORD :—Visited, 21st August.

Present at examination :—Boys, 22 ; girls, 12 ; total, 34.

1. As a building the schoolroom is very fair, but unsuitably furnished. 2. The discipline is very feeble. 3. The instruction is not intelligently regulated—the methods are superficial. 4. The attainments are very moderate.

ERMINGTON :—Visited, 28th October.

Present at examination :—Boys, 19 ; girls, 19 ; total, 38.

1. The building is good, and fairly supplied with furniture and apparatus. 2. The discipline is moderately healthy. 3. The classification is not judicious, nor are the lesson documents profitably arranged. 4. The proficiency ranges from moderate.

GREENDALE :—Visited, 5th March.

Present at examination :—Boys, 11 ; girls, 19 ; total, 30.

1. The material organization is fairly satisfactory. 2. The pupils are tolerably regular, but unpunctual ; in other respects the moral tone of the school is pleasing. 3. The instruction is imparted with tolerable intelligence and effect. 4. The proficiency is fair, except in arithmetic, in which it is but moderate.

KURAJONG :—Visited, 13th May.

Present at examination :—Boys, 14 ; girls, 17 ; total, 31.

1. Some addition has been made to the furniture. 2. The discipline is very lax ; the pupils manifest little of a scholar-like disposition. 3. The teaching is marked by a want of skill, earnestness, and penetration. 4. Progress is small, and the attainments are very moderate.

LANE COVE :—Visited, 20th November.

Present at examination :—Boys, 14 ; girls, 11 ; total, 25.

1. The school is kept in a very uncomfortable building. The furniture is badly arranged. 2. The discipline is moderately effective. A greater regard to cleanliness and tidiness in the pupils is necessary. 3. The ordinary subjects are taught, but not with much method or skill. 4. The proficiency is nearly tolerable.

NELSON :—Visited, 28th July.

Present at examination :—Boys, 17 ; girls, 17 ; total, 34.

1. As a building the schoolroom is in good condition, but badly and insufficiently furnished. 2. The discipline is very weak, and the moral tone low. 3. The teaching is mechanical and superficial. 4. The average proficiency is very moderate.

PARRAMATTA :—Visited, 14th August.

Present at examination :—Boys, 44 ; girls, 29 ; total, 73.

1. The school is held in a tolerably good building, which, however, is neither suitably nor sufficiently furnished. 2. The discipline is ineffective, and the moral aspect is not healthy. 3. The methods, judged by results, are neither intelligent nor are they earnestly and energetically applied. 4. The proficiency, viewed as a whole, ranks as moderate.

PENRITH :—Visited, 17th March.

Present at examination :—Boys, 18 ; girls, 14 ; total, 32.

1. The material condition of this school, especially as regards furniture, is not satisfactory. 2. The discipline does not secure its legitimate end. The moral tone is but moderately pleasing. 3. In themselves the methods may be accounted tolerable, but in their application there is a want of tact and energy. 4. Moderate and fair are the extremes of the range of the proficiency.

PETERSHAM :—Visited, 15th September.

Present at examination :—Boys, 21 ; girls, 20 ; total, 41.

1. The schoolroom is inconvenient in form, and insufficiently and unsuitably furnished. 2. The discipline is very feeble, and the moral aspect is not healthy. 3. The instruction is not skilfully regulated. 4. The attainments range from indifferent to moderate.

RICHMOND :—Visited, 10th June.

Present at examination :—Boys, 17 ; girls, 30 ; total, 47.

1. The building in which the school is carried on requires several repairs. It has had an improvement in its furniture, but still the quality and quantity are imperfect. 2. The attendance is very unpunctual. The discipline is feeble, and the moral aspect unfavourable. 3. The instruction is not skilfully regulated, and the methods are mainly mechanical. 4. The proficiency is very indifferent.

RIDE :—Visited, 29th October.

Present at examination :—Boys, 24 ; girls, 13 ; total, 37.

1. The material condition of the school is reasonably good. 2. The discipline is tolerable. 3. A desire is manifest to make the instruction profitable. 4. The attainments are between tolerable and fair.

SOUTH CREEK :—Visited, 3rd June.

Present at examination :—Boys, 20 ; girls, 13 ; total, 33.

1. The schoolroom is too small, and is also imperfectly furnished. 2. The pupils are irregular, but tolerably punctual ; they are very noisy and inattentive. 3. The teaching is purely mechanical. 4. Proficiency can scarcely be regarded as other than indifferent.

WINDSOR :—

WINDSOR :—Visited, 12th June.

Present at examination :—Boys, 65 ; girls, 45 ; total, 110.

1. The schoolroom is too small, and not very suitably furnished. 2. The discipline and moral aspect of the school are fairly satisfactory. 3. The classification is improved, but the arrangement of the pupils is adverse to effective teaching. The methods are moderately intelligent and successful. 4. The proficiency on the whole ranges from moderate to fair.

3.—PRESBYTERIAN SCHOOLS.

PARRAMATTA :—Visited, 11th August.

Present at examination :—Boys, 29 ; girls, 28 ; total, 57.

1. The material character of the school is very unsatisfactory. 2. The pupils are not sufficiently regular and punctual. In person and dress they do not pay requisite attention to cleanliness and tidiness. 3. The teaching is earnest, and the methods employed are fairly suitable. 4. The proficiency of the school, as a whole, ranges from tolerable to fair. In arithmetic, the attainments of the third class are but indifferent.

PARRAMATTA JUNCTION :—Visited, 19th and 25th August.

Present at examination :—Boys, 19 ; girls, 33 ; total, 52.

1. The schoolroom is inconveniently small. 2. Strict order is not maintained. 3. The instruction is painstaking, but mainly mechanical. 4. Considering the ages of the pupils—a large majority being under eight years—the proficiency is about tolerable.

PORTLAND HEAD :—Visited, 22nd October.

Present at examination :—Boys, 22 ; girls, 12 ; total, 34.

1. The building in which the school is held is good, but ill arranged and furnished for school operations. 2. The discipline is feeble, and the moral aspect not pleasing. 3. Mechanical and superficial methods prevail. 4. The attainments, on the whole, are moderate.

WINDSOR :—Visited, 29th May.

Present at examination :—Boys, 22 ; girls, 8 ; total, 30.

1. The school premises, which are rented by the teacher, are tolerably suitable, properly furnished, and well provided with apparatus and books. 2. The discipline is healthy. 3. The instruction is well regulated, and earnestly imparted. 4. The attainments range from fair to good.

4.—WESLEYAN SCHOOLS.

CASTLEBROUGH :—Visited, 20th October.

Present at examination :—Boys, 15 ; girls, 17 ; total, 32.

1. The organization of the school, as regards building, furniture, apparatus, and books, is satisfactory. 2. The discipline is tolerably effective. 3. The instruction is earnest and painstaking. 4. The proficiency is nearly fair.

LANE COVE :—Visited, 19th November.

Present at examination :—Boys, 17 ; girls, 22 ; total, 39.

1. The building serves the double purpose of a church and schoolroom ; in consequence, it is not well arranged for school work. 2. The discipline is not effective. 3. The instruction is superficial. 4. The attainments are barely tolerable.

PARRAMATTA :—Visited, 12th August.

Present at examination :—Boys, 44 ; girls, 6 ; total, 50.

1. The school generally is well organized. 2. The discipline is effective, and the moral character healthy. 3. The instruction is imparted with fair skill and effect. 4. The proficiency ranges from fair to good.

WINDSOR :—Visited, 28th May.

Present at examination :—Boys, 33 ; girls, 34 ; total, 67.

1. The material organisation is upon the whole fairly satisfactory. 2. The discipline is fairly healthy. 3. The standard of proficiency is taken as the guide in the matter of the instruction, and the methods are fairly intelligent and effective. 4. The attainments, as a whole, are nearly fair.

ALEXR. L. FORBES, A.M.,
Inspector of Schools.

DENOMINATIONAL SCHOOLS.

The following remarks are abridged statements of my detailed Reports upon the condition of the Denominational Schools inspected from 27th May to 31st December, 1868. The remarks chiefly relate to the material condition and organization of the schools, the general discipline and moral training, the subjects and methods of instruction, and the progress of the pupils in learning. The reports are given consecutively in the order of inspection,

BREADALBANE (R.C.) :—Visited, 27th May.

Numbers of pupils enrolled :—Boys, 18; girls, 17; total, 35.

Numbers present at examination :—Boys, 10; girls, 9; total, 19.

The building is in tolerable repair, and, with the removal of a partition, would be fairly suitable for the purposes of teaching. Some additional desks and forms are necessary, but in other respects there is a fair supply of working materials. The discipline admits of considerable improvement. All the subjects prescribed by the Council are not taught, and the attainments of the pupils are elementary. The present teacher has been but a short time in charge of the school. The residents are chiefly farmers, and many of the children are irregular in attendance.

YASS (C.E.) :—Visited, 1st June.

Numbers of pupils enrolled :—Boys, 60; girls, 39; total, 99.

Numbers present at examination :—Boys, 51; girls, 34; total, 85.

The grounds need fencing. The schoolroom is a good building, but although it has been recently erected, it is not in some respects suitable, owing to the bad arrangement of doors and windows. The furniture is of an unsuitable kind, but there is a sufficient supply of apparatus and books. The discipline and attainments of the pupils are tolerably satisfactory. In addition to the ordinary subjects, the elements of algebra, geometry, and mensuration, are taught to the advanced boys.

YASS (Pres) :—Visited, 2nd June.

Number of pupils enrolled :—Boys, 37; girls, 18; total, 55.

Number present at examination :—Boys, 30; girls, 9; total, 39.

The building is in good repair, but the schoolroom is too small; and although there is a fair supply of furniture, apparatus, and books. In some instances the pupils are not sufficiently punctual, but in other respects the discipline is tolerably satisfactory. The subjects taught accord with the "Course of Secular Instruction." The present teacher has been recently appointed, and the results of the examination may be chiefly attributed to the labours of the late master. The general attainments of the scholars are tolerably satisfactory.

YASS (R.C.—boys) :—Visited, 3rd June.

Numbers of pupils enrolled :—Boys, 64.

Numbers present at examination :—Boys, 58.

The grounds are fenced, and the schoolroom is suitable and in good repair. There is a fair supply of furniture, apparatus, and books. In some instances the pupils are not sufficiently punctual, but in other respects the discipline is tolerably satisfactory. The subjects taught accord with the "Course of Secular Instruction." The present teacher has been recently appointed, and the results of the examination may be chiefly attributed to the labours of the late master. The general attainments of the scholars are tolerably satisfactory.

YASS (R.C.—Girls) :—Visited, 4th June.

Number of pupils enrolled :—Girls, 51.

Number present at examination :—Girls, 41.

The schoolroom is much too small, and badly furnished, but new furniture will be supplied immediately. The apparatus and books are insufficient, but a stock has been ordered. I understand from the Local Board that a new schoolroom will be erected shortly. Four-fifths of the scholars are regular in attendance, but in some instances they are not sufficiently punctual. The discipline in other respects is creditable. All the ordinary subjects are taught excepting drawing, and on the whole the progress of the pupils is tolerably satisfactory. Many of them are very young, but there is a considerable number of grown-up girls whose education has been much neglected in their earlier years.

GINDERRA (C.E.) :—Visited, 18th June.

Numbers of pupils enrolled :—Boys, 14; girls, 18; total, 32.

Numbers present at examination :—Boys, 10; girls, 15; total, 25.

The material condition of this school is reasonably good, and the discipline is passable, but the instruction admits of considerable improvement. The attainments of the pupils range from moderate to tolerable.

CANBERRA (C.E.) :—Visited, 19th June.

Numbers of pupils enrolled :—Boys, 30; girls, 18; total, 48.

Numbers present at examination :—Boys, 27; girls, 14; total, 41.

The schoolroom is a substantial stone building, in good repair, but rather small. A supply of suitable furniture is much needed. The apparatus and books are barely sufficient, but a stock has been ordered. All the subjects prescribed by the Council are taught with considerable earnestness and success. The discipline and attainments of the scholars are tolerably satisfactory in most respects.

QUEANBEYAN (R.C.) :—Visited, 26th June.

Numbers of pupils enrolled :—Boys, 30; girls, 30; total, 60.

Numbers present at examination :—Boys, 24; girls, 24; total, 48.

Some additional desks and forms are required, but in other respects the material condition of the school is reasonably good at present. The pupils are fairly regular in attendance, but not sufficiently punctual. The discipline and instruction admit of considerable improvement. Many of the pupils have been absent from school for a length of time, and their attainments are elementary.

QUEANBEYAN (C.E.) :—Visited, 29th June.

Numbers of pupils enrolled :—Boys, 18; girls, 19; total, 37.

Numbers present at examination :—Boys, 15; girls, 10; total, 25.

The grounds are fenced. The school building is suitable, in good repair, neat and tidy in appearance, and well supplied with furniture and working materials. The discipline admits of great improvement. The instruction is not well regulated, and the attainments of the pupils are small and unsatisfactory.

BUNGENDORE (R.C.) :—Visited, 3rd July.

Numbers of pupils enrolled :—Boys, 20 ; girls, 23 ; total, 43.
Numbers present at examination :—Boys, 20 ; girls, 23 ; total, 43.

This school is held in the Roman Catholic Church. It affords ample accommodation, and is in good repair, but there is no fire-place, and it is very cold and uncomfortable during the winter, for both scholar and teacher. The supply of furniture and apparatus is unsuitable and insufficient. As regards discipline, much improvement is necessary. The attainments of the pupils are moderate.

TARALGA (R.C.) :—Visited, 28th August.

Numbers of pupils enrolled :—Boys, 22 ; girls, 9 ; total, 31.
Numbers present at examination :—Boys, 21 ; girls, 9 ; total, 30.

This school is conducted in the Roman Catholic Chapel; the building is commodious, in good repair, and the playground fenced. There are suitable out-buildings, but the supply of school furniture and books is barely sufficient. The discipline requires much improvement. The usual subjects are taught, excepting drawing, singing, and lessons on objects. The teacher has been but a few days in charge. Many of the pupils have been absent for a considerable time, and the general proficiency is very elementary.

TIRRANNA (C.E.) :—Visited, 14th October.

Numbers of pupils enrolled :—Boys, 18 ; girls, 14 ; total, 32.
Numbers present at examination :—Boys, 13 ; girls, 11 ; total, 24.

This school is conducted in the English Church. Its material condition is passably good. The pupils are not sufficiently punctual, but the cleanliness and order are tolerable. The usual branches are taught, and the attainments of the pupils range from moderate in the lower, to tolerable in the upper classes.

NORTH GOULBURN (C.E.) :—Visited, 15th October.

Numbers of pupils enrolled :—Boys, 35 ; girls, 30 ; total, 65.
Numbers present at examination :—Boys, 24 ; girls, 25 ; total, 49.

This school is held in the English Church. The material condition is good in most respects. The order and cleanliness are passable, but in several cases the pupils are unpunctual, and in all the classes the habit of attention requires much cultivation. All the usual subjects are attempted to be taught, but the progress of the scholars is slow and not sufficiently satisfactory.

GOULBURN (C.E.) :—Visited, 19th October.

Numbers of pupils enrolled :—Boys, 48 ; girls, 35 ; total, 83.
Numbers present at examination :—Boys, 44 ; girls, 31 ; total, 75.

This school is situated in a central and picturesque position. The schoolroom is sufficient in size, in good repair, tolerably well furnished, and supplied with a good stock of working materials. There are suitable out-buildings, but the playground is not fenced. All the ordinary branches are taught, with the elements of geometry and algebra to the advanced boys. The discipline is reasonably good, and the attainments of the pupils are tolerably satisfactory.

GOULBURN (R.C.—Boys) :—Visited, 21st October.

Number of pupils enrolled :—Boys, 78.
Number present at examination :—Boys, 70.

The playground is rather small, but the schoolroom is sufficient in size, in good repair, fairly furnished, and well supplied with apparatus and books. The pupils are rather talkative and inattentive; but considering that the teaching power is inadequate to the requirements of the school, the discipline is passable. The usual subjects are taught, excepting drawing and vocal music, and the attainments range from moderate to tolerable. The present master has been but a short time in charge of the school; its condition, however, has been considerably improved under his management.

GOULBURN (R.C.—Girls and Infants) :—Visited, 26th and 27th October.

Numbers of pupils enrolled :—Boys, 17 ; girls, 85 ; total, 102.
Numbers present at examination :—Boys, 16 ; girls, 78 ; total, 94.

This school is held in a building attached to the Convent of the Sisters of Mercy. The schoolroom is rather small, and the furniture and infant gallery are not very suitable, nor conveniently arranged for the purposes of teaching. A new class-room for the infants, with a suitable gallery for the oral teaching of the pupils, is much needed; and it would add much to the comfort and convenience of the ladies who manage the school, in carrying out that strict and effective discipline which they desire to maintain. The attainments of the pupils in the junior classes are moderately efficient, and in the senior, fairly satisfactory. All the usual subjects are taught, and the teachers are much interested in the education and moral training of the pupils.

MARULAN (C.E.) :—Visited, 10th November.

Numbers of pupils enrolled :—Boys, 33 ; girls, 34 ; total, 67.
Numbers present at examination :—Boys, 23 ; girls, 21 ; total, 44.

The schoolroom needs some repairs and two additional desks, and hat-pegs are required. The discipline is healthy, and the instruction well regulated. The pupils answer with thoughtful accuracy, and, for their ages and time under tuition, their attainments are reasonably satisfactory.

JEMBAICUMBENE (R.C.) :—Visited, 8th December.

Numbers of pupils enrolled :—Boys, 37 ; girls, 43 ; total, 80.
Numbers present at examination :—Boys, 28 ; girls, 29 ; total, 57.

The schoolroom is too small, in bad repair, and not properly furnished. The discipline is unsatisfactory, chiefly as regards punctuality and cleanliness. Drawing is not taught. The proficiency of the pupils in the other branches ranges from moderate to tolerable.

REIDSDALE (R.C.) :—Visited, 9th December.

Numbers of pupils enrolled :—Boys, 30 ; girls, 38 ; total, 68.

Numbers present at examination :—Boys, 20 ; girls, 19 ; total, 39.

The schoolroom is fairly suitable, and in good repair in most respects, but the furniture is insufficient in quantity. All the ordinary subjects are taught but music. The discipline and attainments of the scholars are tolerably satisfactory.

W. M'INTYRE,
Inspector of Schools.

Goulburn, 6th February, 1869.

MAITLAND DISTRICT.

DETAILED Statement shewing the condition of the Certified Denominational and other Schools inspected, as regards,—

1. Their material condition.
2. Their moral character.
3. The subjects and methods of instruction.
4. The proficiency of the pupils.

CHURCH OF ENGLAND.

BISHOP'S BRIDGE :—Visited, 8th December.

Numbers present at examination :—Boys, 17 ; girls, 22 ; total, 39.

1. The school is in tolerable condition, fairly suitable and sufficient, but badly organized. 2. The discipline was ineffective, and the order poor. 3. The subjects were appropriate, and arranged with moderate judgment ; but the methods were hurried, thoughtless, and mechanical. 4. Except reading and writing, to a very partial extent, the proficiency was very small.

BLANDFORD :—Visited, 19th August.

Numbers present at examination :—Boys, 7 ; girls, 15 ; total, 22.

1. The school is in poor repair, and very badly organized. 2. The discipline was wholly ineffective. 3. The occupation was partial, confused, and injudicious. The methods do not deserve the name. 4. The proficiency was extremely bad.

BUCHANAN :—Visited, 27th November.

Numbers present at examination :—Boys, 18 ; girls, 18 ; total, 36.

1. For the kind, the premises are fairly effective, and the schoolroom is tolerably well organized. 2. The majority of the pupils were very irregular, and all poorly clad ; otherwise, the moral character of the school was fair. 3. Most of the required subjects were taught ; and their arrangement evinced improvement. The methods were moderately intelligent and steady, but wanting force and animation. 4. The proficiency and mental culture were tolerable.

CASSILIS :—Visited, 27th August.

Numbers present at examination :—Boys, 17 ; girls, 9 ; total, 26.

1. The buildings are in fair condition, but the out-offices insufficient, and the organization is very defective. 2. The pupils were very unpunctual, but tolerably regular ; their conduct and manners had improved slightly, but their order and attention remained especially unsatisfactory. Moral tone very low. 3. Reading, writing, and arithmetic, were the only subjects regularly professed. The classification and occupation were very injudicious, and the methods obsolete. 4. Writing in the highest class ranged from fair to good, but the proficiency as a whole was very bad.

DENMAN :—Visited, 28th July.

Numbers present at examination :—Boys, 23 ; girls, 13 ; total, 36.

1. The premises are not enclosed, but otherwise fairly sufficient and suitable. The organization of the school is moderate. 2. The punctuality, regularity, cleanliness, and order of the pupils, were tolerable, but several were untidy in dress and appearance. 3. Object lessons and drawing were omitted from the instruction, which was otherwise suitable, but without arrangement. The methods, only partially witnessed, were earnest, but exceedingly mechanical. 4. The proficiency was moderate, but very partial.

ELLALONG :—Visited, 26th June.

Numbers present at examination :—Boys, 25 ; girls, 19 ; total, 44.

1. The school is in good repair and moderately furnished, but poorly supplied with apparatus. 2. Except a habit of prompting, the order of the pupils was tolerable. 3. The occupation was appropriate, and tolerably well arranged. The methods were very discursive and unprepared. 4. The proficiency was very small.

HINTON :—Visited, 26th November.

Numbers present at examination :—Boys, 20 ; girls, 20 ; total, 40.

1. The condition of the premises and organization of the school are tolerable. 2. As a whole the discipline was ineffective, but the order moderate. 3. Except singing, the subjects were taught as prescribed, and tolerably well arranged. The teaching was earnest, but not guided by modern method. 4. In reading and writing some fair instances were observed, but general proficiency was small.

JERRY'S PLAINS :—Visited, 27th July.

Numbers present at examination :—Boys, 36 ; girls, 23 ; total, 59.

1. The school is very deficient in furniture, apparatus, and books ; but otherwise in tolerable condition. 2. The pupils were very noisy, inattentive, and disorderly ; greatly addicted to prompting, indolent, forward, and subject to very little control. 3. Most of the prescribed subjects were taught, but their arrangement was very unsystematic. The methods were tolerably intelligent, but ineffectual. 4. The general proficiency was small ; but a few fair specimens of reading and writing were witnessed.

LAGUNA :—

LAGUNA :—Visited, 18th June.

Numbers present at examination :—Boys, 9 ; girls, 11 ; total, 20.

1. The schoolroom is clean, comfortable, and in tolerable repair ; but its organization very defective. 2. The moral character of the school was tolerable. The day was very wet, and all the pupils were not present. 3. Except singing and drawing, the subjects accorded with the standard, and the occupation was moderately well arranged ; but the methods were very mechanical and ineffectual. The proficiency showed improvement, but was still far below the standard.

MAITLAND, EAST :—Visited, 14th and 16th October.

Numbers present at examination :—Boys, 55 ; girls, 44 ; total, 99.

1. The building is new, suitable, and excellent, and the schoolroom fairly organized ; but out-offices and water had not been provided, nor was the ground quite enclosed. 2. Noisy and unsteady habits were prevalent ; otherwise, the order was tolerable. The occupation accorded with the prescribed course, and was arranged with passable judgment. The methods were tolerably intelligent and effective, but betrayed a tendency to "cramming." 4. The general proficiency ranged from tolerable to fair, with a partial display of intelligence.

MAITLAND, WEST (St. Mary's) :—Visited, 22nd and 27th October.

Numbers present at examination :—Boys, 79 ; girls, 67 ; total, 146.

1. The out-offices are very badly situated, and the schoolroom needs whitewashing ; otherwise, the state of the premises and the organization were fair. 2. Punctuality was not well observed in commencing business, and a restless habit prevailed among the pupils ; otherwise, their conduct, order, and attention were fair. The occupation was suitable and tolerably judicious. The methods were earnest, fairly intelligent, and tolerably effective. 4. The general proficiency ranged from moderate to tolerable ; but in reading, writing, and arithmetic, it rose to fair and good, in a considerable number of instances.

MAITLAND, WEST (St. Paul's) :—Visited, 17th November.

Numbers present at examination :—Boys, 32 ; girls, 38 ; total, 70.

1. The premises are substantially good, but show considerable deterioration. The out-offices are objectionable in every respect, and the organization of the school is very inferior. On the day of inspection, the room was rather untidy in appearance. 2. The moral aspect of the school was low, but with some signs of improvement. The school had resumed operations only about a month preceding inspection. 3. The subjects were suitable, but too advanced to be considered judiciously arranged. The methods were fairly appropriate as a whole, but not applied and illustrated with much judgment. 4. The proficiency in reading, writing, and arithmetic, approached the standard in a limited number of instances, but, upon the whole, it was small.

MILLFIELD :—Visited, 25th June.

Numbers present at examination :—Boys, 17 ; girls, 16 ; total, 33.

1. The premises, generally, are in moderate repair, but the schoolroom is poorly furnished and organized. 2. The moral tone was tolerable. 3. The subjects and methods were tolerable in all respects. 4. The progress and proficiency were moderate.

MORPETH (Primary) :—Visited, 18th and 19th November.

Numbers present at examination :—Boys, 31 ; girls, 31 ; total, 62.

1. The condition of the premises and the organization of the school are fair. 2. In general, the discipline is lax. Bad habits were prevalent among the pupils, but their conduct and order were tolerable. 3. The occupation was appropriate and tolerably judicious ; the methods were fairly intelligent and skilful. 4. The general proficiency ranged from moderate to tolerable in several instances, fair to good in the highest class.

MORPETH (Infant) :—Visited, 19th November.

Numbers present at examination :—Boys, 18 ; girls, 24 ; total, 42.

1. The room is clean, airy, and commodious, tolerably furnished, and provided with appliances. 2. Punctuality was badly observed ; otherwise, the moral tone of the school was moderate. 3. The occupation was fairly suitable, but indefinitely arranged ; the methods were wholly mechanical. The proficiency was tolerable in a few instances, but bad in most.

MUSWELLBROOK :—Visited, 30th and 31st July.

Numbers present at examination :—Boys, 59 ; girls, 37 ; total, 96.

1. The state of the premises and the organization of the school are fair. 2. The general conduct and order of the pupils had improved, but bad habits were still prevalent among them. 3. Except drawing, the prescribed subjects were taught, and arranged with fair judgment. The methods employed by the Master were tolerably skilful, but the teaching of the Assistant was very inefficient. 4. To a partial extent the proficiency ranged from tolerable to fair, but upon the whole it was small.

PATERSON :—Visited, 16th December.

Numbers present at examination :—Boys, 16 ; girls, 15 ; total, 31.

1. The schoolroom is much too small, badly ventilated, and poorly furnished ; the playground is exceedingly limited ; the out-offices are insufficient and unfit for use. The entire premises are in a very unserviceable state. 2. Except punctuality, the moral character of the school was tolerable. 3. The prescribed subjects were taught, but not carefully arranged. The methods were rather hurried, disconnected, and without preparation. 4. With a few exceptions in reading and writing, the proficiency was small.

PORT MAITLAND :—Visited, 21st October.

Numbers present at examination :—Boys, 15 ; girls, 24 ; total, 39.

1. The building is in process of decay, and otherwise in bad condition ; very poorly furnished, and scantily supplied with requisites. 2. The discipline was very ineffective, and the moral tone low. 3. The occupation was injudicious, and extremely confused. There were, properly speaking, no methods. 4. The general proficiency was bad, and destitute of mental culture.

SCONE :—Visited, 13th and 14th August.

Numbers present at examination :—Boys, 29 ; girls, 39 ; total, 68.

1. The premises are in fair condition, and, to a partial extent, well furnished. 2. The order and moral aspect of the school were fair. 3. The occupation was fairly appropriate, and the methods were intelligent and tolerably skilful. 4. To a partial extent, a tolerable knowledge and a fair degree of intelligence were evinced.

SINGLETON :—Visited, 4th and 5th June.

Numbers present at examination :—Boys, 85 ; girls, 52 ; total, 137.

1. The school is in excellent condition, suitable, well furnished, and provided with abundant materials. 2. Except a disposition to prompt, and a tendency to unsteadiness, among the pupils, the moral character of the school was fair. 3. The subjects were appropriate, and arranged with fair judgment, and the methods evinced a considerable improvement in suitableness, preparation, and efficiency. 4. The proficiency shewed a marked improvement. To a partial extent, it ranged from fair to good, and was, in general, moderate.

WOODVILLE :—Visited, 19th March.

Numbers present at examination :—Boys, 20 ; girls, 28 ; total, 48.

1. The condition of the building is fair, but the supply of water very deficient. Hat-pegs and books are also wanting, and the out-offices need repairing. 2. The moral tone was low. 3. The prescribed subjects were taught, but injudiciously arranged. The methods were modern, but mechanical upon the whole. 4. The proficiency was bad in every class.

ROMAN CATHOLIC.

BLANDFORD :—Visited, 20th and 21st August.

Numbers present at examination :—Boys, 84 ; girls, 18 ; total, 52.

1. The school is well situated, in good repair, and tolerably organized ; but the ground is not enclosed. 2. Most of the pupils were regular and punctual, clean, fairly attentive, and orderly. 3. Singing and drawing were not taught, otherwise the subjects were appropriate and arranged with tolerable judgment. The methods were intelligent, earnest, and fairly judicious. 4. The proficiency ranged from moderate to fair.

LOCHINVAR :—Visited, 1st December.

Numbers present at examination :—Boys, 26 ; girls, 22 ; total, 48.

1. The situation is very good, and the building excellent ; the furniture and apparatus are fairly sufficient and tolerably suitable, but the playground is without shade and supply of water. 2. The moral aspect of the school was tolerable. 3. Except singing, the required subjects were taught and arranged in fair accordance with the standard. The methods were tolerably intelligent and skilful. 4. The general proficiency was partial, and, for the most part, moderate.

MAITLAND, EAST (Boys) :—Visited, 28th and 29th October.

Number present at examination :—64.

1. The schoolroom is in good repair, fairly suitable and sufficient, and tolerably well furnished, but needs a proper supply of water. 2. The discipline evinced considerable improvement, and the moral tone was tolerable. 3. Most of the prescribed subjects were taught, and arranged with tolerable judgment in the requisite guides. The methods were stiff and cumbrous, but earnest, impressive, and fairly intelligent. 4. The proficiency ranged from tolerable in the junior classes to moderate in the senior, with a reasonable degree of intelligence in all.

MAITLAND, EAST (Girls) :—Visited, 30th October.

Number present at examination :—46.

1. The schoolroom is a new building, fairly sufficient and suitable, and tolerably organized, but it needs a verandah. 2. The pupils are unpunctual, but tolerable as regards conduct, attention, and order. 3. Singing and drawing were omitted from the instruction, which was, otherwise, suitable and fairly arranged. The methods were not witnessed. 4. The proficiency ranged from moderate to tolerable, but the mental culture was small.

MAITLAND, WEST (Infants) :—Visited, 10th November.

Numbers present at examination :—Boys, 10 ; girls, 43 ; total, 53.

1. The room is fairly suitable, in good condition, and provided with a gallery. A few desks are still needed ; otherwise, the appointments are fair. 2. The discipline was fairly effective, and the moral character of the school reasonably good. 3. The occupation was appropriate, and the methods were intelligent and fairly judicious. 4. The proficiency ranged from tolerable to fair in the senior division, which comprised the bulk of the children capable of being instructed.

MAITLAND, WEST (Girls) :—Visited, 5th and 6th November.

Number present at examination :—96.

1. The schoolroom is fairly sufficient, suitable, and well organized. 2. The moral aspect of the school was very pleasing. 3. The occupation was constant, suitable, and well arranged. The methods were earnest, intelligent, and calculated to be effectual. 4. The general proficiency was fair, but partial.

MAITLAND, WEST (Boys) :—Visited, 11th and 13th November.

Number present at examination :—109.

1. The schoolroom is in good condition, but scarcely sufficient, and in need of slight interior improvements. It is in every respect fairly organized. 2. The discipline showed improvement in every particular. The conduct, attention, and order of the pupils were reasonably satisfactory. 3. The ordinary subjects, with Geometry and Algebra, were taught, and, for the most part, well arranged. The instruction was intelligent and tolerably vigorous. 4. In one class the proficiency was nearly fair ; in the others, moderate to tolerable.

MORPETH :—

APPENDIX.

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MORPETH :—Visited, 24th and 25th November.

Numbers present at examination :—Boys, 55 ; girls, 55 ; total, 110.

1. The condition of the premises is effective, and the organization fair. 2. In general, the moral aspect of the school was fair. 3. The occupation was appropriate ; and the methods were from tolerable to moderate. 4. The proficiency was tolerable in the first class, small in the second, and partial in the third.

PHENIX PARK :—Visited, 20th November.

Numbers present at examination :—Boys, 24 ; girls, 18 ; total, 42.

1. The room is small and badly ventilated, but otherwise moderate in all respects. 2. The pupils were well-behaved, but addicted to slovenly habits, and utterly ignorant of order. 3. Most of the subjects prescribed were taught, and moderately well arranged. The work of the school was inefficient, though the methods were not unintelligent. 4. A partial proficiency was evinced in writing, spelling, and arithmetic ; but the pupils were, for the most part, ignorant of the other subjects.

SINGLETON :—Visited, 2nd and 3rd June.

Numbers present at examination :—Boys, 62 ; girls, 69 ; total, 131.

1. The house is a new and excellent structure, airy, commodious, suitable, and fairly organized. The ground is enclosed and supplied with water. 2. The good order previously noticed was well maintained, and the moral aspect very fair. 3. The occupation, as a whole, was appropriate, and arranged with tolerable judgment. The methods varied from tolerable to moderate, but were earnest and persevering. 4. The general proficiency was partial, but ranging from moderate to tolerable, and accompanied by a considerable degree of animated intelligence.

PRESBYTERIAN.

MAITLAND, WEST :—Visited, 20th October.

Numbers present at examination :—Boys, 33 ; girls, 28 ; total, 61.

1. The condition of the premises and the organization of the school continue fairly satisfactory. 2. The discipline had improved ; the moral tone was tolerable. 3. The occupation was appropriate and arranged with moderate judgment. The methods were moderately intelligent, but, as a whole, mechanical. 4. The general proficiency was moderate.

WESLEYAN.

MAITLAND, WEST :—Visited, 3rd October.

Numbers present at examination :—Boys, 22 ; girls, 14 ; total, 36.

1. The premises are fairly effective, and the organization is tolerable. 2. The moral tone was tolerable. 3. The instruction was fairly suitable, but not well understood in certain respects, and arranged with tolerable judgment. The methods were intelligent, well applied, and of good promise. 4. The proficiency was in the first class very bad ; in the others, tolerable to fair, but partial.

PROVISIONAL.

COOLAH :—Visited, 2nd September.

Numbers present at examination :—Boys, 13 ; girls, 13 ; total, 26.

1. The schoolroom is a tolerable one for the kind—clean, comfortable, and moderately well furnished. 2. The pupils were well-behaved and attentive, but wholly ignorant of order. 3. The occupation was confined to reading, writing, and arithmetic, and destitute of skilful arrangement. The methods were not witnessed. 4. The pupils were able to read and write a little, but knew nothing else.

GRESFORD :—Visited, 17th December.

Numbers present at examination :—Boys, 16 ; girls, 15 ; total, 31.

1. The condition of the premises is moderate in all respects, but the furniture is unsuitable, and the supply of books insufficient. 2. The pupils were neither regular nor punctual ; they were ignorant of order, addicted to copying, but tolerably well-behaved. 3. The occupation was not punctually conducted or well arranged, and only in partial accordance with the prescribed course. The methods were very mechanical, but earnest and tolerably careful. 4. The general proficiency was very small.

KAYUGA :—Visited, 3rd August.

Numbers present at examination :—Boys, 14 ; girls, 13 ; total, 27.

1. The schoolroom is very small, rudely and inadequately furnished, and poorly organized. 2. For the opportunities of the pupils and the facilities of the school, the moral tone was moderate. 3. Reading, writing, and arithmetic were the only subjects taught ; they were destitute of arrangement. The methods were mechanical, but well meant, and moderately effective. 4. The proficiency was very small ; but, considering the character of the school, and the previous ignorance of the children, not unreasonably low.

MUNMURRA :—Visited, 28th August.

Numbers present at examination :—Boys, 9 ; girls, 14 ; total, 23.

1. The schoolroom is tolerable for the kind and the place, and moderately organized. 2. The pupils were shy, and ignorant of order, but well conducted and attentive. 3. The classification was very injudicious, the occupation partial and without arrangement. The methods were, to some extent, intelligent, but very mechanical. 4. In reading, writing, and arithmetic—the only subjects taught—the pupils were very ignorant.

MERRYGOEN :—Visited, 7th September.

Numbers present at examination :—Boys, 4 ; girls, 11 ; total, 15.

1. The schoolroom is in bad repair, but tolerably commodious and suitable, and moderately provided with indifferent furniture. 2. The pupils were clean, well-conducted, and in tolerable order. 3. The subjects were only in partial accordance with those prescribed, and indifferently arranged. The methods were earnest, and moderately intelligent. 4. The proficiency was very small ; but the pupils were said to have been very ignorant when the teacher was appointed.

TUREE CREEK :—

TUREE CREEK :—Visited, 1st September.

Numbers present at examination :—Boys, 10 ; girls, 4 ; total, 14.

1. The schoolroom is a small, dingy hut, miserable in every respect, and almost destitute of furniture ; it was also untidily kept. 2. The discipline was utterly ineffective, and the moral tone very low. 3. Only reading, writing, and arithmetic were attempted to be taught ; and arrangement was not thought of. The methods were not witnessed. 4. The general proficiency was very bad.

HALF-TIME.
COBBOBA :—Visited, 4th September.

Numbers present at examination :—Boys, 6 ; girls, 7 ; total, 13.

1. The school was held in a dirty, dark, unwholesome room, badly furnished, and, without exception, probably the most disgraceful building it has been my lot to enter as a school. 2. The pupils evinced no acquaintance with order, either in their movements or in their work. 3. The regulations for Half-time Schools were not observed in the occupation, which was of a desultory character, and devoid of judgment. The methods were crude, mechanical, and ineffectual. 4. The proficiency ranged from indifferent to bad.

NEWCASTLE DISTRICT.—TABULATED REPORTS FOR 1863.

DENOMINATIONAL SCHOOLS.

CHURCH OF ENGLAND.

DUNGOG :—Visited, 24th November.

Pupils enrolled :—Boys, 34 ; girls, 42 ; total, 76.

Pupils present :—Boys, 26 ; girls, 35 ; total, 61.

The schoolhouse is substantially in good condition, the supply of working material is sufficient, but the furniture is inferior and insufficient. The organization is correct, the discipline is healthy, and the results of the teaching are very satisfactory. The Rev. Huband-Smith and the lay members of the Board were present at the examination.

ERINA :—Visited, 11th August.

Pupils enrolled :—Boys, 19 ; girls, 18 ; total, 37.

Pupils present :—Boys, 18 ; girls, 17 ; total, 35.

The schoolhouse is a slab erection with shingled roof ; the floor is an earthen one ; with this exception the building is a suitable one. The school is very deficient in appliances, and the furniture is insufficient and unsuitable. The ground is not fenced, nor are there any closets. The school, after being closed for seven months, has been reopened three weeks. The organization is crude, but the discipline is promising. The Rev. J. Shaw was present at the examination.

GOSFORD :—Visited, 10th August.

Pupils enrolled :—Boys, 28 ; girls, 15 ; total, 43.

Pupils present :—Boys, 26 ; girls, 15 ; total, 41.

The schoolhouse is in need of repair, but has been recently coloured and cleansed, and looks comfortable. There is a fair supply of working material, but the school is wretchedly furnished. The organization is correct, the discipline is judicious, and the instruction tolerably effective. The Rev. J. Shaw and a lay member of the Board were present at the examination.

HEXHAM :—Visited, 14th December.

Pupils enrolled :—Boys, 17 ; girls, 29 ; total, 46.

Pupils present :—Boys, 14 ; girls, 24 ; total, 38.

The schoolhouse, which is a tolerably suitable building, is in good repair. The furniture is bad and insufficient, but the supply of working material is fair. The organization is satisfactory, and the discipline has improved ; but the results of the teaching are very unsatisfactory, excepting in the junior class. The Rev. J. S. Wood was present at the examination.

KINCUMBER :—Visited, 17th August.

Pupils enrolled :—Boys, 21 ; girls, 11 ; total, 32.

Pupils present :—Boys, 16 ; girls, 9 ; total, 25.

The school premises are small, ill-conditioned, and very unsuitably furnished. The ground is enclosed, and out-offices have been provided. The discipline of the school is satisfactory, but the organization and instruction are very unskilful and unproductive.

MILLER'S FOREST :—Visited, 16th December.

Pupils enrolled :—Boys, 37 ; girls, 42 ; total, 79.

Pupils present :—Boys, 32 ; girls, 38 ; total, 70.

The schoolroom is commodious, suitable, and in fair repair. There is a sufficient supply of material, but the furniture is sadly unequal to the requirements of the school. The organization is satisfactory, the discipline is excellent, the instruction is careful and effective, making due allowance for the detriments of absenteeism. The tone of the school is very healthy. The Rev. S. Simm was present at the examination.

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NEWCASTLE (Christ Church) :—Visited, 24th July.

Pupils enrolled :—Boys, 80 ; girls, 62 ; total, 142.

Pupils present :—Boys, 58 ; girls, 44 ; total, 102.

The school premises are in very good condition, and, excepting an insufficiency of desks, the school is well supplied with working appliances. The organization is correct, the discipline is effective, and the results of the instruction range from tolerable to good. The tone of the school is good. The Rev. A. Selwyn was present for a short time near the close of the inspection; with this exception, the School Board was not represented.

NEWCASTLE (St. John's) :—Visited, 27th July.

Pupils enrolled :—Boys, 52 ; girls, 30 ; total, 82.

Pupils present :—Boys, 50 ; girls, 25 ; total, 75.

The material condition of this school is good, the organization is satisfactory, the discipline is fairly effective, and the results of the examination range from fair to good. No member of the School Board was present at the examination.

RAYMOND TERRACE :—Visited, 11th December.

Pupils enrolled :—Boys, 51 ; girls, 36 ; total, 87.

Pupils present :—Boys, 42 ; girls, 26 ; total, 68.

The schoolhouse is an excellent structure, and it is well furnished and supplied with material. The organization is correct, the discipline fair, and the teaching is tolerably effective. The Rev. S. Simm was present for a short time, but was prevented by pressing parochial duties from remaining.

STROUD :—Visited, 12th November.

Pupils enrolled :—Boys, 21 ; girls, 20 ; total, 41.

Pupils present :—Boys, 16 ; girls, 15 ; total, 31.

The premises require some repairs, and the walls are very dingy ; otherwise, the schoolhouse is substantially good. There is a very fair supply of working appliances, and the furniture is sufficient, but badly arranged. The organization is satisfactory, the discipline is fair, the teaching is careful, but insufficiently spirited and searching ; still, however, tolerable progress has been made in the mechanical branches of instruction. The Rev. A. Shaw was present at the examination.

UPPER BENDOLBA :—Visited, 27th November.

Pupils enrolled :—Boys, 33 ; girls, 33 ; total, 66.

Pupils present :—Boys, 16 ; girls, 26 ; total, 42.

Excepting that some repairs are needed, the building is substantially good ; it is airy and clean, but it is wretchedly furnished. The organization is satisfactory, the order is good, the pupils are fairly industrious, and their progress is moderate. A lay member of the Board was present, but owing to a serious accident the Rev. Huband-Smith was unable to attend.

WALLSEND :—Visited, 20th October.

Pupils enrolled :—Boys, 88 ; girls, 76 ; total, 164.

Pupils present :—Boys, 81 ; girls, 66 ; total, 147.

The material condition of the school is good ; and, excepting a necessity for additional desks, the school is properly appointed. The organization is correct, the discipline is healthy and improving, and the attainments of the pupils are fair. The Rev. J. S. Wood was present during the whole of the examination.

ROMAN CATHOLIC SCHOOLS.

CLARENCE TOWN :—Visited, 8th December.

Pupils enrolled :—Boys, 24 ; girls, 21 ; total, 45.

Pupils present :—Boys, 21 ; girls, 19 ; total, 40.

The school building, which is also used as a church, is commodious, moderately supplied with working appliances, but it is very indifferently furnished. The organization and discipline show marks of real improvement ; the teaching is but moderately effective. The short-comings of the several classes are attributable to the irregularity and backwardness of most of the pupils. No member of the School Board was present at the examination.

MILLEE'S FOREST :—Visited, 15th December.

Pupils enrolled :—Boys, 25 ; girls, 26 ; total, 51.

Pupils present :—Boys, 20 ; girls, 21 ; total, 41.

The schoolhouse is substantially good, and fairly furnished and supplied with material. The ground is small, but it is enclosed, and proper out-offices are provided. The organization is correct, the discipline is fair, and the instruction is tolerably successful. The irregularity of the pupils depresses the average attainments of the respective classes. No member of the School Board was present at the examination.

NEWCASTLE :—Visited, 23rd July.

Pupils enrolled :—Boys, 83 ; girls, 60 ; total, 143.

Pupils present :—Boys, 88 ; girls, 30 ; total, 68

The school premises are in good condition, and there is a tolerable supply of furniture and working material ; the discipline is improving, the instruction is fairly successful, and the spirit of the school is moderately pleasing. The Rev. M. Walsh and a lay member of the Board were present during a considerable portion of the examination.

PRESBYTERIAN

PRESBYTERIAN SCHOOLS.

DINGO CREEK :—Visited, 15th September.

Pupils enrolled :—Boys, 21 ; girls, 27 ; total, 48.

Pupils present :—Boys, 13 ; girls, 15 ; total, 28.

The school building is in but a moderate state of repair. It is sufficiently commodious, but the furniture is old and clumsy. The school ground is unfenced, and there are no out-offices. The organization is fairly correct, the discipline has improved, but the instruction is unskilful and uneducative. The Rev. J. Laing and two lay members of the Board were present at the examination.

NEWCASTLE :—Visited, 28th July.

Pupils enrolled :—Boys, 97 ; girls, 64 ; total, 161.

Pupils present :—Boys, 91 ; girls, 55 ; total, 146.

The school premises are in good condition, but the room is much too small for the number of pupils in attendance. There is a suitable supply of furniture and apparatus, but not of books. Since my last visit out-offices have been erected. The organization and discipline are moderately effective ; the intelligence and industry of the pupils are tolerably satisfactory, and their attainments range from moderate to very fair. The Rev. Mr. Coutts was present during a short portion of the examination.

J. W. ALLPASS,
Inspector of Schools,
Newcastle District.

INSPECTORS' REPORT.—SYDNEY DISTRICT.

DETAILED STATEMENT of the condition of Certified Denominational Schools in the Sydney District, inspected during the Year 1868.

The remarks under head 1 relate to the material condition of schools ; under 2, to their moral character ; under 3, to the subjects and methods of instruction ; under 4, to the proficiency of the pupils.

BALMAIN (C.E.) :—Visited, 28th August.

Numbers present at examination :—Boys, 57 ; girls, 35 ; total, 92.

1. With the exception of the fencing, which has been repaired, the same material defects exist as were noted in last year's report. Some of the desks have received ill-usage from the children attending the Sunday School. 2. The order and general discipline are fairly satisfactory. 3. The school is divided into too many classes, and the classification is too high. The lesson documents are fairly arranged ; the methods are in the main modern, but require to be applied with greater energy. 4. The proficiency ranges from indifferent to tolerable. There is not the material for a fourth class, and the existence of one evidences over-anxiety on the part of the teacher to advance the children in their studies.

BALMAIN (R.C.—Boys) :—Visited, 3rd November.

Number present at examination :—67.

1. Additional desks, a lavatory, and a book-press have been provided since last inspection. The material state of the school is now fairly satisfactory. 2. The pupils are reasonably regular and punctual ; on the whole, clean and becomingly attired. They are inclined to be restless in the classes, and the operations of teaching are not conducted with sufficient order and decorum. 3. The course of secular instruction is observed. The classification is tolerably appropriate. The lesson documents are arranged with care and passable judgment. The teaching is very painstaking, but unskilful. 4. The attainments rank from moderate to fair. The pupils are tolerably attentive under examination ; but think slowly, and answer with difficulty. Their intelligence is but partially cultivated.

BALMAIN (R.C.—Girls) :—Visited, 14th December.

Number present at examination :—52.

1. The situation is good, and the building suitable. The school is fairly found in the necessary appliances. 2. The pupils are very irregular in their attendance ; the order is passable, and the moral tone healthy. 3. All the prescribed subjects are taught. The classification is appropriate, and the lesson documents tolerably arranged. More vigour needs to be infused into the teaching generally. 4. The average proficiency is barely moderate.

BALMAIN (R.C.—Infants) :—Visited, 14th December.

Numbers present at examination :—Boys, 15 ; girls, 38 ; total, 53.

1. The schoolroom is spacious, and otherwise suitable. The gallery is awkwardly constructed, and proper desks have yet to be provided. The supply of apparatus is very scanty. 2. The pupils are both unpunctual and irregular. The order is tolerable, and the government mild. 3. The instruction is very elementary, and the methods are mechanical and wanting in skill. 4. The attainments are moderate.

CAMPERDOWN (R.C.) :—Visited, 7th October.

Numbers present at examination :—Boys, 84 ; girls, 64 ; total, 148.

1. The schoolhouse is an old building, in indifferent repair. There is but one playground for both sexes. A lavatory is badly needed. There is a tolerable supply of indifferent furniture, and a fair quantity of apparatus. 2. The pupils are unpunctual and irregular in attendance. The order is bad, the government feeble and ineffective, and the moral tone low. 3. Object lessons form no regular part of the instruction ; in other respects, the prescribed course is observed. The classification is bad. The lesson documents are but poorly arranged. The methods are mechanical, and feebly applied. 4. The attainments are small. The pupils are restless, noisy, and inattentive under examination, and addicted to copying. The instruction has signally failed in developing the mental powers of the children.

CHIPPENDALE (Wes.) :—Visited, 19th August.

Numbers present at examination :—Boys, 26 ; girls, 24 ; total, 50.

1. The out-offices are not sufficiently private, and additional desks are needed. Those in use are much ink-stained. The foregoing are the most noticeable defects in the material condition of the school.
2. The small attendance on the day of examination is attributable to very rainy weather. Under ordinarily favorable circumstances the pupils are fairly punctual and regular. With few exceptions, they are clean in person and tolerably well-behaved. On the whole the discipline has decidedly improved.
3. The subjects of instruction accord with the prescribed course. The lesson documents admit of an improved arrangement, and the classification is in some respects faulty. The methods are practical rather than skilful.
4. The proficiency varies from tolerable to fair. The teacher has labored hard, and done good work during the year.

CHURCH HILL (R.C.—Girls) :—Visited, 6th October.

Number present at examination :—66.

1. The windows need repairs, the woodwork to be painted, and a lavatory provided. The school is badly situated, and the light is defective. The supply of educational appliances is sufficient.
2. The pupils are unpunctual and irregular in attendance, but reasonably clean and in pretty fair order.
3. The usual branches are taught; the methods are moderately suitable, and are, so far as observed, applied with zeal and energy.
4. The proficiency varies from moderate to tolerable; the answering, as a rule, is very partial, and the pupils' intelligence is but moderately developed.

CHURCH HILL (R.C.—Infants) :—Visited, 6th October.

Numbers present at examination :—Boys, 59 ; girls, 56 ; total, 115.

1. The situation is unfavorable, the furniture is insufficient, and the supply of apparatus scanty.
2. The pupils are fairly regular, but not punctual. The order is bad, and the government ineffective.
3. The subjects of instruction are those prescribed. The lesson documents are tolerably arranged. The methods are unskilful.
4. The proficiency is very moderate.

CHRIST CHURCH (Primary) :—Visited, 28th and 29th October.

Numbers present at examination :—Boys, 174 ; girls, 81 ; total, 255.

1. A fine commodious schoolhouse, liberally found in teaching appliances.
2. The pupils are regular, punctual, and clean. Their behaviour is marked by considerable boisterousness, and the operations of teaching are rather noisily conducted.
3. The usual branches are taught. The classification is not well defined for some subjects, and the lesson documents are poorly arranged. The methods are in some respects peculiar and obsolete, but are applied with much earnestness and industry.
4. The attainments range from moderate to fair.

CHRIST CHURCH (C.E.—Infants) :—Visited, 28th and 29th October.

Numbers present at examination :—Boys, 89 ; girls, 65 ; total, 154.

1. The schoolroom is in good repair, and, excepting the desks, which are indifferent in quality and scant in supply, is very fairly provided with the necessary educational appliances.
2. The pupils are regular, but unpunctual; the order is barely moderate, and the moral tone is unsatisfactory.
3. The instruction is fairly regulated, and the methods are diligently applied.
4. The average proficiency approaches tolerable.

DABLINGHURST (C.E.) :—Visited, 16th and 17th July.

Numbers present at examination :—Boys, 67 ; girls, 52 ; total, 119.

1. The supply of desks is limited, otherwise the material condition of the school is very fair.
2. The pupils are disposed to be restless and inattentive under instruction; in other respects the discipline is passable.
3. The instruction is tolerably regulated, and fairly painstaking.
4. The proficiency is tolerable.

DOUBLE BAY (C.E.—Primary) :—Visited, 18th August.

Number of pupils present at examination :—Boys, 31 ; girls, 27 ; total, 58.

1. Improvements have been effected in the material state of the school since the general inspection of last year. Existing defects are about to be remedied. The school is well found in suitable furniture and apparatus. The whole property is cleanly and carefully kept.
2. The moral aspect of the school is very pleasing.
3. Instruction is given in the usual subjects. The classification is appropriate. Much pains is bestowed upon the keeping of the lesson documents. The methods are suitable, and are vigorously applied.
4. The average proficiency is very fair. The pupils exhibit a becoming demeanour under examination, are self-reliant, and answer with readiness and intelligence.

DOUBLE BAY (C.E.—Infants) :—Visited, 18th August.

Numbers present at examination :—Boys, 30 ; girls, 28 ; total, 58.

1. The school buildings are substantial and suitable. The ceiling needs some repairs, and proper desks have yet to be provided. There is an adequate supply of working materials.
2. The discipline is satisfactory.
3. The instruction is judiciously regulated, and is very painstaking.
4. The proficiency is fair.

DOUBLE BAY (R.C.) :—Visited, 8th September.

Numbers present at examination :—Boys, 38 ; girls, 27 ; total, 65.

1. The schoolroom is a good weatherboard building. The supply of furniture and apparatus is meagre.
2. The pupils are punctual, fairly orderly, and neatly dressed.
3. The instructional documents are incomplete. The methods are of a passable kind.
4. The attainments are moderate. The teacher has been a very short time in charge.

ERSKINE-STREET (Pres.) :—Visited, 25th August.

Numbers present at examination :—Boys, 26 ; girls, 22 ; total, 48.

1. The situation is objectionable; the playground is extremely small, the out-offices incomplete, and a lavatory is much wanted; otherwise the school is fairly equipped.
2. Fair discipline is maintained.
3. The instruction is poorly arranged for the lower classes, and drawing is taught in a rather desultory manner.
4. The proficiency varies from moderate to tolerable. *Note.*—The defects in the organization have been remedied since the date of inspection, in so far as the situation and area would admit.

GIEBE

GLEBE (C.E.) :—Visited, 4th August.

Numbers present at examination :—Boys, 56 ; girls, 37 ; total, 93.

1. The schoolroom is commodious, otherwise suitable, and well found in requisites. 2. The pupils are fairly punctual and becomingly attired. The order is but moderate, and the government is wanting in tact and firmness. 3. The instruction is not regulated by the necessary documents ; the teaching is necessarily desultory, and is conducted with very little energy. 4. The attainments are indifferent, and the mental culture is small.

HAYMARKET (R.C.) :—Visited, 3rd and 7th September.

Number present at examination :—133 boys.

1. The accommodation for teaching purposes is insufficient. Hat-pegs, tablet-rails, additional desks, and a lavatory are needed. The school is fairly found in books and apparatus. 2. The pupils are irregular and unpunctual in attendance, untidy in appearance, and in very bad order. The government is feeble and ineffective. The moral tone of the school is low. 3. The classification is bad ; the lesson documents are imperfectly arranged ; the methods are empirical, and require to be applied with greater vigour and earnestness. 4. The proficiency is small. It is well nigh impossible to gain the attention of the pupils. Copying is openly and generally practised. The teacher has since been removed.

KENT-STREET, NORTH (R.C.—Boys) :—Visited, 2nd September.

Number present at examination :—170.

1. Several improvements have been effected in the material state of the school since last inspection. The schoolroom is still too small for the attendance. The desks are old, cumbrous, and unsuitable, and a lavatory is much wanted. 2. The pupils are regular, punctual, clean, and in very fair order. The government is firm and effective. 3. The instruction embraces the usual subjects, and is fairly regulated. Suitable methods are employed, and the teaching generally is marked by earnestness and intelligence. 4. The proficiency is fair, and the thinking faculty of the pupils has been fairly developed.

KENT-STREET, NORTH (R.C.—Girls) :—Visited, 2nd September.

Number present at examination :—118.

1. The schoolroom is a new weatherboard building. The playground is too small, and the fences need repair. Additional desks and a book-press are required ; otherwise there is a fair supply of working materials. 2. The pupils are punctual, orderly, and fairly attentive. 3. The instruction is fairly regulated, and the methods are moderately effective. 4. The proficiency approaches Tolerable.

KENT-STREET, SOUTH (R.C.—Boys) :—Visited, 21st October.

Number present at examination :—79.

1. The schoolhouse is unsuitable and in bad repair ; it has no playground. The desks are cumbrous, and much the worse for wear. These and a dilapidated book-press constitute the furniture. The apparatus is almost as scanty. The maps and books supplied by the Council have been wilfully abused. The teacher complains that he is not allowed to keep the key of the schoolhouse. 2. The pupils are tolerably regular, but unpunctual. Several are disposed to appear untidy. The order, although much improved, is not quite satisfactory. The government requires to be administered with greater firmness. 3. Vocal music excepted, the ordinary branches are taught. The lesson documents are marked by a want of fulness and explicitness of detail. Fair judgment is displayed in the classification of the pupils. The methods are tolerably suitable. 4. The proficiency is tolerable. The first class appears to have been neglected. Additional teaching power is required.

NEWTOWN (C.E.—Primary) :—Visited, 26th August.

Numbers present at examination :—Boys, 44 ; girls, 23 ; total, 67.

1. A supply of suitable desks is much needed. The boys' out-offices are incomplete, and are not cleanly kept. There is a fair supply of working materials. 2. The pupils are tolerably punctual, regular, and clean. In the upper classes the order is good, in the lower, moderate. 3. The instruction is fairly arranged, and the methods are tolerably skilful. 4. The general proficiency varies from moderate to tolerable.

NEWTOWN (C.E.—Infants) :—Visited, 27th August.

Numbers present at examination :—Boys, 44 ; girls, 45 ; total, 89.

1. A good schoolroom. Additional desks are required ; otherwise the school is very fairly equipped. 2. The order is indifferent, and the government is not sufficiently firm. 3. The instruction is tolerably regulated. 4. The attainments are moderate.

NEWTOWN (R.C.) :—Visited, 22nd October.

Numbers present at examination :—Boys, 18 ; girls, 18 ; total, 36.

1. The school is held temporarily in a dwelling-house. The situation is bad. The rooms are unsuitable, and the supply of furniture and apparatus is inadequate. 2. The pupils are punctual, but irregular ; they are tolerably clean, and the government is moderately effective. 3. The classification is injudicious ; the lesson documents are incomplete and badly arranged. The methods are mechanical and ineffective. 4. The proficiency is small. This school has been removed to new buildings, and a more competent teacher placed in charge.

NEWTOWN (Wes.) :—Visited, 23rd and 24th September.

Numbers present at examination :—Boys, 81 ; girls, 58 ; total, 139.

1. The situation is favorable ; the buildings are in very fair repair, and the school is amply found in the requisite appliances. 2. The pupils are not punctual. Fair order is maintained, and the government is effective. 3. The prescribed course is observed. The instructional documents are tolerably arranged, and the teaching is painstaking. 4. The attainments are tolerable.

PADDINGTON (C.E.) :—Visited, 3rd September.

Numbers present at examination :—Boys, 29 ; girls, 23 ; total, 52.

1. A good schoolroom. The desks need repair, and a lavatory has yet to be provided. A fair supply of the necessary requisites. 2. The discipline is passable. 3. The classification is injudicious ; the instructional documents are fairly compiled ; the methods are tolerably appropriate, but are only partially effective. 4. The proficiency is very moderate.

PADDINGTON (R.C.) :—Visited, 22nd September.

Numbers present at examination :—Boys, 25 ; girls, 53 ; total, 78.

1. The situation is good, and the schoolroom is fairly suitable. There is an insufficiency of furniture, which is badly arranged, owing to the church pews being fixed to the floor. 2. The pupils are tolerably punctual, and the order is passable. 3. The classification is faulty. The teaching is mechanical but painstaking. 4. The proficiency is moderate.

PARRAMATTA-STREET (R.C.—Boys) :—Visited, 11th November.

Number present at examination :—81.

1. The site of the schoolhouse is low, and the light is defective. New premises are urgently required. The furniture is sufficient in quantity, but old and not very suitable. 2. The pupils are restless, talkative, and noisy in school, and boisterous on the playground. Their demeanour is neither sufficiently subdued nor respectful. The government is feeble and ineffective. 3. There are too many classes, and the classification is much too high. The methods are modern, but fail, through bad discipline and defective skill, to produce satisfactory results. 4. The attainments rank from bad to moderate. With much trouble on the part of the examiner the pupils can be got to yield a tolerable attention. Their answering is very partial, and evidences a low state of mental development.

PARRAMATTA-STREET (R.C.—Girls) :—Visited, 12th and 13th November.

Number present at examination :—104.

1. The situation is unsuitable, and the schoolroom is insufficiently large. Some repairs have been recently effected, but the roof is not weatherproof. The supply of furniture is limited. 2. The pupils seem tolerably punctual, but the order is indifferent, and the government is deficient in tact and firmness. 3. The course of instruction is observed. The classification is appropriate ; the lesson documents are compiled with moderate judgment, and the teaching is conducted with like skill. 4. The average proficiency is moderate.

PARRAMATTA-STREET (R.C.—Infants) :—Visited, 11th and 12th November.

Numbers present at examination :—Boys, 57 ; girls, 45 ; total, 102.

1. The business of this school is conducted in the same room as the girls' department. The accommodation is insufficient, and a supply of suitable desks is required. 2. The pupils are clean and tolerably punctual ; the order is bad, and the government ineffective. 3. Pupils, chiefly boys, have been admitted or retained in this department, whose ages and attainments render them fit for the primary schools. The instruction is moderately arranged, and the teaching is conducted with passable industry. 4. The proficiency is very moderate.

PLYMOUTH (C.E.) :—Visited, 7th August.

Numbers present at examination :—Boys, 43 ; girls, 35 ; total, 78.

1. The schoolhouse is a substantial stone building, favourably situated. The outhouses need repairs. The supply of apparatus is but tolerable. 2. The pupils are regular and punctual ; the order is fair ; and the moral tone of the school is healthy. 3. The instruction is very fairly regulated, and the methods are suitable and reasonably effective. 4. The proficiency ranges from tolerable to very fair.

RANDWICK (C.E.) :—Visited, 1st September.

Numbers present at examination :—Boys, 25 ; girls, 11 ; total, 36.

1. A lavatory and a supply of water require to be provided ; otherwise, the schoolhouse is in good repair and is fairly furnished. 2. The order and general discipline are fairly satisfactory. 3. The classification is tolerably appropriate. The lesson documents are open to improvement in some particulars, but the instruction is not badly regulated. The methods are practical, and appear to be applied with fair industry. 4. The attainments rank from tolerable to fair.

REDFERN (C.E.—Primary) :—Visited, 10th and 11th August.

Numbers present at examination :—Boys, 112 ; girls, 82 ; total, 194.

1. The new schoolroom is a fine, commodious, building, and is liberally provided with excellent furniture and apparatus. 2. The pupils are regular, punctual, clean, and for the most part becomingly attired. The order, however, admits of great improvement. 3. Except that object lessons are omitted from the time-table of the first class, all the essential branches are taught. The lesson documents need amendment in certain particulars, and the classification requires revision. The methods savour of empiricism, but are apparently applied with earnestness and zeal. 4. The average proficiency is moderate : arithmetic, grammar, and object lessons being the weak subjects. The answering in each class seems to devolve upon a few of the pupils. Guessing is far too prevalent.

REDFERN (C.E.—Infants) :—Visited, 10th and 11th August.

Numbers present at examination :—Boys, 78 ; girls, 54 ; total, 132.

1. The school-buildings are spacious, in good repair, and otherwise suitable. There is a sufficiency of working materials. 2. The pupils are reasonably punctual, clean, and neatly dressed. The movements of the school are conducted with tolerable order, but the pupils are disposed to be restless and inattentive. 3. The instructional documents are not sufficiently specific in some respects. The methods of teaching vary in point of skill, the average being very moderate. 4. The proficiency varies from moderate in the lower classes to tolerable in the higher.

ST. ANDREW'S (C.E.—Primary):—Visited, 13th August.

Numbers present at examination:—Boys, 65; girls, 41; total, 106.

1. The present schoolhouse is used temporarily. There is an adequate supply of the necessary educational appliances, in a fair state of preservation. 2. The attendance has largely increased since the general inspection of last year. The pupils are clean, punctual, and regular. Good order is maintained. The government is effective, and the moral tone healthy. 3. The instruction, which embraces the usual subjects, is fairly regulated. There is a tendency to unnecessarily subdivide the classes, but, on the whole, the classification is intelligent and practical. In point of average merit the methods may be estimated as fair. 4. The attainments vary from fair to very fair. The pupils are attentive, tolerably self-reliant, and answer with considerable intelligence and reasonable promptness.

ST. ANDREW'S (C.E.—Infants):—Visited, 13th August.

Numbers present at examination:—Boys, 33; girls, 49; total, 82.

1. A supply of suitable furniture is needed; otherwise the school is fairly organized. 2. The order and discipline are unsatisfactory. 3. The classification is faulty, the lesson documents are incomplete, and the teaching is not very skilful. 4. The proficiency is moderate. The teacher has been only recently appointed.

ST. ANDREW'S (Pros.):—Visited, 19th May.

Numbers present at examination:—Boys, 76; girls, 49; total, 125.

1. The schoolhouse is a substantial stone building, in fair repair. The drainage is defective, the out-offices are unsuitably placed, and there is no playground. The school is fairly found in furniture and apparatus. 2. The discipline is healthy. 3. The instruction is judiciously regulated. The methods possess fair average skill, and are diligently applied. 4. The proficiency varies from tolerable to fair.

ST. BARNABAS' (C.E.—Primary):—Visited, 9th and 10th September.

Numbers present at examination:—Boys, 102; girls, 73; total, 175.

1. The playground has been recently enlarged, levelled, fenced, and divided for the sexes. New and improved water-closets have been erected, and the schoolroom has been rewhitewashed. A separate lavatory for the girls is required, in order to render the arrangements as complete as could be desired. The school is well organized. 2. The pupils are punctual, regular, clean, and in very good order. The government is mild, but firm and effective. The moral tone is excellent. 3. The instruction accords with the prescribed course. The classification is appropriate; the lesson documents are judiciously constructed; the methods are modern, and are applied with energy and skill. 4. The proficiency varies from fair to very fair. The teaching is carried on with considerable enthusiasm, and a healthy spirit pervades the school.

ST. BARNABAS' (C.E.—Infants):—Visited, 9th and 10th September.

Numbers present at examination:—Boys, 89; girls, 64; total, 153.

1. A good schoolroom, in excellent repair. The gallery is not sufficiently large. 2. The discipline is healthy, and the moral tone pleasing. 3. The instruction is judiciously regulated. The methods are suitable, and are energetically applied. 4. The average proficiency is fair.

ST. JAMES' (C.E.—Primary):—Visited, 6th, 7th, and 8th June.

Numbers present at examination:—Boys, 100; girls, 64; total, 164.

1. The schoolroom requires to be whitewashed internally. There is an abundance of the requisite educational appliances. Except that the playground is very untidy, the property is carefully kept. 2. The pupils are very punctual, and fairly regular in attendance, clean, and becomingly attired. Fair order is maintained, but the government needs to be characterized by greater firmness, energy, and decision. 3. Book-keeping is taught, along with the usual subjects. The lesson documents are compiled with very fair judgment. The teaching is carried on with industry and reasonable skill. 4. The attainments rank from fair to very fair. Arithmetic and grammar are the weak subjects. The teacher is anxious and painstaking, and has done good work during the year.

ST. JAMES' (C.E.—Infants):—Visited, 1st and 2nd June.

Numbers present at examination:—Boys, 88; girls, 76; total, 164.

1. A spacious schoolroom, suitably furnished, and well found in requisites. 2. The order and discipline are satisfactory. 3. Except in the lowest class, the instruction is intelligent, appropriate, and well regulated. 4. The proficiency is fair.

ST. LEONARD'S (C.E.—Boys):—Visited, 18th November.

Number present at examination:—58.

1. The schoolroom is too small, and the supply of furniture scanty. There is an adequate amount of working materials. 2. The pupils are punctual and regular. The order is excellent, and the moral tone of the school pleasing. 3. The instruction is judiciously regulated, and the methods are intelligent, and are applied with fair skill. 4. The proficiency of the pupils is satisfactory.

ST. LEONARD'S (C.E.—Girls):—Visited, 8th October.

Number present at examination:—35.

1. The school-buildings are in fair repair, and are otherwise suitable. A supply of furniture is much needed, together with a black-board and easel. 2. The pupils are punctual and fairly regular. The order is very fair, and the moral tone of the school is healthy. 3. The instruction is tolerably arranged, and the teaching is conducted with moderate skill. 4. The results are tolerable.

ST. LEONARDS (R.C.) :—Visited, 18th November.

Numbers present at examination :—Boys, 49 ; girls, 29 ; total, 78.

1. The playground requires to be divided for the sexes, and provided with proper out-houses. A lavatory is needed. The desks are old, unsightly, and unsuitable. 2. The pupils require to be trained to yield a prompt and willing obedience ; their manners too are susceptible of improvement. The order is unsatisfactory, and the government is wanting in tact and firmness. 3. The course of Secular Instruction is adhered to. The classification is in various ways faulty. The methods are of modern cast, and appear to be applied with diligence. 4. The proficiency is barely tolerable. The pupils yield a rather fitful attention. Their answering is partial, frequently random, and indicative of a low state of mental culture.

ST. LEONARDS (Pres.) :—Visited, 8th October.

Numbers present at examination :—Boys, 48 ; girls, 19 ; total, 67.

1. Since last inspection, the walls of the schoolroom have been whitewashed, the woodwork painted, the windows frosted, and hat-pegs provided. The playground still requires to be fenced and supplied with wash-house and urinal. The school is amply found in suitable furniture and apparatus. The general state of the property is very fair. 2. The pupils are tolerably clean, but somewhat unpunctual and irregular in attendance. The order is bad, the government feeble, and the moral tone unsatisfactory. 3. The classification is tolerably appropriate ; the lesson documents need revision in certain particulars ; the methods are practical, and but very partially effective. 4. The proficiency ranges from small to tolerable. This poverty of attainments may be attributed partly to the bad order of the school, and partly to the absence of anything like searching or intelligent examination of work done.

ST. MARY'S (R.C.—Boys) :—Visited, 9th, 10th, and 15th June.

Number present at examination :—215.

1. There is no playground attached to this school ; the closets are in a bad state ; the interior of the schoolroom requires to be whitewashed ; and more suitable desks need to be provided. 2. The pupils are more punctual than formerly ; they attend with reasonable regularity. The presence of a large number of infants interferes with the order, but this has improved, and may now be estimated as fair. 3. Except that the pupils in the first class greatly preponderate, the classification is appropriate. Algebra and Euclid are taught, in addition to the usual subjects. The methods are modern, and are applied with diligence and earnestness. 4. The average proficiency approaches fair. The pupils are fairly attentive under examination, tolerably self-reliant, and seemingly anxious to do well.

ST. MARY'S (R.C.—Girls) :—Visited, 5th, 8th, and 9th June.

Number present at examination :—103.

1. The school is held in the Temporary Cathedral, the schoolroom being separated from the body of the church by a wooden partition. There is a fair supply of furniture and apparatus. 2. The pupils are fairly regular ; the order is satisfactory, and the moral tone of the school is pleasing. 3. The instruction is fairly regulated, and is conducted with zeal and intelligence. 4. The attainments are fairly satisfactory.

ST. MARY'S (R.C.—Infants) :—Visited, 4th June.

Number present at examination :—70 girls.

1. The furniture is sufficient in supply, but cumbersome in character, and is badly arranged. The apparatus is scanty. 2. The pupils are tolerably regular, and the order is passable. 3. The instruction is indifferently regulated. 4. The average proficiency is barely moderate.

ST. PHILIP'S (C.E.—Primary) :—Visited, 5th August.

Numbers present at examination :—Boys, 56 ; girls, 63 ; total, 119.

1. The playground needs to be divided for the sexes. With this exception, the organization is reasonably good. 2. The pupils are less unpunctual than formerly. Their demeanour is forward, and their behaviour somewhat boisterous. The operations of teaching need to be more quietly conducted. A vigilance to detect the beginnings of disorder, and an energy and a determination to put them down, are qualities which the teacher will have to exercise before any great change for the better can be reasonably hoped for. 3. The instruction embraces the usual branches. The classification is generally appropriate. The methods are suitable, but need to be applied with increased earnestness and vigour. 4. The average proficiency is tolerable. The pupils answer only after repeated questioning, think slowly, and are indisposed to anything like real mental exertion. On the whole, however, the school has improved in efficiency during the year.

ST. PHILIP'S (C.E.—Infants) :—Visited, 5th August.

Numbers present at examination :—Boys, 82 ; girls, 100 ; total, 182.

1. The schoolroom is rather small ; in other respects it is suitable, and is adequately provided with the necessary educational appliances. 2. The order is fair, and the government is mild and effective. 3. The instruction is judiciously arranged. The methods are modern, and range in point of skill from moderate to very fair. 4. The average proficiency is fair.

SURRY HILLS (C.E.—Primary) :—Visited, 28th October.

Numbers present at examination :—Boys, 29 ; girls, 23 ; total, 52.

1. Some repairs and improvements have been effected in the school since last inspection. Measures are in progress to provide a lavatory. When this has been done, and the school furnished with more suitable desks, the material condition will be fairly satisfactory. 2. The small attendance is perhaps attributable to causes over which the teacher has had no control. Fair order is maintained, and the moral tone may be regarded as healthy. 3. The instruction embraces the requisite branches, and is fairly regulated. The methods are suitable, and are intelligently applied. 4. The proficiency is very fair.

SURRY HILLS (C.E.—Infants) :—Visited, 20th October.

Numbers present at examination :—Boys, 70 ; girls, 48 ; total, 118.

1. The school is favourably situated. New and suitable desks are needed ; otherwise there is a fair supply of the necessary appliances. 2. The pupils are punctual and regular. The order is very fair, and the government judicious. 3. All the subjects prescribed for infant schools are taught. The classification is on the whole fair, the instructional documents are judiciously compiled, and the methods are appropriate and effective. 4. The general proficiency is fair.

SURRY HILLS

SURRY HILLS (R.C.—Boys) :—Visited, 4th November.

Number present at examination :—155.

1. Some important alterations and improvements have been effected in the material condition of the school since last inspection. A lavatory is still an important desideratum. The school is objectionably situated. 2. The pupils are neither punctual nor regular. The discipline is in other respects susceptible of improvement. 3. All the prescribed subjects are taught. The classification is tolerably appropriate; the lesson documents are arranged with passable judgment; the methods are tolerably suitable. 4. The attainments range from small in the lower classes to tolerable in the higher. The pupils' answering is partial, and deficient in thoughtfulness, and indicates a very imperfect retention of the lessons. The teaching power is poor and indifferent.

SURRY HILLS (R.C.—Girls) :—Visited, 4th November.

Number present at examination :—108.

1. The situation is low, and the accommodation, whether as regards space or furniture, is insufficient. There is a moderate supply of apparatus and books. 2. The pupils are fairly punctual and regular. The order is unsatisfactory, the pupils being restless and noisy. 3. The instruction is tolerably regulated, and the teaching is conducted with moderate intelligence. 4. The proficiency is moderate.

SURRY HILLS (Wes.—Primary) :—Visited, 21st May.

Numbers present at examination :—Boys, 69; girls, 22; total, 91.

1. The schoolroom needs whitewashing internally. There is an adequate supply of the necessary working materials. 2. The pupils are tolerably punctual. The order admits of improvement. 3. The instruction is fairly regulated, and the methods are intelligent and tolerably effective. 4. The average proficiency is tolerable.

SUSSEX-STREET (Hebrew) :—Visited, 22nd October.

Numbers present at examination :—Boys, 40; girls, 20; total, 60.

1. The school is temporarily conducted in the Odd Fellows' Hall. The furniture is insufficient and unsuitable. The organization is in other respects very imperfect. 2. The order and general discipline are far from satisfactory. 3. The instruction is only properly regulated for one class. The methods are in part mechanical and worthless. 4. The attainments of the first class are fair, those of the second and third classes are small. The teacher wants training.

TRINITY (C.E.—Primary) :—Visited, 17th November.

Numbers present at examination :—Boys, 62; girls, 32; total, 94.

1. Some of the desks are old and unsightly; a lavatory is required, and the out-offices are not cleanly kept; otherwise, the material state of the school is fairly satisfactory. 2. The pupils are fairly regular, punctual, and clean. The order is susceptible of improvement. The operations of teaching are noisily conducted. 3. All the required branches are taught. The teaching is earnest and painstaking. 4. The proficiency varies from tolerable to fair.

TRINITY (C.E.—Infants) :—Visited, 17th November.

Numbers present at examination :—Boys, 72; girls, 74; total, 146.

1. A classroom is much needed, together with suitable desks; in other respects, the school is fairly organized. 2. The pupils are fairly punctual and regular, clean, and becomingly dressed. The order is good in the upper classes, and moderate in the lower. 3. The instruction is regulated by the necessary documents. The methods are suitable and applied with tolerable skill. 4. The proficiency ranges from moderate to fair.

VICTORIA-STREET (R.C.—Girls) :—Visited, 10th November.

Number present at examination :—82.

1. The schoolhouse is well fitted for the purpose, but is too far from the centre of population. New and more suitable desks, and some diagrams, are needed. 2. The pupils are regular, punctual, and clean. Their demeanour is subdued, modest, and respectful, and their behaviour unexceptionable. The moral tone of the school is excellent. 3. The instruction accords with the prescribed course. The methods are appropriate, and the teaching is very painstaking. 4. The attainments rank from very fair to good. The answering is prompt, thoughtful, and pretty general.

VICTORIA-STREET (R.C.—Infants) :—Visited, 10th November.

Numbers present at examination :—Boys, 44; girls, 39; total, 83.

1. The playground is too small; otherwise the material condition of the school is fair. 2. The pupils are fairly punctual, and in other respects the discipline is excellent, and the moral tone pleasing. 3. The course of instruction is that prescribed for infant schools. The methods are skilfully and zealously applied. 4. The average proficiency is very fair.

WAVERLEY (C.E.) :—Visited, 27th October.

Numbers present at examination :—Boys, 36; girls, 53; total, 89.

1. A fair schoolroom, in good repair, and suitably furnished. Since last inspection, the playground has been divided for the sexes and completely enclosed, but a lavatory and shed are still wanted. There is a fair supply of apparatus. 2. The pupils are fairly punctual, the government is effective, and the moral tone is tolerably healthy. 3. The instruction is regulated with moderate judgment. The methods are appropriate, and are applied with fair energy. 4. The proficiency varies from moderate to tolerable.

WAVERLEY (R.C.) :—Visited, 5th November.

Numbers present at examination :—Boys, 42; girls, 42; total, 84.

1. Additional desks, a lavatory, and access to the playground other than through the schoolroom, are required. The school is fairly supplied with books and apparatus. 2. The government is barely strict enough. On the whole, however, the order and moral aspect of the school may be regarded as tolerable. 3. The methods are moderately suitable, and are applied with commendable industry. 4. Tolerable results have been produced.

WAVERLEY (Pres.) :—Visited, 5th November.

Numbers present at examination :—Boys, 31 ; girls, 32 ; total, 63.

1. The schoolhouse is badly in need of repairs. The playground is unenclosed, and is not furnished with shed or lavatory. The supply of furniture is scanty. 2. The discipline is tolerably satisfactory. 3. The instruction is fairly regulated; and the methods vary in point of skill, the average being moderate. 4. The proficiency is moderate. The teacher has been only recently appointed.

WATERLOO (C.E.—Primary) :—Visited, 24th November.

Numbers present at examination :—Boys, 44 ; girls, 33 ; total, 77.

1. The schoolroom is a weatherboard building, in good condition. The fences need repairing, and a lavatory has yet to be provided. A fair supply of the necessary appliances. 2. Excepting punctuality, the discipline is healthy, and the moral tone pleasing. 3. The Course of Instruction is observed, and the teaching is painstaking and tolerably intelligent. 4. The proficiency varies from tolerable to fair.

WATERLOO (C.E.—Infants) :—Visited, 25th November.

Numbers present at examination :—Boys, 46 ; girls, 49 ; total, 95.

1. A neat weatherboard building erected since last inspection. A shed, a lavatory, and a supply of furniture are wanted. There is a sufficiency of apparatus. 2. The pupils are tolerably regular, but unpunctual. The order is but moderate, owing chiefly to the inadequacy of the teaching power. 3. The instruction is judiciously regulated. The methods are moderately skilful. 4. The average proficiency is tolerable.

WATERLOO (R.C.) :—Visited, 26th and 27th November.

Numbers present at examination :—Boys, 91 ; girls, 55 ; total, 146.

1. The playground is not divided for the sexes, and a lavatory and shed are wanted. Interiorly, the accommodation is good. Considerable additions have been made to the school furniture, and there is a fair supply of working materials. 2. The pupils are very unpunctual, the order is indifferent, and the government is wanting in tact and firmness. 3. The classification is unnecessarily minute. The methods are in part empirical, and but partially effective. 4. The attainments are very moderate.

WOOLLOOMOOLOO (Pres.) :—Visited, 2nd and 3rd December.

Numbers present at examination :—Boys, 79 ; girls, 59 ; total, 138.

1. The material condition of this school has been much improved during the past year. The want of a playground is at present the most serious defect. The furniture is not adequate to the present attendance, and some minor apparatus is required. 2. The pupils are regular and fairly punctual. In the lower classes the order is indifferent, in the upper classes it is fair. 3. The Course of Instruction is observed. The teaching is characterized by fair intelligence and reasonable skill. 4. The attainments are moderate in the two lower classes, and fair in the two higher.

YORK-STREET (Wes.) :—Visited, 19th November.

Numbers present at examination :—Boys, 31 ; girls, 26 ; total, 57.

1. The situation is low, the schoolroom badly lighted, and unprovided with playground or proper furniture. There is sufficient apparatus. 2. The pupils are unpunctual; otherwise, the discipline is passable. 3. The instruction is fairly regulated, and the methods are tolerably skilful. 4. The average proficiency is tolerable.

1869.

LEGISLATIVE ASSEMBLY.
NEW SOUTH WALES.

COUNCIL OF EDUCATION.

(EMPLOYMENT OF THE HON. GEOFFREY EAGAR, M.P., BY.)

Ordered by the Legislative Assembly to be Printed, 22 October, 1869.

Laid on Table in reply to Question No. 3. See Votes and Proceedings, No. 16, of Friday, 22 October, 1869.

THE SECRETARY TO THE COUNCIL OF EDUCATION to THE PRINCIPAL UNDER SECRETARY.

Council of Education Office,
Sydney, 22 October, 1869.

SIR,

I have the honor, by direction of the Council of Education, to forward herewith the information necessary to enable the Honorable the Colonial Secretary to reply to a question to be asked this day in the Legislative Assembly by Mr. Morrice.

I have, &c.,
W. WILKINS,
Secretary.

3. MR. MORRICE *to ask* THE COLONIAL SECRETARY,—Has the Hon. Geoffrey Eagar, M.P., been employed by the Council of Education; if so, in what capacity, what remuneration, and for what period?

In January last the Council of Education decided to employ an experienced accountant to examine the system of accounts in operation for the conduct of its business, in order to ascertain whether the books in use were sufficient, or whether it was desirable to introduce any change, to render the system more correct and satisfactory. After this decision was arrived at, the names of several professional accountants were considered, and finally the Secretary was instructed to communicate with Mr. Eagar on the subject. On this application being made to him, Mr. Eagar undertook to investigate the state of the accounts, and to embody the results of his investigations, and any suggestions for an improved system that might appear to be necessary, in a report to the Council. In the performance of his duty, Mr. Eagar attended at the office of the Council of Education on forty-nine different occasions, going carefully through the records with the Council's accountant, being occupied on many occasions several hours at a time. Mr. Eagar embodied the results of his examination of the accounts in two lengthy reports to the Council, recommending the adoption of a new system, which was introduced under his supervision. Mr. Eagar was engaged in this duty altogether more than five months. The fee charged was £100, which was paid to him.

W. WILKINS,
Secretary.

1869.

LEGISLATIVE ASSEMBLY.
NEW SOUTH WALES.

PUBLIC AND DENOMINATIONAL SCHOOL TEACHERS.
(ALLOWANCE FOR HOUSE-RENT TO.)

Ordered by the Legislative Assembly to be Printed, 29 September, 1869.

RETURN to an *Order* made by the Honorable the Legislative Assembly of New South Wales, dated 23 March, 1869, That there be laid upon the Table of this House,—

“ A copy of the Memorial from certain Public and Denominational School Teachers, respecting the continued omission of any allowance for house-rent to Non-vested Public, and Certified Denominational School Teachers, presented to the Council of Education on or about the 1st March, 1868 ; and also, copies of all Minutes of the Council in reference to the same subject.”

(Mr. Burns.)

PUBLIC AND DENOMINATIONAL SCHOOL TEACHERS.

THE SECRETARY TO THE COUNCIL OF EDUCATION *to* THE PRINCIPAL UNDER SECRETARY.

Council of Education Office,
Sydney, 31 March, 1869.

SIR,

In accordance with the Honorable the Colonial Secretary's request as contained in your letter dated 24th March instant, I have the honor, by direction of the Council of Education, to transmit herewith a copy of the Memorial from certain Public and Denominational School Teachers, respecting the continued omission of any allowance for rent to Non-vested Public, and Certified Denominational School Teachers, presented to the Council of Education on or about 1st March, 1868; and also, copies of all Minutes of the Council in reference to the same subject.

I have, &c.,
W. WILKINS,
Secretary.

(1.)

JOHN J. SALIER *to* THE SECRETARY OF THE COUNCIL OF EDUCATION.

Sydney, 22 February, 1868.

SIR,

I have the honor respectfully to request that you will lay before the Council of Education, at its next meeting, the enclosed Memorial, adopted at a meeting of Teachers under the Council, held at Fort-street School, on Saturday, the 22nd instant.

I have, &c.,
JOHN J. SALIER,
Chairman of Meeting.

(2.)

To the Honorable the President and Members of the Council of Education.

The Memorial of the undersigned Teachers, employed under the Council of Education,—

HUMBLY SHOWETH:—

1. That your Memorialists are in charge of schools under your Council, and have neither residences provided nor house-rent allowed, and are, on that account, at considerable outlay, ranging in Sydney from £40 to £60, and in the Suburbs from £30 upwards each annually.
2. That most of your Memorialists have made application to their respective Local Boards for house-rent, and have invariably had the reply that "they had no funds out of which such a claim could be met."
3. That your Memorialists desire most respectfully to suggest that the Church and School Estate Fund is a source from which such an allowance as the Council may deem sufficient for the above purpose might be justly paid.
4. Trusting that these premises will be taken into your favourable consideration,—
Your Memorialists, as in duty bound, will ever pray.

James Rutledge.	Marian Agnes M'Garvey.
John J. Salier.	Honoria Duffy.
Saml. J. Hardy.	B. Lynch.
Jas. Lyons.	Jerh. Crowley.
Alexander Adams.	Jacob Saxby.
John Burrows.	Valentine Ellery.
Herbert Farr.	R. George.
John C. Waterman.	John Elkin.
Jno. Wm. Hume.	D. D. Reid.
W. Henry Bayley.	J. Wiley.
James Cooke.	G. O'Byrne.
M. O'Grady.	Alexander Clark.
W. Saunders.	James Maloney.
Geo. Burgess.	Thos. Buchanan.
John Andrews.	James Bardsley.

John J. Salier.

(3.)

Copy of a Minute of Proceedings of the Council of Education, dated 24th March, 1868.

The Council took the undermentioned matter into consideration.

Rent.—Teacher's Memorial, dated 22nd instant, to the Council, praying for an allowance for rent. To be informed that the Council deems it inexpedient to accede to the prayer of the Memorialists.

W. WILKINS,
Secretary.

(4.)

(4.)

THE SECRETARY TO THE COUNCIL OF EDUCATION *to* MR. JOHN J. SALIER.

Council of Education Office,
Sydney, 26 March, 1868.

SIR,

I have the honor, by direction of the Council of Education, to acknowledge the receipt of your letter, under date 22nd February last, covering a Memorial adopted at a meeting of Teachers of schools under the superintendence of the Council, held at Fort-street, praying for an allowance on account of house-rent.

2. In reply, I am instructed to acquaint you that the Council deems it inexpedient to accede to the prayer of the Memorialists.

I have, &c.,

W. WILKINS,
Secretary.

1869.

LEGISLATIVE ASSEMBLY.
NEW SOUTH WALES.

PUBLIC AND CERTIFIED DENOMINATIONAL SCHOOLS.
(STATISTICS RESPECTING.)

Ordered by the Legislative Assembly to be Printed, 19 October, 1869.

Laid on Table in reply to Question No. 1. See Votes and Proceedings, No. 13, of Tuesday, 19 October, 1869.

RETURN of Pupils in Public and Certified Denominational Schools, from 1st January, 1867, to
30th June, 1869:—

PUBLIC SCHOOLS.			DENOMINATIONAL SCHOOLS.		
	No. on Roll.	No. in Average Attendance.		No. on Roll.	No. in Average Attendance.
1867.			1867.		
1st Quarter.....	19,641	13,021	1st Quarter	27,986	17,245
2nd "	18,908	11,684	2nd "	25,616	14,520
3rd "	20,367	12,926	3rd "	26,238	16,122
4th "	20,986	14,259	4th "	26,416	17,378
1868.			1868.		
1st Quarter.....	21,902	13,452	1st Quarter	25,469	15,290
2nd "	23,340	15,401	2nd "	26,193	16,945
3rd "	24,471	16,211	3rd "	24,849	16,324
4th "	24,355	16,696	4th "	25,204	17,313
1869.			1869.		
1st Quarter.....	25,291	16,701	1st Quarter	25,932	17,062
2nd "	25,707	16,948	2nd "	25,496	16,673

Council of Education Office,
Sydney, 13th October, 1869.

W. WILKINS,
Secretary.

RETURN of Expenditure upon Public and Denominational Schools, from 1st January, 1867, to
30th June, 1869:—

Public Schools.

Expenditure... .. £116,590 18 11

Denominational Schools.

Expenditure... .. £82,047 1 3

Council of Education Office,
Sydney, 13th October, 1869.

W. WILKINS,
Secretary.

1869.

LEGISLATIVE ASSEMBLY.
NEW SOUTH WALES.

PUBLIC SCHOOLS ACT.

(CORRESPONDENCE RESPECTING PROPOSED AMENDMENT OF.)

Ordered by the Legislative Assembly to be Printed, 28 October, 1869.

RETURN to an *Order* made by the Honorable the Legislative Assembly of New South Wales, dated 14 October, 1869, That there be laid upon the Table of this House,—

“ Copies of the Correspondence relating to certain Resolutions of the Synod of the Diocese of Sydney, adopted on the 8th of April last, and affirming that it was desirable that the Public Schools Act should be so amended as to entitle Certified Denominational Schools to receive from the Council of Education the same assistance as is afforded to Public Schools.”

(*Mr. J. Stewart.*)

SCHEDULE.

NO.	PAGE.
1. The Lord Bishop of Sydney to the Colonial Secretary, with Enclosure, and Minute of Colonial Secretary thereupon. 13 April, 1869	2
2. The Secretary to the Council of Education to the Under Secretary, Colonial Secretary's Department. 1 June, 1869	2
3. The Under Secretary, Colonial Secretary's Department, to the Secretary to the Council of Education. 21 June, 1869	2
4. The Secretary to the Council of Education to the Under Secretary, Colonial Secretary's Department. 26 June, 1869	3
5. The Under Secretary, Colonial Secretary's Department, to the Secretary to the Council of Education. 10 July, 1869	3
6. The Secretary to the Council of Education to the Under Secretary, Colonial Secretary's Department. 5 October, 1869	4
7. The Under Secretary, Colonial Secretary's Department, to the Lord Bishop of Sydney. 27 October, 1869	4

PUBLIC SCHOOLS ACT.

No. 1.

THE LORD BISHOP OF SYDNEY to THE COLONIAL SECRETARY.

Bishopscourt,
13 April, 1869.

SIR,

At the request of the Synod of the Diocese of Sydney, I forward to you a copy of two resolutions passed by that body on Thursday, April 8th, and respectfully solicit your attention to the matter contained in the former of them.

I venture to add the expression of my own opinion that, as the Church of England Denominational Schools are recognized by the law of the Colony, and are usefully engaged in the work of education under the Council of Education, it is not an unreasonable request which the Synod prefers, that these schools should receive more assistance than is now given, in order that they may be enabled to comply with the requirements of the Council.

I have, &c.,
F. SYDNEY,
President.

[Enclosure.]

COPY of Resolutions passed in the Synod of the Diocese of Sydney, Thursday, 8th April, 1869.

1. That, in the opinion of this Synod, it is desirable that the Public Schools Act, 1866, be so amended as to entitle Certified Denominational Schools to receive from the Council of Education the same assistance as is afforded to Public Schools.
2. That the Synod respectfully requests the Bishop, as President, to communicate the foregoing resolution to the Honorable the Colonial Secretary as to him, the Bishop, shall seem most expedient.

F. SYDNEY,
President.

Memorandum by the Colonial Secretary.

Refer to the Council of Education for any observations that to it may seem desirable to be communicated to the Government on the subject.

JOHN R.,
18 May, 1869.

The Secretary to the Council of Education, B.C., 18th May, 1869.—H.H.

No. 2.

THE SECRETARY TO THE COUNCIL OF EDUCATION to THE PRINCIPAL UNDER SECRETARY.

Council of Education Office,
Sydney, 1 June, 1869.

SIR,

I have the honor to acknowledge the receipt of your blank cover memorandum, dated 18th May ultimo, communicating to the Council of Education the minute of the Honorable the Colonial Secretary on a letter from the Lord Bishop of Sydney, transmitting copy of resolutions passed by the Synod of the Diocese of Sydney, on the 8th April.

2. I am instructed by the Council to state, in reply, that the resolutions of the Synod do not appear to apply to the administration of the Public Schools Act, but are rather directed to the re-opening of a question which that Act was supposed to have settled. It would not, therefore, it is conceived, be within the scope of the duties of the Council to offer any opinion on a change of policy in the promotion of public education.

I have, &c.,
W. WILKINS,
Secretary.

No. 3.

THE PRINCIPAL UNDER SECRETARY to THE SECRETARY TO THE COUNCIL OF EDUCATION.

Colonial Secretary's Office,
Sydney, 21 June, 1869.

SIR,

In acknowledging the receipt of your letter of the 1st instant, respecting the resolution of the Synod of the Diocese of Sydney with reference to Certified Denominational Schools, I am now directed to refer the letter of the Bishop of Sydney on that subject, which is accordingly herewith returned with its enclosure, for the further consideration of the Council of Education, in the hope that they will yet afford to the Colonial Secretary the advantage of their advice and experience, and thus assist the Government duly to consider and satisfactorily to answer the letter in question.

2. The Council will, Mr. Robertson feels sure, see that in asking such assistance he is in the only way practicable asking that the Government may have the advantage of the experience and knowledge brought within the Council's reach by means of a numerous staff of highly intelligent and valuable officers appointed and paid by the Government, but with whom it would be irregular for him to communicate directly.

Herewith
returned.

13 April, 1869.

3

3. In view of the sixth clause of the Public Schools Act, which provides that "the Council of Education shall in all matters be subject to the like control by the Governor and Executive Council as any other Department of the Public Service," the Colonial Secretary does not think that even if he asked assistance from the Council, or from any of the large staff of officers under its control, to enable the Government to prepare and satisfactorily to complete a measure for a changed educational policy, the Council could properly refuse on the ground that it does not come "within the scope of its duties to offer any opinion on a change of policy in the promotion of public education"—certainly no other department of the Government would ever think of objecting to assist the Government on such grounds.

4. But Mr. Robertson did not ask anything of the kind. He received a letter from the Lord Bishop of Sydney, conveying certain resolutions of the Synod of the Diocese of Sydney, and expressing the opinion of that distinguished Prelate as follows:—"That as the Church of England Denominational Schools are recognized by the law of the Colony, and are usefully engaged in the work of education, under the Council of Education, it is not an unreasonable request which the Synod prefers, that these schools should receive more assistance than is now given, in order that they may be enabled to comply with the requirements of the Council."

5. Here was a proposition courteously put forward by the Bishop and the Synod of the Diocese of Sydney; and it was, and is, I am to add, the Colonial Secretary's duty to answer it after careful and thoughtful consideration—not necessarily to comply with the wishes in it expressed, but certainly to avoid dealing with it lightly or disrespectfully. Mr. Robertson therefore addressed the Council as the administrative body charged (under the department for which he is the Minister directly responsible to Parliament) with the conduct and management of public education; and sought its assistance to enable him to return a satisfactory reply.

I have, &c.,
HENRY HALLORAN.

No. 4.

THE SECRETARY TO THE COUNCIL OF EDUCATION to THE PRINCIPAL UNDER SECRETARY.

Council of Education Office,
Sydney, 26 June, 1869.

SIR,

I am directed by the Council of Education to acknowledge the receipt of your letter of the 21st instant, referring, by direction of the Honorable the Colonial Secretary, the letter of the Bishop of Sydney, dated the 13th April, and its enclosure, for the further consideration of the Council.

2. It appears to the Council that some misapprehension exists, both as to the nature of its communication of the 1st instant, and its position and functions as defined by law. Upon the resolutions of the Synod of the Diocese of Sydney, transmitted to the Government by the Lord Bishop's letter, the Council considered that it could not with propriety, offer any opinion, as those resolutions merely expressed the desire of the Synod for an amendment of the Act of Parliament, which the Council had been called into existence to administer. I am desired to say that the Council will have pleasure, at all times, in affording to the Government any information in its possession relating to the working of the Act; but it must still adhere to its decision not to incur the responsibility of offering advice on matters of public policy, such as are involved in the resolutions of the Synod.

3. In thus communicating its views the Council disclaims all intention of dealing lightly or disrespectfully with the proposition of His Lordship the Bishop and the Synod of the Diocese of Sydney.

4. The letter of the Lord Bishop of Sydney, with its enclosure, is respectfully returned.

I have, &c.,
W. WILKINS,
Secretary.

No. 5.

THE PRINCIPAL UNDER SECRETARY to THE SECRETARY TO THE COUNCIL OF EDUCATION.

Colonial Secretary's Office,
Sydney, 10 July, 1869.

SIR,

In acknowledging the receipt of your further letter of the 26th ultimo, having reference to the resolution of the Synod of the Diocese of Sydney, on the subject of Certified Denominational Schools,—I am directed by the Colonial Secretary to observe that the Council of Education have left altogether out of sight in their reply the letter of the Lord Bishop of Sydney, which was quoted at considerable length in my communication of 21st June.

2. The Council states, however, that it "will have pleasure at all times in affording to the Government any information in its possession relating to the working of the Act."

3. In the present instance the Bishop claims for certain Denominational Schools more assistance than is now given to them; and bases his claim on the facts of their recognition by the law, and their value as a means of education. The Colonial Secretary will therefore be glad to be informed—

Firstly—What assistance the schools, to which His Lordship refers, have had as compared with other Denominational Schools?

Secondly—What assistance they have had as compared with Public Schools having the same, or nearly the same, number of scholars?

Thirdly—Whether they have all the assistance intended to be provided for them under the law?

4. I am to add that there does not seem to be any present necessity for prosecuting further the discussion which the Council has raised as to the amount of assistance, advice, or help that the Government is entitled to seek from it in the event of a new Education Bill becoming necessary, inasmuch as that contingency has not arisen.

I have, &c.,
HENRY HALLORAN.

No. 6.

No. 6.

THE SECRETARY TO THE COUNCIL OF EDUCATION *to* THE PRINCIPAL UNDER SECRETARY.
Council of Education Office,
Sydney, 5 October, 1869.

SIR,

I have the honor, by direction of the Council of Education, to acknowledge the receipt of your letter, dated 10th July ultimo, in which you request, with reference to the letter of the Lord Bishop of Sydney respecting the resolution of the Synod of the Sydney Diocese on the subject of certified Denominational Schools, that the Honorable the Colonial Secretary may be informed—

1. What assistance the schools to which His Lordship refers have had as compared with other Denominational Schools?
 2. What assistance they have had as compared with Public Schools having the same, or nearly the same, number of scholars?
 3. Whether they have all the assistance intended to be provided for them under the law?
2. In supplying the information requested I am instructed by the Council to remark that the expenditure of the funds placed at the Council's disposal by the vote of the Legislature may be classified under the following heads, viz. :—
1. Erection and repairs of buildings.
 2. School furniture (fixtures).
 3. Rent of teachers' residences.
 4. School books.
 5. School apparatus.
 6. Training school allowances.
 7. Travelling expenses of teachers.
 8. Salaries of teachers.
 9. Inspection of schools.
 10. Forage allowances to teachers.
3. With the exception of the erection and repairs of buildings, school furniture, rent of teachers' residences, and forage allowances, the Council has made no distinction between Public Schools and Certified Denominational Schools, but has given the same amount of pecuniary assistance to all alike.
4. With respect to the first of these matters I am to point out that section 23 of the Public Schools Act prohibits the appropriation of money in aid of building or repairing school premises, unless the site of such premises shall be vested for the promotion of Public Schools in the Council of Education.
5. As regards the supply of furniture the Council desires me to remark that the proportion of the Church and School Estates Revenue available for Denominational Schools may be devoted to this object, at the discretion of the heads of the respective denominations, upon whose recommendation the Council has allotted the amount accruing from that source. The Council has, moreover, agreed that applications for furniture, made on behalf of Certified Denominational Schools which are situated in poor localities, and supply the only means of education in their respective districts, shall be received and considered on their merits.
6. The sums formerly paid to teachers of Public Schools on account of house rent have been discontinued, the Regulation (Article 44) under which such allowances were granted having been altered in the revised Regulations of 8th March, 1869. Public and Certified Denominational Schools are consequently now placed on the same footing in this respect.
7. The forage allowances are granted to teachers of half-time Schools only. These teachers are required to itinerate between two or more localities, and are compelled to keep horses to enable them to perform their duties.
8. It is therefore apparent, from the foregoing statements, that the Certified Denominational Church of England Schools receive the same assistance as all other Certified Denominational Schools, and that they now receive the same assistance as Public Schools, except as regards aid in the erection and repairs of buildings (which is prohibited by law) and in the supply of furniture.

I have, &c.,
W. WILKINS,
Secretary.

No. 7.

THE PRINCIPAL UNDER SECRETARY *to* THE LORD BISHOP OF SYDNEY.
Colonial Secretary's Office,
Sydney, 27 October, 1869.

MY LORD,

With reference to your Lordship's letter of the 13th April last, forwarding copy of resolutions passed by the Synod of the Diocese of Sydney, affirming the desirability of so amending the Public Schools Act of 1866, as to entitle Certified Denominational Schools to receive from the Council of Education the same assistance as is afforded to Public Schools,—I am now directed by the Colonial Secretary to state, for your Lordship's information, that as the result of recent correspondence with the Council of Education, it has been ascertained that the Certified Denominational Church of England Schools receive in common with all other Certified Denominational Schools the same assistance as Public Schools, except as regards aid in the erection and repair of buildings (which is prohibited by law), and in the supply of furniture.

2. With regard to the latter item the Council of Education represent that the proportion of the Church and Schools Estates Revenue, available for Denominational Schools, may be devoted to this object at the discretion of the heads of the respective Denominations, upon whose recommendation they have allotted the amount accruing from that source, and that they have moreover agreed that applications for furniture, made on behalf of Certified Denominational Schools which are situated in poor localities, and supply the only means of education in their respective districts, shall be received and considered on their merits.

I have, &c.,
HENRY HALLORAN.

1869.

LEGISLATIVE ASSEMBLY.
NEW SOUTH WALES.

GENERAL CEMETERY AT NORTH SHORE.

(CORRESPONDENCE, &c., RESPECTING.)

Ordered by the Legislative Assembly to be Printed, 21 October, 1869.

RETURN to an *Order* made by the Honorable the Legislative Assembly of New South Wales, dated 8th October, 1869, That there be laid upon the Table of this House,—

“ Copies of all Correspondence, Minutes, Papers and Plans in the possession
“ of the Government, having reference to a General Cemetery at the North
“ Shore.”

(*Mr. Tunks.*)

SCHEDULE.

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GENERAL CEMETERY AT NORTH SHORE.

No. 1.

W. TUNKS, Esq., M.L.A., to THE SECRETARY FOR LANDS.

St. Leonards,
12 March, 1867.

SIR,

In accordance with the request of the Premier and yourself, I have made inquiry about Willoughby for land suitable for a general cemetery for this district. I have not been successful in finding any Crown land, but there is abundance of (in my opinion) suitable private land to be had. I herewith forward you a letter from Mr. French, offering a site in a central situation for sale, and which I shall be happy to point out to any person authorized by Government. I am not in a position to offer an opinion as to price.

2 March, 1867.

I would beg your early attention to this matter, as it must be obvious that to convey the dead from the parishes of Willoughby and Gordon to Haslem's Creek for burial, will be inconvenient and even oppressive to many poor families.

I have, &c.,
WILLIAM TUNKS.

Surveyor General. B.C., 19 March, /67.—M.F.

Forwarded to Mr. Licensed Surveyor Armstrong, who will be good enough to confer with Mr. Tunks and examine the locality, and report what portion of Baker or Lamb Farms is offered to the Government as a site for a cemetery, its suitability for the purpose in view both as to situation and soil, and also whether the price the land is offered at is reasonable.

W.R.D.
B.C., 20 March, 1867.

[Enclosure.]

Mr. J. French to W. Tunks, Esq., M.L.A.

2 March, 1867.

Dear Sir,

I attended at the North Shore last Thursday, when I learned that you were away at the opening of the extension of the Southern Railway to Nattai. I trust you enjoyed yourself.

I beg to state that I am willing at present to dispose of the land known as Baker Farm, and the unsold portion of Lamb Farm, at £20 per acre cash, for the purpose named at our recent interview.

I am not in ignorance of the fact that the price per acre named by me is considerably less than what is demanded for land in less favourable situations.

I named this sum, however, under the impression that the land was required to cultivate and otherwise improve. Having named the price, I keep to it; but had I known at the time for what purpose the land was required, I should certainly have asked more.

Of course I shall not bind myself to keep the land open for any length of time at this low price. An early decision in the matter will therefore be necessary.

I am, &c.,
J. FRENCH.

No. 2.

MR. LICENSED SURVEYOR ARMSTRONG to THE SURVEYOR GENERAL.

Sydney, 25 March, 1867.

SIR,

According to your B.C. instructions, dated 20th March, and herewith returned, I have the honor to inform you that I called on Mr. Tunks, who accompanied me to the land offered for sale to the Government by Mr. French, near St. Leonards, as a general cemetery.

Mr. French being absent at Maitland, no one being able to show the two farms alluded to, and Mr. Tunks being unacquainted with the boundaries, I had great difficulty to fix on the spot, not being fenced in; but from one or two labourers, and a tracing in my hand, I could identify the place pretty nearly. We examined the land all round, and I have shown on the accompanying tracing*, by a blue tint, one spot, part of Baker's farm alluded to, and another, tinted green, part of two allotments lately marked out by Government for sale, but withdrawn, as the most eligible with regard to soil, the undulating form of the ground, and not too near the steeper land adjoining the creek, where some ironstone showed itself.

* Appendix A

Lamb's 25 acres is not a desirable spot for a cemetery, because the land falls more rapidly, and the wash from it towards other small farms might be objected to.

The soil at both of the spots I have pointed out roughly consists of clay and ironstone grit on the surface. I have no doubt the subsoil is also clay, and some ironstone bands through it. I have not yet dug down to try it. There is only sapling timber growing; all the large timber has been cut down.

On Mr. French's return from Maitland, I beg to suggest that he be requested to point out to me correctly the land he offers, and if he has a plan, to allow me to inspect it, Mr. Tunks being unable to define it properly.

The

The price per acre (£20 cash) is I think too much for that locality—£5 per acre is about the value. The rough forest land lying back in that part of the country is said to fetch £3 per acre. If the Government (when the land is more clearly pointed out to me by Mr. French) do not come to terms with him, I beg respectfully to submit for your consideration an *alternative*—that Mr. Berry be applied to, to sell sufficient land adjoining the present Church of England Burial Ground at A, which he gave them, to make a general cemetery.

It is to be hoped that for such a purpose he would not ask too much.

I have, &c.,
JOHN ARMSTRONG,
L. S.

No. 3.

THE CHIEF DRAFTSMAN to MR. LICENSED SURVEYOR ARMSTRONG.

Memorandum of instructions.

Mr. Licensed Surveyor Armstrong is requested at his early convenience to measure Peter Dargan's 25 acres and Humphrey Evans' 25 acres, in the positions (approximately) shown by red dots on the accompanying tracing.* A space for J. Williamson's 44 acres, and H. Asser's 30 acres, and T. Jennings' 30 acres, is also to be left in the position shown by green edging, and Mr. Armstrong will accordingly be good enough to mark off 104 acres accordingly. *Appendix B.

Mr. Armstrong will also be good enough to test the fitness of the land indicated by a green tint on the tracing furnished by his letter of 25 March for the purposes of a cemetery, and if found suitable lay out in the usual way 16 or 20 acres for the purpose.

Mr. Armstrong will also have the goodness to consult with the Chairman of the Municipal Council of North Willoughby, and lay out the usual areas for Pound—for Municipal Buildings—and, if applied for by the proper authorities, for Churches and Schools.

JOHN S. ADAM.
(For Surveyor General.)
22 April, 1867.

Replied to by my letter dated 24 September, 1867.

No. 4.

R. HARNETT, Esq., to THE SECRETARY FOR LANDS.

Gore Hill, North Shore,
20 September, 1867.

SIR,

I have the honor to enclose a petition signed by myself and 104 landowners and residents in this district, against the proposed site for a cemetery near Gore Hill on the North Shore, and recommending that a certain creek be reserved for the purposes of water supply.

I have, &c.,
R. HARNETT.

Surveyor General, B.C., 24 Sept.—M.F.

Mr. L. S. Armstrong, for report at his earliest convenience. J.S.A., for Surveyor General.—
22 October, 1867.

[Enclosure.]

The humble Petition of the undersigned residents and landowners in the parishes of Willoughby and Gordon on the North Shore respectfully sheweth:—

That your petitioners have learned with anxiety and alarm that Mr. Surveyor Armstrong, acting in pursuance of instructions received from the Surveyor General, has been engaged marking out as a site for a public cemetery about sixteen or twenty acres of land with a frontage to the main road leading from Sydney to Lane Cove, and contiguous to land on the North Shore known as "Gore Hill."

That the township of St. Leonards numbers upwards of 2,000 inhabitants, and that the parishes of Gordon and Willoughby, including North Sydney, contain upwards of 500 inhabitants.

That any general cemetery which may be opened will be the place of sepulture not merely of the immediate residents, but also of those persons residing in the township of St. Leonards and of other townships growing up in the district.

That in the nature of things, and having regard to the population, any cemetery which may be opened on this side of the Shore will receive a considerable annual percentage of burials.

That the proposed site is on the main thoroughfare between Lane Cove and Sydney, over which there is considerable traffic, and on this account alone would not be pleasant to the feelings of your petitioners, while it would be calculated to impair the public health.

That the proposed site is the centre of a populous and increasing district.

That the proposed site presents objections of a local nature.

That the ground on which it is proposed to place the cemetery abounds with springs, and is situate near the source of a fine creek of beautiful fresh water which traverses a considerable portion of the district before uniting with the "Flat Rock" and other creeks which fall into Middle Harbour.

That a considerable proportion of your petitioners are dependent upon and supplied with fresh water for the use of themselves, their families and cattle, &c., from the creek referred to and its tributaries or confluents.

That the creeks referred to are the sole means of water supply to the majority of your petitioners.

That your petitioners are all equally interested in this matter, as they feel that what is calculated seriously to impair the health of one portion of the inhabitants on this side of the Shore must necessarily affect the whole.

That it has been decided by the authority of eminent medical men that nothing is calculated to contribute more to sickness and disease than bad water.

That it has been decided by like authority that cemeteries do seriously affect the water in their neighbourhood, by *drainage* and percolation of impure and pestiferous matter.

That

That your petitioners are further supported in their views by the evidence taken in a recent inquiry respecting the burial ground at Randwick.

That there are at present no less than *four* cemeteries at the North Shore, and the one now proposed will make the *fifth*. That the creek referred to affords a never-failing stream of pure water in all seasons.

That considering its position, and that there is no similar stream within several miles upon the same line of road, your petitioners are of opinion that it would be conducive to public interests to reserve the creek for the purposes of *water supply*; and your petitioners beg leave to bring the fact under your serious consideration, in the hope that a benefit so desirable and necessary may be conferred upon your petitioners, by the creek being reserved accordingly and the cemetery put in another place.

That questions of a sanitary nature have always received mature consideration at the hands of Government, and that the recent Act of the Legislature, 30 Victoria, No. 3, prohibiting interments in the public cemetery in Sydney, and a further Bill now before Parliament having a similar object, are precedents of paternal regard in this behalf.

That your petitioners are informed and verily believe that the Government have other land at their disposal for the purposes named not having the many objectionable features presented by that of the proposed site.

Your petitioners humbly trust that in the exercise of your high and important office you will be induced to take the premises into your serious consideration; and that you will grant them such immediate relief as the exigencies of the case require. And your petitioners, as in duty bound, will ever pray.

[Here follow 104 signatures.]

No. 5.

MR. LICENSED SURVEYOR ARMSTRONG to THE SURVEYOR GENERAL.

Sydney, 24 September, 1867.

SIR,

*Appendix C.

According to your memorandum of instructions, dated 22 April, 1867, and herewith returned, I have the honor to transmit the plan* of 104 acres at North Willoughby, having surveyed and fixed the same in the positions pointed out by you. I had some difficulty in doing so, the original work having been performed by different surveyors, namely:—Mr. Mehan, Mr. Burrows, Mr. Drake, and Mr. Knapp, sen. The whole is now well marked, and the corners are staked and lock-spitted.

Not required.
Not required.

I have also examined the neighbourhood as to the fitness of a spot for a cemetery, and found it very difficult to obtain enough of suitable soil for the purpose lying altogether. I could therefore only take in, in one spot, 12 acres 3 roods 35 perches, which consists generally of good dry loam and free from rock; also of easy access, fronting the road from St. Leonards to Lane Cove. It is all strongly marked, and at the corners are lettered stakes and lock-spits. I herewith transmit a plan of it on a large scale.

I have likewise surveyed and marked out and transmit the plan of the 25-acre grant to Humphrey Evans, and the 25-acre grant to Peter Dargan, in the way directed by you, deducting the area of the public road passing through them.

I beg to add that, according to your directions, I consulted Mr. Bligh, the Chairman of the Municipality of North Willoughby, pointing out all you required me to do. He was well satisfied.

I have, &c.,
JOHN ARMSTRONG,
Licensed Surveyor.

No. 6.

MR. LICENSED SURVEYOR ARMSTRONG to THE SURVEYOR GENERAL.

Sydney, 24 October, 1867.

SIR,

According to your B.C. instructions, dated 22 October, 1867, and now returned, I have the honor to report, as directed, on the petition of certain persons on the North Shore, against the proposed cemetery at North Willoughby.

As to the site, I consider it is of easy access from every direction—the position is central. If it was any distance from the Lane Cove Road, which runs for miles most conveniently along a main ridge, it would then most probably have to be approached by some awkward by-road or over some gully. As to its being not pleasant to the feelings of the petitioners because one side touches on the Lane Cove Road, it may be remarked that other cemeteries which can be named have been so placed for the general convenience.

Although the proposed cemetery may be said to be contiguous to the cultivation paddock and cottage, &c., called "Gore Hill," it is on the other side of a ridge of land and out of sight, and no actual detriment can therefore occur to it.

See enclosure
to No. 1.

The proprietor of that place considering he had a claim to this very spot, only a short time ago, offered it to the Government at a certain sum per acre, being aware of the purpose to which it was to be applied. (*Vide* his letter and offer.)

The allegation that the spot *abounds with springs* is very incorrect; it is, on the contrary, sound ground, the soil is good loam with an occasional spot of ironstone grit, and there is fortunately no rock.

The two small insignificant gutters, or they may be called slight indentations of the surface, have no water—it is only grass or some trifling scrub. Neither of them even when they meet form themselves into a creek till a good way down.

I am confident that any unbiassed person viewing the ground would say it is a most suitable spot in every way.

The water in the creek, when you begin to meet any as you go down, is generally brackish, and I refused to drink it even as far down as "the Flat Rock" crossing-place itself. I cannot think it can be so much resorted to as alleged—I witnessed nothing of the kind. Mr. Tunks, M.L.A., pointed out this spot to the Government as the most eligible that could be found. I accompanied him to view it, and coincided in his opinion without hesitation; other intelligent persons on my application to them concurred in the same opinion, observing that there was no other spot so suitable on the Crown land, being chiefly rock and sand.

As

As to the evil apprehended of the *draining* or *percolation* from such firm soil and so nearly level with those blind creeks passing through barren unimproved and unenclosed land, I am of opinion it is too remote to be entertained.

Lastly, looking at that thinly populated part of the country, surely this cemetery will avail for a very long period; and if as alleged there are four other cemeteries laid out on the North Shore, this one will not be required to be much used for years to come.

I have, &c.,
J. ARMSTRONG,
L. S.

The report of Mr. L. S. Armstrong on the petition against the cemetery at North Willoughby is forwarded for the information of the Honorable the Secretary for Lands. From the various reasons set forth in that report, I am of opinion that the objection of the petitioners against the site as a cemetery are not valid; that the land is suitable, and should be granted for the purpose in view.

Under Secretary for Lands.

W.R.D.
B.C., 26 Oct., 1867.

No. 7.

THE UNDER SECRETARY FOR LANDS to R. HARNETT, Esq.

Department of Lands,
Sydney, 21 November, 1867.

SIR,

In reference to your letter of the 20th September, forwarding a petition signed by certain residents in the parishes of Willoughby and Gordon, North Shore, praying that the intention to appropriate for a cemetery a portion of land at Gore's Hill, on the Lane Cove Road, may be abandoned,—I am directed to inform you that, from a report which has been received from the Surveyor General, it appears that the land in question is the most suitable for the purpose that could be found, and that it is not open to any of the objections urged in the petition.

2. Under these circumstances, the Minister for Lands has decided that the land may be dedicated to the purpose contemplated.

I have, &c.,
M. FITZPATRICK.

No. 8.

W. TUNKS, Esq., M.L.A., to THE SECRETARY FOR LANDS.

St. Leonards, 23 April, 1868.

SIR,

I beg to inform you that there are persons daily cutting and carrying away timber from off the land lately dedicated for a general cemetery at the North Shore, and that I have called the attention of the Crown Lands Commissioner, Mr. James Deane, to the fact, who (I am informed by the Sergeant of Police resident here) visited the spot yesterday, but took no steps to punish or even discontinue the trespass complained of, because the persons whom he caught cutting wood were employed by a person who had, or was supposed to have, a license to cut timber on Crown Lands. I therefore request your prompt interposition in this matter, to prevent the trees from being destroyed. It surely was never intended that licenses to cut timber on Crown Lands should be issued for operating upon such places as the reserve alluded to, or the small quantity of public land adjoining to it. I am anxious, until the formal dedication is completed and Trustees are appointed, that in this cemetery the growing trees should be preserved, as a number of them, in my opinion, ought to be left standing for the purpose of shade and ornamentation; but if the indiscriminate cutting them down is permitted, it will prevent that being properly done—besides which, such trees as it will be necessary to remove can be easier rooted out while their tops remain intact than taking out the mere stumps, and the firewood thus obtained could be sold and the proceeds applied towards the expense of clearing the land; but taking out stumps only would be laborious, and the wood from them worthless. These considerations are forced upon me, as I am aware that our local exchequer is empty, and we have but slender means of replenishing it.

I have, &c.,
WILLIAM TUNKS.

Request the Mayor of North Willoughby to protect the cemetery until Trustees are appointed.
J.B.W.—24 April, /68.

No. 9.

THE UNDER SECRETARY FOR LANDS to THE MAYOR OF NORTH WILLOUGHBY.

Department of Lands,
Sydney, 25 April, 1868.

SIR,

Representation having been made by Mr. W. Tunks, M.L.A., that persons are daily cutting and removing timber from the land at the North Shore which has been dedicated for a general cemetery, I am directed by the Honorable the Minister for Lands to request that you will be good enough to protect the cemetery until Trustees have been appointed.

I have, &c.,
M. FITZPATRICK.

No. 10.

No. 10.

THE MAYOR OF NORTH WILLOUGHBY to THE UNDER SECRETARY FOR LANDS.

Municipality of North Willoughby,
30 April, 1868.

SIR,

I am in receipt of your letter dated 25 April, 1868, directing me to protect the land (at North Shore) set apart for a general cemetery. I have the honor to inform you that the request of the Honorable the Minister for Lands is being carried out.

I have, &c.,
DAVID BROADFOOT,
Mayor.

No. 11.

THE UNDER SECRETARY FOR LANDS to W. TUNKS, Esq., M.L.A.

Department of Lands,
Sydney, 2 May, 1868.

SIR,

Referring to your letter of the 23rd ultimo, I am directed to inform you that the Mayor of North Willoughby has been asked to undertake the charge of the cemetery at North Shore pending the appointment of Trustees.

I have, &c.,
M. FITZPATRICK.

No. 12.

MINUTE OF THE EXECUTIVE COUNCIL.

Department of Lands,
Sydney, 18 April, 1868.

For Schedule see
Government
Gazette Notice,
19 May, 1868,
No. 13.

THE enclosed Schedule of lands set apart for religious and other public purposes is recommended for the approval of His Excellency the Governor and the Executive Council,—one month, as required by law, having elapsed since Abstracts of the same were laid before Parliament.

J. BOWIE WILSON.

Clerk of the Council, B.C., 18 April, 1868.—M.F.

The Executive Council are not aware of any objection to the dedication of the several portions of land set forth in the Schedule accompanying this Minute to religious and other purposes, and advise accordingly.

VERE HUNT,
Acting Clerk of the Council.

Minute 68/19—23 April, 1868.

Confirmed, 4 May, 1868.

Approved. B.—6/5/68.

No. 13.

NOTICE IN GOVERNMENT GAZETTE.

Department of Lands,
Sydney, 19 May, 1868.

HIS Excellency the Governor, with the advice of the Executive Council, has been pleased to dedicate the Crown Lands hereunder described to the several public purposes mentioned in connection therewith, an Abstract of such intended dedication having been duly laid before Parliament, in accordance with the 5th section of the Crown Lands Alienation Act of 1861.

J. BOWIE WILSON.

EXTRACT from Schedule of Crown Lands authorized to be dedicated to religious and public purposes, in accordance with the 5th section of the Act 25th Victoria No. 1.

Place.	County.	Allotment.	Section.	Locality.	Area.	To what purpose dedicated.
Willoughby North ...	Cumberland	.....	.....	Parish of Willoughby, on the road from St. Leonards to Lane Cove and Pennant Hills.	a. r. p. 14 3 24	General Cemetery.

No. 14.

W. TUNKS, Esq., M.L.A., to THE SECRETARY FOR LANDS.

St. Leonards, 1 June, 1868.

SIR,

I beg to inform you that I have applied (see copy of letter marked A enclosed) to the different denominations of religion residing at St. Leonards to nominate lay Trustees for the Crown Lands lately dedicated for a general cemetery for this district, but no names have been suggested to me. I however have received replies to my letter—copies herewith forwarded, marked respectively A 1 and A 2. I subsequently wrote to the Municipal Councils of Willoughby (see copy of letter marked B enclosed), and have received replies—copies marked respectively B 1 and B 2; and as Mayor of the Municipal Council of St. Leonards, I am authorized in stating that that Council is willing to co-operate with the other Councils as Trustees of the cemetery alluded to. I therefore respectfully request that the Municipal Councils of St. Leonards, East St. Leonards, and North Willoughby, may be appointed as Trustees for the before-named cemetery, and that the usual trust deed may be issued at once.

I have, &c.,

WILLIAM TUNKS.

[Enclosures.]

A.

W. Tunks, Esq., M.L.A., to The Rev. W. B. Clarke and others.

St. Leonards, 27 January, 1868.

Rev. Sir,

I beg to inform you that on application the Government consented to dedicate for a general cemetery about fifteen acres of land, situated at Gore's Hill, and bounded by the Lane Cove Road, at the turn opposite Mr. Parker's residence, and that a portion of the same land has been, as I understand, divided in quantity in proportion to the numbers of the principal denominations of religionists, as exhibited by the last Census, leaving however a considerable space for a "general cemetery" and a "proposed extension" within the general enclosure, and for each allotment Trustees are required. I have therefore to request you to be good enough to suggest to me the names of such number of lay gentlemen willing to act as Trustees for the land allotted as a burying place for the Church of as may be deemed necessary. I have been informed that the Government will pay the expense of the exterior fencing and permanently marking the boundaries of the interior divisions only.

The powers of the proposed Trusts are not at present I believe defined by legislative enactment, but the land is given to the Trustees in such a way as to enable each Denomination or Trust to frame its own rules; and a scale of charges, which, when approved by the Governor and Executive Council, have sufficient force to accomplish the object intended; and such rules, &c., have in many places in this Colony been found in practice to work satisfactorily.

The land alluded to is apportioned as under, viz. :—

	a.	r.	p.
Church of England	3	1	22
Church—Roman Catholic	2	0	0
„ Presbyterian	0	3	0
„ Wesleyan	0	2	0
„ Independent	0	0	20
„ Jews	0	0	8
General cemetery	3	3	18
Proposed extension	2	1	7
Dividing road, say	2	0	5
	15	0	0

I have, &c.,

WILLIAM TUNKS.

Addressed

Rev. W. B. Clarke, C.E.
 Rev. John Kenny, R.C.
 Rev. C. Atchison, P.
 Rev. Mr. Lamb, Wesleyan.
 Rev. Mr. Brown, Independent.
 Mr. John Jones, Jew.

Delivered 28th January, 1868.

A 1.

The Rev. W. B. Clarke to W. Tunks, Esq., M.L.A.

Parsonage, 31 January, 1868.

My dear Sir,

Mr. A Gordon, the Bishop's Chancellor, would be glad to see you on the subject of the letter I had the honor of receiving from you respecting the acceptance of the burial ground proposed to be allotted to the Church of England at Gore's Hill.

Believe me, &c.,

W. B. CLARKE.

A 2.

The Rev. John Kenny to W. Tunks, Esq., M.L.A.

St. Leonards, 5 February, 1868.

Dear Sir,

I have to thank you for informing me that the Government has been pleased to grant a piece of ground near St. Leonards for a general cemetery, allotting two acres for the Roman Catholics. If I knew the number of Trustees required by the Government, I would send in the names of those who would consent to act. I wish to see the ground and the portion that is set apart for the Catholics. I have been credibly informed that five acres have been appointed to the Church of England. Now, if they get five acres, I think the Catholics are entitled to three at least. Please inform me if I correspond with you in this matter in your capacity of Chairman of the Municipal Council.

I have, &c.,

JOHN KENNY.

B.

B.
W. Tunks, Esq., M.L.A., to The Mayor of East St. Leonards and North Willoughby.
St. Leonards, 11 March, 1868.

Sir,
I beg to inform you that the Government have promised to dedicate for a general cemetery about 15 acres of land, near Gore's Hill, on the Lane Cove Road, opposite Mr. Parker's residence. The land alluded to is surveyed and apportioned, I believe, in accordance with the last Census, as under, viz. :—

	a.	r.	p.
Church of England	3	1	22
„ Roman Catholic	2	0	0
„ Presbyterian	0	3	0
„ Wesleyan	0	2	0
„ Independent	0	0	20
„ Jews	0	0	8
General cemetery	3	3	18
Proposed extension	2	1	7
Dividing road, say	2	0	5
	15	0	0

The Government will, I am informed, fence in the land and permanently mark the interior boundaries of the division. I have been requested to nominate lay Trustees, and with the view of obtaining acceptable persons, have written to the heads of the different denominations of religion in this district, asking them to suggest to me names of gentlemen willing to act for them respectively, but the replies which I have received are, I regret to say, not so satisfactory as I could have desired; indeed I am now of opinion that from the sparseness of the population a practical difficulty will arise as to meeting the cost of management amongst the religious denominations, and that the general public would rather that the Municipal Councils should take the general control into their hands. I therefore request you to be good enough to ascertain whether your Council be willing to co-operate with the other Municipal Councils of Willoughby, and undertake jointly the management of the proposed cemetery. The cost (if deemed necessary to incur any) may be borne in proportion to population or to persons buried, or by some equitable plan to be hereafter arranged. I am authorized in stating that the Municipal Council of St. Leonards are willing to act in this matter, and I propose communicating simultaneously with the Mayor of North Willoughby on the same subject. I am aware that some of the religious bodies concur in the suggestion now made by me, and I have reason to believe that the majority of them will not object to it.

I have, &c.,
WILLIAM TUNKS.

B 1.
The Mayor of North Willoughby to W. Tunks, Esq., M.L.A.
Municipality of North Willoughby,
5 May, 1868.

Sir,
I beg to inform you that the Council agrees to co-operate with the other Councils of Willoughby in managing the matter referred to in your letter.

I have, &c.,
D. BROADFOOT,
Mayor.

B 2.
East St. Leonards, 16 May, 1868.

Sir,
I am directed by the Mayor of East St. Leonards to inform you that at a special meeting of this Council held on the 15th instant, it was resolved that this Council agrees to co-operate with the Municipal Council of Willoughby and St. Leonards in the management of the land dedicated to the public for a general cemetery at Gore's Hill.

I have, &c.,
HENRY CUBITT,
Council Clerk.

No. 15.

THE UNDER SECRETARY FOR LANDS to THE VERY REV. S. J. A. SHEEHY, V.G.
Department of Lands,
Sydney, 6 July, 1868.

VERY REV. SIR,
It having been represented by Mr. W. Tunks, M.L.A., that owing to the sparseness of the population of the district, it is desirable that the Borough Council of St. Leonards, East St. Leonards, and North Willoughby should be appointed Trustees of the land at North Willoughby dedicated for a general cemetery, I am directed to request that you will be good enough to inform whether His Grace Archbishop Polding has any objection to offer to this arrangement.

I have, &c.,
M. FITZPATRICK.

Similar to Secretary to Lord Bishop of Sydney.

No. 16.

THE VERY REV. S. J. A. SHEEHY, V.G., to THE UNDER SECRETARY FOR LANDS.
Vicar General's Office,
10 July, 1868.

SIR,
In answer to your letter of the 6th instant inquiring whether His Grace the Archbishop has any objection to the appointment of the Borough Councils of St. Leonards, East St. Leonards, and North Willoughby, as Trustees of land at North Willoughby dedicated for a General Cemetery,—I have the honor to state that, as it does not appear that any portion of the said cemetery is to be assigned to the use of Roman Catholics, they can have no interest in it, and His Grace, therefore, sees no reason for offering objection or approval in the arrangement proposed.

I have, &c.,
S. J. A. SHEEHY, V.G.

Inform the Vicar General that the cemetery does include the usual portion for Roman Catholics. If such had not been the case, of course he would not have been applied to on the subject.

J.B.W.—17 July.

No. 17.

9

No. 17.

THE UNDER SECRETARY FOR LANDS to THE VERY REV. S. J. A. SHEEHY, V.G.

Department of Lands,
Sydney, 25 July, 1868.

VERY REV. SIR,

In reference to your letter of the 10th instant, respecting the appointment of Trustees for the general cemetery at North Willoughby, and intimating that as no portion of the cemetery appears to have been assigned to the use of the Roman Catholics, His Grace Archbishop Polding sees no reason for offering objection or approval in the arrangement proposed.—I am directed to inform you that the cemetery in question does include the usual portion for Roman Catholics, and I am to state that if such had not been the case you would not have been applied to on the subject.

I have, &c.,
G. J. ARMYTAGE.
(For the Under Secretary.)

No. 18.

THE UNDER SECRETARY FOR LANDS to THE SECRETARY TO THE LORD BISHOP OF SYDNEY.

Department of Lands,
Sydney, 26 July, 1868.

SIR,

It having been represented by Mr. Tunks, M.L.A., that owing to the sparseness of the population of the district it is desirable that the Borough Councils of St. Leonards, East St. Leonards, and North Willoughby should be appointed Trustees of the land at North Willoughby dedicated for a general cemetery, I am directed to request that you will be good enough to inform me whether His Lordship the Bishop of Sydney has any objection to offer to this arrangement.

I have, &c.,
M. FITZPATRICK.

No. 19.

THE VERY REV. S. J. A. SHEEHY, V.G., to THE UNDER SECRETARY FOR LANDS.

Vicar General's Office,
28 July, 1868.

SIR,

With reference to your letter of the 25th instant, informing me that the general cemetery at North Willoughby does include the usual portion for Roman Catholics, and stating further that if this had not been the case I should not have been applied to on the subject,—I beg you will allow me to point out that this latter consequence was by no means clear until I had the honor of receiving your assurance on the subject.

If I may be permitted to refer to your letter of the 25th March last, inviting the nomination of a Trustee for a general cemetery at the junction of the Old with the New South Head Road, you will observe that after having in my letter of the 31st March made special inquiry, and only then, I was informed that no portion had been set apart for Roman Catholics. You will see therefore that I was justified in not drawing from the mere fact of your communication a conclusion which I had already experienced not to be certain.

With respect to the proposal of Mr. Tunks for the general cemetery at North Willoughby, His Grace the Archbishop regrets that he has it not in his power to comply with a measure that seems to offer some facilities; but custom and the responsibilities of a Trustee of land for Catholic ecclesiastical purposes, do not warrant him in naming as Trustee any other than a Catholic.

I have, &c.,
S. J. A. SHEEHY, V.G.

No. 20.

THE UNDER SECRETARY FOR LANDS to W. TUNKS, Esq., M.L.A.

Department of Lands,
Sydney, 17 August, 1868.

SIR,

I am directed to inform you that the suggestion made in your letter of the 1st June, that the general cemetery at North Willoughby should be vested in the Municipal Councils of St. Leonards, East St. Leonards, and North Willoughby, having been referred to the Very Reverend the Vicar General, a reply has been received, an extract from which I enclose for your information.

I have, &c.,
G. J. ARMYTAGE.
(For the Under Secretary.)

Extract referred to.

With respect to the proposal of Mr. Tunks for the general cemetery at North Willoughby, His Grace the Archbishop regrets that he has it not in his power to comply with a measure that seems to offer some facilities; but custom and the responsibilities of a Trustee of land for Catholic ecclesiastical purposes do not warrant him in naming as Trustee any other than a Catholic.

I have, &c.,
S. J. A. SHEEHY, V.G.

146—B

No. 21.

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No. 21.

THE SECRETARY TO THE LORD BISHOP OF SYDNEY to THE UNDER SECRETARY FOR LANDS.

Diocesan Registry,
Sydney, 26 August, 1868.

SIR,

In reply to your letter of the 26th July last, I have the honor, by direction of His Lordship the Bishop of Sydney, to inform you that His Lordship must decline to join in the nomination of Trustees for a general cemetery, where it is not the intention of Government to set apart a separate portion of the same for the exclusive use of the members of the Church of England as a burial ground, so that His Lordship may be able to consecrate it.

I have, &c.,
WM. NORTON,
Secretary.

No. 22.

W. TUNKS, Esq., M.L.A., to THE SECRETARY FOR LANDS.

St. Leonards, 3 September, 1868.

SIR,

I beg, in accordance with your suggestion, a reconsideration of my letter and enclosures to your department, of date the 1st June, 1868, and request that the Borough Councils of St. Leonards, East St. Leonards, and North Willoughby, may be appointed joint Trustees of the land dedicated for a general cemetery at North Willoughby. In the event of this application not being acceded to, I have to request that the Borough Councils of St. Leonards and East St. Leonards may be appointed joint Trustees of that portion of the land of the same cemetery which is not allotted to religious denominations.

I have, &c.,
WILLIAM TUNKS.

I recommend the Borough Councils named be appointed Trustees of the entire cemetery at North Willoughby, subject however to such future arrangements as may be found expedient for dividing the cemetery among certain denominations. W.F.—13 September, 1868.

No. 23.

THE SECRETARY TO THE LORD BISHOP OF SYDNEY to THE UNDER SECRETARY FOR LANDS.

Diocesan Registry,
Sydney, 11 September, 1868.

SIR,

With reference to your letter of the 6th July last, I have the honor, by direction of His Lordship the Bishop of Sydney, to withdraw my letter of the 26th ultimo, and to inform you that His Lordship objects to the Borough Councils of St. Leonards, East St. Leonards, and North Willoughby, being appointed Trustees for the land at North Willoughby dedicated for a general cemetery, and to say that His Lordship will at an early date submit for approval the names of gentlemen as Trustees of the portion of the above-mentioned cemetery dedicated to the Church of England.

I have, &c.,
WM. NORTON,
Secretary.

No. 24.

THE UNDER SECRETARY FOR LANDS to W. TUNKS, Esq., M.L.A.

Department of Lands,
Sydney, 1 October, 1868.

SIR,

In further reference to your letter of the 1st June, 1868, proposing that the Borough Councils of St. Leonards, East St. Leonards, and North Willoughby, be appointed Trustees of the cemetery at North Willoughby, I am directed to inform you that His Lordship the Bishop of Sydney declines to concur in this arrangement.

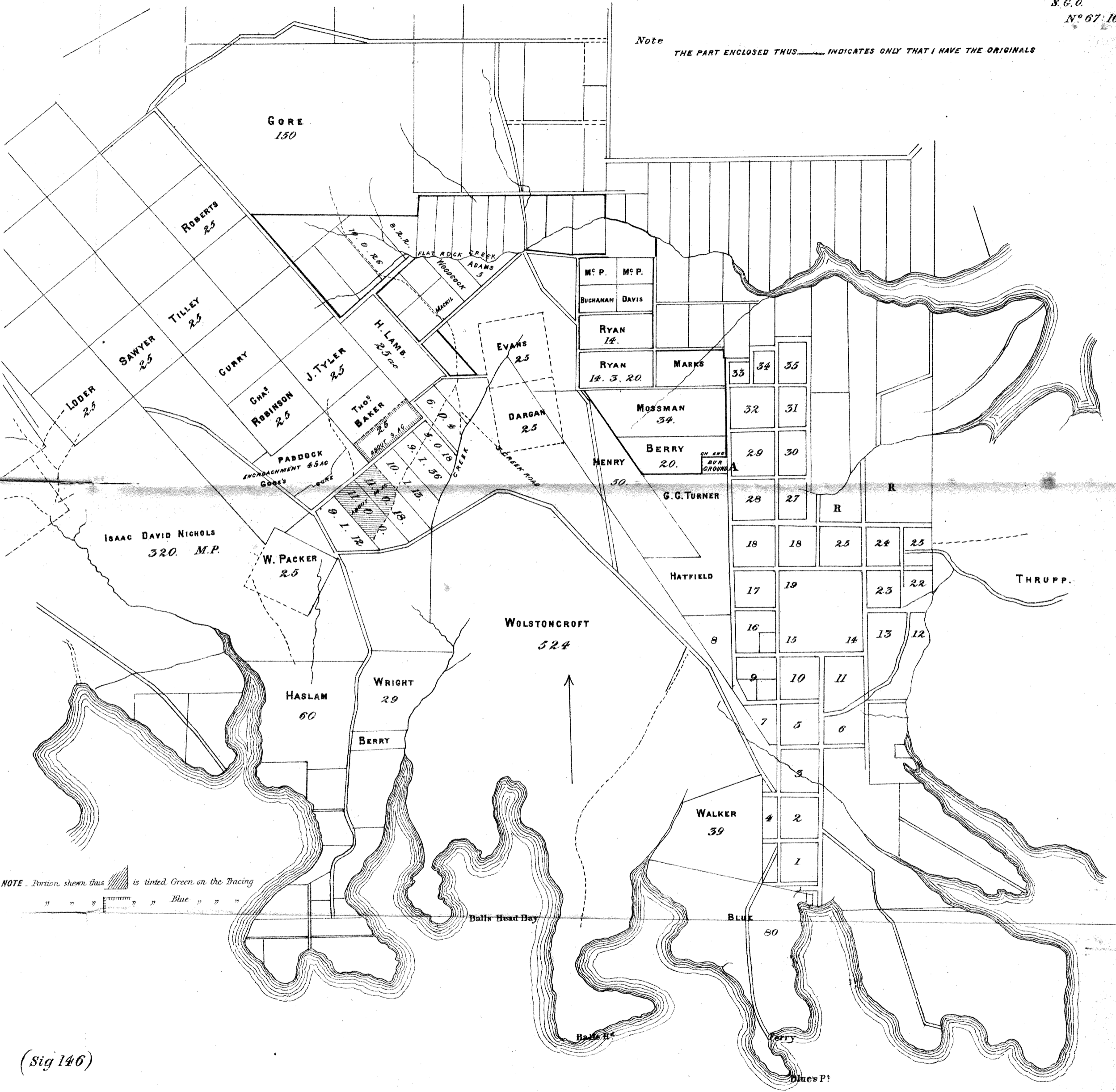
I have, &c.,
M. FITZPATRICK.



[Three plans.]

APPENDIX, A.

S. G. O.
N^o 67. 1624

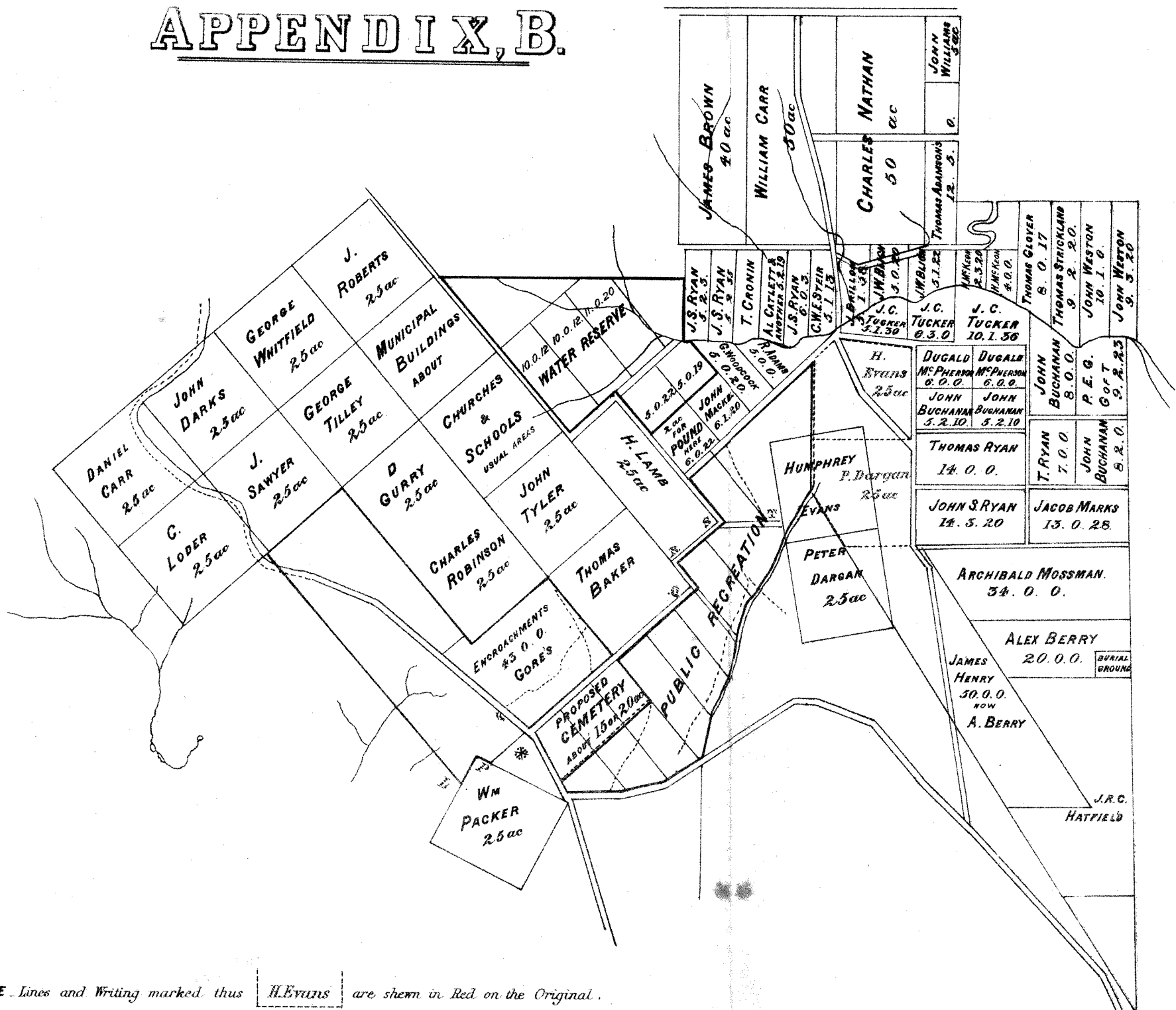
Note
THE PART ENCLOSED THUS  INDICATES ONLY THAT I HAVE THE ORIGINALS



NOTE Portion shown thus  is tinted Green on the Facing
" " "  Blue " " "

(Sig 146)

APPENDIX B.



NOTE Lines and Writing marked thus H. Evans are shown in Red on the Original.

* TO BE INCLUDED IF NECESSARY IN THE MEASUREMENT OF THE 104 ACRES

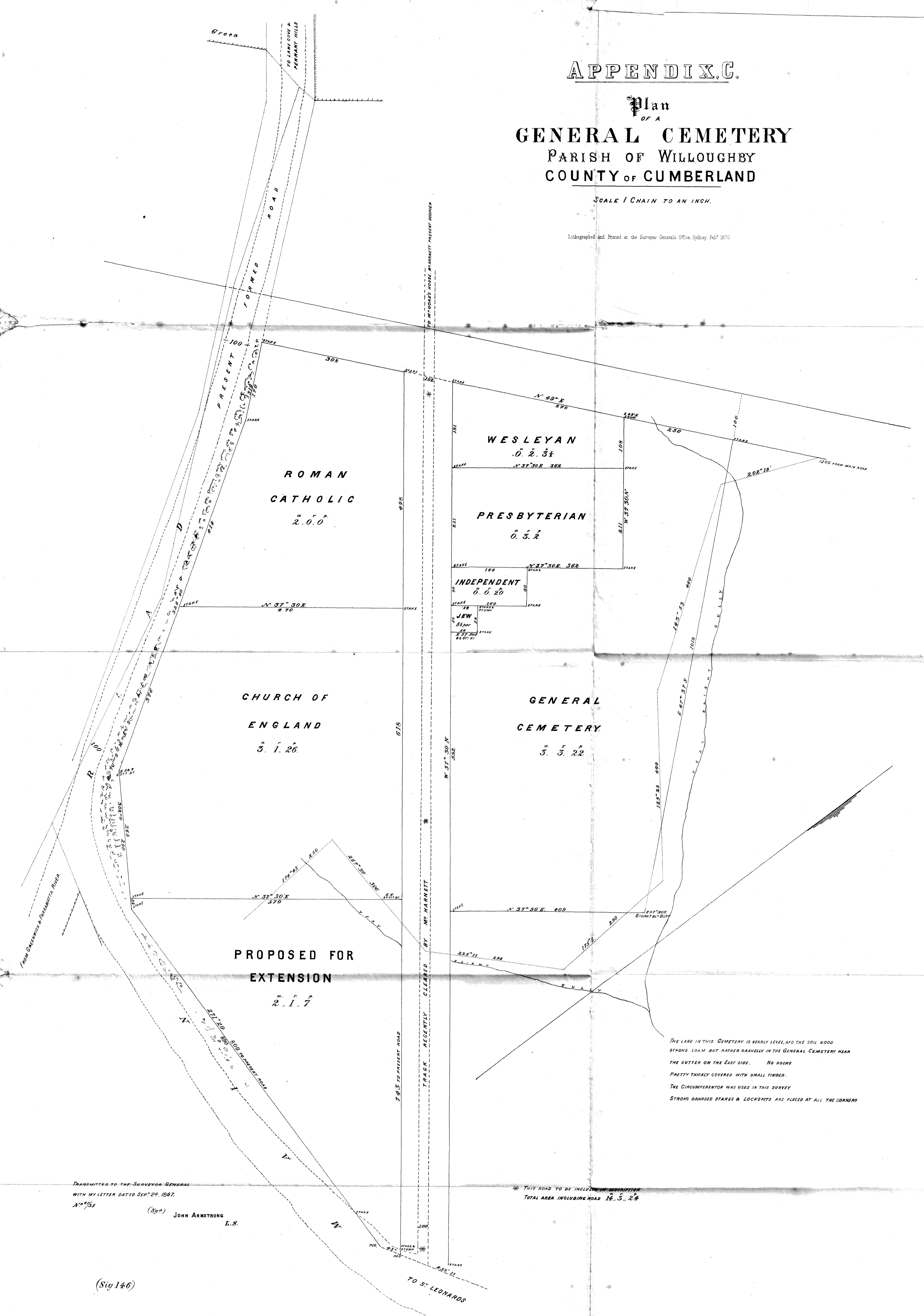
(Sig 146)

APPENDIX C.

Plan OF A GENERAL CEMETERY PARISH OF WILLOUGHBY COUNTY OF CUMBERLAND

SCALE 1 CHAIN TO AN INCH.

Lithographed and Printed at the Surveyor General's Office, Sydney, Feb^y 1870



The LAND IN THIS CEMETERY IS NEARLY LEVEL, AND THE SOIL GOOD STRONG LOAM BUT RATHER GRAVELLY IN THE GENERAL CEMETERY NEAR THE GUTTER ON THE EAST SIDE. NO ROCKS PRETTY THICKLY COVERED WITH SMALL TIMBER. THE CIRCUMFERENTOR WAS USED IN THIS SURVEY STRONG BRANDED STAKES & LOCKPITS ARE PLACED AT ALL THE CORNERS

TRANSMITTED TO THE SURVEYOR GENERAL WITH MY LETTER DATED SEP. 24. 1867.
N^o 75
(30th) JOHN ARMSTRONG
L.S.

* THIS ROAD TO BE INCLUDED IN DESCRIPTION
TOTAL AREA INCLUDING ROAD 12.5.24

1869.

LEGISLATIVE ASSEMBLY.
NEW SOUTH WALES.

WILLIAM HEARD.

(PETITION OF.)

Ordered by the Legislative Assembly to be Printed, 29 September, 1869.

To the Honorable the Speaker and Members of the Legislative Assembly of New South Wales in Parliament assembled.

The humble Petition of William Heard, of Dowling-street, in the City of Sydney, late Overseer of the Necropolis, Haslem's Creek,—

HUMBLY SHEWETH:—

That your Petitioner was appointed, on the 3rd November, 1862, by the then Minister for Lands, the Honorable John Robertson, as Sheep and Cattle Inspector for Corowa.

That owing to the Sheep and Cattle Act having expired in about thirteen months after, your Petitioner had to return to Sydney, and was by the then Secretary for Lands, the Honorable J. B. Wilson, promised other employment as soon as a suitable vacancy occurred.

That your Petitioner, in consideration of this promise, made application and was appointed on the 1st January, 1865, as Working Overseer and Care-taker of the Necropolis, Haslem's Creek, at a salary of £104 per annum, with a residence in the lodge.

That your Petitioner has always been attentive and diligent in the performance of such duties, as certified by Mr. Moore, the Trustees, and others visiting the Necropolis.

That, on the 19th February, 1869, your Petitioner received a notice from Mr. Moore, purporting to come from the Honorable the Minister for Lands, that his services were to be done away with on the plea of economy, and that your Petitioner was to leave and give up of his charge on the 28th day of the said month.

That your Petitioner, after he had received the said notice, was informed that a young unmarried man from the Botanic Gardens, named Robert Nicol, was nominated and afterwards appointed his successor, and was to occupy the aforesaid house and premises.

That your Petitioner, by the direction of Mr. Moore and the Honorable the Minister for Lands, gave up quiet possession of the said house and premises, tools, implements, &c., to the said Robert Nicol, on the 24th day of May, 1869.

That your Petitioner has only received salary for March, although Mr. Moore was aware that your Petitioner continued working on the premises three months under his superintendence.

That your Petitioner has been summarily deprived of his situation on the plea of economy, and his family left unprovided for, while another has been appointed in his place at the same salary.

That your Petitioner feeling that a gross injustice has been inflicted upon him as a public officer of four years and six months services, and being twenty-eight years a resident of the Colony:

Your Petitioner therefore humbly prays, that your Honorable House will take his case into your honorable consideration, and grant him such relief as your Honorable House shall seem meet.

And your Petitioner, as in duty bound, will ever pray.

WILLIAM HEARD.

1869.

LEGISLATIVE ASSEMBLY.

NEW SOUTH WALES.

GEORGE SWINNERTON YARNTON.

(PETITION OF.)

Ordered by the Legislative Assembly to be Printed, 19 October, 1869.

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

The humble Petition of George Swinnerton Yarnton, of Sydney, solicitor,—

SHOWETH :—

That on the 1st day of February, one thousand eight hundred and fifty-nine, your Petitioner relinquished his position as a practising solicitor in the City of Sydney, and accepted the office of Registrar of the Metropolitan District Court.

That on the twenty-eighth day of January last your Petitioner received a communication from the Secretary to the Crown Law Officers, intimating that your Petitioner had been removed from his said office, provision for his salary having ceased.

That your Petitioner has made repeated applications for compensation for the loss of office, but without success; your Petitioner being advised that it has for many years past been the invariable practice on the removal from office of a public servant, to grant a compensation proportioned to the length of his service and the amount of salary received by him.

Your Petitioner therefore prays that your Honorable House will take this case into your favourable consideration, and grant your Petitioner such relief as the justice of the case shall require and as to your Honorable House shall seem meet.

And your Petitioner shall ever pray, &c.

GEORGE S. YARNTON.

Sydney, 30 September, 1869.

1869.

LEGISLATIVE ASSEMBLY.

NEW SOUTH WALES.

MUSIC AND DANCING IN LICENSED PUBLIC HOUSES.

(PETITION—CERTAIN MOTHERS AND DAUGHTERS SYDNEY AND SUBURBS.)

Ordered by the Legislative Assembly to be Printed, 30 September, 1869.

To the Honorable the Legislative Assembly in Parliament assembled.

The Petition of the undersigned Mothers and Daughters in the City of Sydney and Suburbs,—

RESPECTFULLY SHEWETH :—

That, as Mothers and Daughters, your Petitioners take a great interest in the welfare of this community, and are deeply impressed with the conviction that much of the immorality and vice too prevalent in this City and Suburbs is to be attributed to the present state of the Law regulating Licensed Public Houses, and to the practice which is so prevalent of allowing Publicans to have Music and Dancing in their Licensed Public Houses, thereby holding out strong temptations to the youth of both sexes to dissipate their means, injure their health, and in all probability ruin themselves and families by inducing them to frequent such Public Houses and indulge in intoxicating drinks.

Your Petitioners therefore humbly pray, that your Honorable House will be graciously pleased to pass a Law prohibiting Publicans having Music and Dancing in their Licensed Houses.

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

Dated at Sydney, this 29th day of September, 1869.

[Here follow 15,294 Signatures.]

[The body of the page contains extremely faint and illegible text, likely bleed-through from the reverse side of the document. The text is too light to be transcribed accurately.]

1869.

LEGISLATIVE ASSEMBLY.

NEW SOUTH WALES.

BASE LINE FOR TRIANGULATION OF NEW SOUTH WALES.

(PROGRESS REPORT FROM GEORGE R. SMALLEY, ESQ., GOVERNMENT ASTRONOMER.)

Ordered by the Legislative Assembly to be Printed, 29 September, 1869.

THE GOVERNMENT ASTRONOMER to THE PRINCIPAL UNDER SECRETARY.

SIR,

I have the honor to forward, for the information of the Honorable the Colonial Secretary, a Progress Report of the measurement of the Base Line at Lake George for the Triangulation of New South Wales.

1. In the Estimates for 1867 the Parliament voted £1,000 for the measurement of the Base Line for Triangulation, and a further grant of £500 made in 1868.

2. My first official instructions from your Department to act in this matter were dated 16th January, 1867; and in accordance with these instructions, I placed myself in communication with the then Surveyor General; and the result of a conference between that gentleman, his Deputy (now Surveyor General), and myself, will be shown in the copy of an appended Minute agreed to by us on that occasion.

3. The results of inquiries made by District Surveyors in different parts of the Colony fully bore out my predilections in favour of Lake George being the best site for a base line; and in July, 1867, Mr. Adams and I met Mr. District Surveyor Twynam at the lake, and after a careful examination, unanimously agreed that no better site could be conveniently selected.

4. Previous to this I had written to the Astronomer Royal for England, to obtain for the New South Wales Government the loan of two very valuable and useful instruments which had been previously employed in similar operations. With Professor Airy's usual kind readiness to forward any useful scientific work, this application was acceded to. I regret to say that these instruments were submerged when the ship "John Duthie" was scuttled in Port Jackson, and they had, at a considerable expense, to be thoroughly cleaned and set in order by Mr. Tornaghi, the optician; but I do not believe that there has been any permanent damage to them.

5. In March, 1867, I proceeded to Melbourne, for the purpose of examining the mode of carrying on the Trigonometrical Survey in Victoria, and likewise to negotiate for the loan of some apparatus, which was readily granted. At the same time I was fortunate enough in recovering some well-seasoned pine bars belonging to the Government of New South Wales, and which appear to have been sent out some thirty years ago to the Government of Tasmania, and afterwards, through some mistake, deposited at the Lands Office in Melbourne.

6. I may observe that I have long felt convinced that *well-seasoned* pine bars, with such arrangements as I have adopted for determining accurately the distance between each pair, are quite, if not more reliable than the very complicated compensation bars, which would have been an enormous expense, and required a much larger staff to work them than I have at my disposal; and this opinion is sustained by those of highly scientific and practical men. I believe that the hygrometrical and thermal changes will be almost inappreciable; but as a full account of the *modus operandi* and results will be furnished in my Final Report, I presume that I need not enter further into details on the present occasion.

7. The remainder of 1867 and early part of 1868 was employed in making the preliminary arrangements, and mounting the ten-foot standard bar of the Colony, which had been placed in my charge at the Observatory. Considerable time and expense was incurred in getting things up to the lake, so that it was not until nearly the end of May, 1868, that systematic operations were commenced.

8. The first work to be performed was the selection of the actual line, and in doing so it was necessary to keep it—

- (1.) As level as possible.
- (2.) Sufficiently removed from the swampy margin of the lake.
- (3.) To cross two creeks at the narrowest points consistent with the other conditions, so as to diminish as much as possible the expenditure of time and money in building the necessary bridges.
- (4.) It was necessary to clear the whole line of trees, so as to afford an uninterrupted view from end to end, and allow free passage for the bars and tents; also, to make extensive clearings, so as to obtain a view of the primary stations from the ends of the line.

All this has been satisfactorily effected.

9. At the commencement of operations, my force consisted of a carpenter, cook and hutkeeper, and two general workmen. It soon, however, became evident that this was quite insufficient for the purpose; so that, in August last, I had to obtain the assistance of Mr. Frank Russell to take charge of my camp, and carry out my instructions during my occasional and necessary absence. I had also to obtain the assistance of two day labourers and a boy, especially to assist in felling the heavy timber on the line and hills.

10. The length of the base line is about 5 miles 64 chains and 72 links, the ends are not liable to inundations, and the line itself is indicated by five nearly equidistant solid stone pillars, resting about $3\frac{1}{2}$ feet beneath the surface, on granite foundations—having let into the upper surface a solid brass plug with a fine platinum dot inserted—this again protected by a brass plate screwed over it, and again by a massive stone cap over the whole. These marks afford a lasting record of the operations, and will, when the final measurement is completed, be still further protected by stone structures, and I hope a moderate space around them reserved to the Crown. Doubtless these pillars and the expenses attending them have cost a great deal, but I think their value is quite commensurate with the outlay. In measuring a base line, it is of the greatest importance that in future generations some one should be able to verify it; yet this is rarely possible. I may instance La Caille's base line at the Cape of Good Hope—a fine line, but not to be identified for want of permanent records. Sir Thomas Mitchell's small base line on the Botany Sands; also his measured check line somewhere near Lake George. Now if any one, or even two of these pillars should at some future time be lost, the remainder known to have the platinum dots in a straight line, as nearly as science can bring them, and with the records of the entire work to refer to, would be quite sufficient to enable future surveyors to verify the work now in progress.

11. The next work was the selection of primary stations; and here I may observe that the necessary conditions are—

- (1.) That the triangles connecting them with the extremities of the base line should be as nearly as possible equilateral.
- (2.) That both ends of the base line should be visible from each of the primary stations.
- (3.) That the primary stations should command good secondary stations.

There was no difficulty about the one on the eastern side of the line, as the present Surveyor General, Mr. District Surveyor Twynam, and myself, were unanimously of opinion that the one selected could not be surpassed; but I had great difficulties to contend with in finding a suitable primary station on the western side of the lake. Several weeks were spent in examining the mountain ranges, and clearing intermediate hills, before I could select one answering the required conditions. Happily I succeeded in obtaining a station nearly equal to the one on the east of the line.

12. I considered it important that on each of these hills should be erected a substantial stone column, about 15 feet high, to serve not only as permanent marks, but also as being of great value in measuring the primary and secondary triangles. One of these is completed, and the other will be finished shortly. A scaffold surrounds the pillar, and on the top is formed a convenient place for observing. The whole is surmounted by a white cone, which forms a well-defined object, visible at a very considerable distance.

13. I have dwelt at some length upon these primary stations, because owing to the heavy and unforeseen expense incurred over them, especially in the extensive clearing of trees, the whole of the vote for base line measurement is exhausted, and it will be necessary to obtain a fresh supply in order to complete the work; this, with favourable weather, I trust to do within three months. It would probably have been finished now, but for the time I was obliged to devote to the boundary between New South Wales and South Australia; but even as it is, with the drawbacks there have been, I am satisfied the time occupied will not be found excessive.

14. On the Estimates for the present year there is a vote to the Lands Department of £500 for *commencement of triangulation*; and I would respectfully urge that the Minister for Lands should be moved to sanction the application of such portion of this vote as may be required to enable me to complete the work I have undertaken. I have also to request that I may be empowered to draw from the Treasury, as hitherto, an advance, from time to time, of a sum not exceeding £50, to enable me to pay current expenses—vouchers in adjustment of each being forwarded as usual.

I have, &c.,

GEORGE R. SMALLEY,

Government Astronomer.

4 June, 1869.

1869.

LEGISLATIVE ASSEMBLY.
NEW SOUTH WALES.

REPORT FROM THE SELECT COMMITTEE

ON

ROBERTS' TRUST BILL;

TOGETHER WITH THE

PROCEEDINGS OF THE COMMITTEE,

MINUTES OF EVIDENCE,

AND

APPENDIX.

ORDERED BY THE LEGISLATIVE ASSEMBLY TO BE PRINTED,
13 *October*, 1869.

SYDNEY: THOMAS RICHARDS, GOVERNMENT PRINTER.

1869.

1869.

EXTRACTS FROM THE VOTES AND PROCEEDINGS OF THE
LEGISLATIVE ASSEMBLY.

VOTES, No. 8. FRIDAY, 8 OCTOBER, 1869.

8. Roberts' Trust Bill ("*Formal Motion*") :—Mr. Hart moved pursuant to Notice No. 6,—
- (1.) That Roberts' Trust Bill be referred to a Select Committee for their consideration and report, with power to send for persons and papers.
- (2.) That such Committee consist of Mr. Byrnes, Mr. Dodds, Mr. Driver, Mr. Lee, Mr. Lord, Mr. Lyons, Mr. Neale, Mr. Oatley, Mr. Samuel, and the Mover.
- Question put and passed.
-

VOTES, No. 10. WEDNESDAY, 13 OCTOBER, 1869.

6. Roberts' Trust Bill :—Mr. Hart, as Chairman, brought up the Report from, and laid upon the Table the Minutes of Proceedings of, and of Evidence taken before, the Select Committee, for whose consideration and report this Bill was referred on 8th October, 1869.
- Ordered to be printed.

* * * * *

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1869.

ROBERTS' TRUST BILL.

REPORT.

THE SELECT COMMITTEE of the Legislative Assembly, for whose consideration and report was referred, on the 8th October, 1869,—“*Roberts' Trust Bill*”—“*with power to send for persons and papers*”—beg to report to your Honorable House,—

That they have examined the Solicitor for the Bill* (whose evidence is appended hereto); and the Preamble having been satisfactorily proved by the evidence of that gentleman, your Committee proceeded to consider in detail the several clauses of the Bill, in which it was deemed necessary to make certain amendments.†

*Richard Holdsworth, Esq.

†Vide Schedule of Amendments.

And your Committee now beg to lay before your Honorable House the Bill as amended by them.

JAMES HART,
Chairman.

No. 3 Committee Room,
Sydney, 12 October, 1869.

PROCEEDINGS OF THE COMMITTEE.

TUESDAY, 12 OCTOBER, 1869.

MEMBERS PRESENT:—

Mr. Hart,
Mr. Lee,

Mr. Oatley,
Mr. Dodds,

Mr. Neale.

Mr. Hart called to the Chair.

Printed copies of Bill *referred*, and original Petition to introduce the same, before the Committee.

Present:—Richard Holdsworth, Esq., *Solicitor for the Bill*.

Richard Holdsworth, Esq., Solicitor, examined, and produced probate of the will of Mr. Joseph Roberts; and *handed in* certified copy of same. (*Vide Appendix*.)

Room cleared.

Preamble read.

Question,—That this Preamble stand part of the Bill,—*put and agreed to*.

Solicitor called in and informed.

Clause 1 read and agreed to.

Clause 2 read and agreed to.

Clause 3 read.

Certain amendments made (*Vide Schedule of Amendments*).

Clause as amended agreed to.

Clause 4 read and agreed to.

Clause 5 read and agreed to.

Clause 6 read and omitted.

Clause 7 read and agreed to.

Chairman to report the Bill, as amended, to the House.

SCHEDULE OF AMENDMENTS.

Page 3, clause 3, line 31,—*After* “shall” *insert* “with the consent of the *cestui que* trust; and *after* “Debentures,” in the same line, *insert* “or on mortgage of real property in the Colony of New South Wales.”

WITNESS.

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Holdsworth, Richard, Esq., <i>Solicitor</i>	5.

1869.

LEGISLATIVE ASSEMBLY.
NEW SOUTH WALES.

MINUTES OF EVIDENCE

TAKEN BEFORE

THE SELECT COMMITTEE

ON

ROBERTS' TRUST BILL.

TUESDAY, 12 OCTOBER, 1869.

Present:—

MR. DODDS,	|	MR. LEE,
MR. HART,	|	MR. NEALE,
	MR. OATLEY.	

JAMES HART, ESQ., IN THE CHAIR.

Richard Holdsworth, Esq., examined:—

1. *Chairman.*] You are solicitor for the promoters of this Bill? I am.
2. Do you produce the will of the late Joseph Roberts? I produce the probate of the will, the will itself being deposited of course in the Supreme Court.
3. Have you a certified copy of it for the Committee? (*The witness produced the same.*)
4. Has the will been proved in the Supreme Court? It has.
5. By whom, and when? It was proved on the 30th May, 1849, by Martha Roberts, widow of the testator, and James Roberts, executrix and executor therein named.
6. Are they the present trustees of the will? They are.
7. Who are the persons beneficially interested in that will, as regards the testator's residuary estate? Richard Hutchinson Roberts, Augustus Neich and Jane his wife, Alexander Houison and Fanny Eliza his wife, Mary Elizabeth Roberts, James Joseph Roberts, George John Roberts and Martha his wife, and Joseph James Roberts.
8. They are the petitioners for this Bill? They are.
9. What are the trusts of the will, as regards the testator's residuary estate? Upon trust, to be equally divided between all his the said testator's children by his wife Martha, living at his death or born in due time afterwards, share and share alike as tenants in common, their heirs and assigns for ever, the shares of such as were girls to vest at the age of twenty-one, or marriage, with the consent of his the said testator's trustees and executors for the time being, and to be settled to their respective use, and not to be anticipated or made liable to the debts, control, or interference of any husband with whom she might intermarry.
10. Were the shares of such as were sons to vest at the age of twenty-one years? Yes.
11. And in case of any one or more of his the said testator's said children dying under the age of twenty-one years, and without issue, the shares or share of such child or children was to go to the surviving child or children in the same manner as their, her, or his original share or shares? Yes.
12. When did Mr. Roberts the testator die? 7th May, 1849.
13. Have all the children attained the age of twenty-one years? They have.
14. And some of the daughters are married? Yes; three of them, Mrs. Neich, Mrs. Houison, and Mrs. George Roberts—she married a gentleman of the same name as herself. There is only one girl unmarried.
15. Is there any power in that will to sell the residuary real estate? None.
16. Have the persons you have mentioned an absolute right over the property, or a life interest only? They have an absolute right; they have the fee.

R. Holdsworth, Esq.
12 Oct., 1869.

R. Holdsworth, Esq.
12 Oct., 1869.

17. Is it desirable now that the property should be sold so that the proceeds of the property should be divided? It is desirable, and the persons interested are most anxious that it should be done. I was instructed some time ago to bring the property under the Real Property Act, for the purpose of facilitating the sale; but I was met at the outset of my application by the objection, that inasmuch as three of the daughters were married, and the will directed the property to be settled for their separate use, without power of anticipation, they could not while they were *femmes covert* join in making the application, and I was advised that the only way of getting over the difficulty was by applying to the Legislature for an Act to enable the Trustees to sell and divide the proceeds of the property.

18. Have you the consent of all the parties to the proposed Bill being passed? I have.

19. Will the shares of the married women be affected by this Bill? They will be affected in this way,—that during their coverture they will not be able to dispose of the principal of the money—they will merely receive the income during their lives, or during their coverture. If they should become widows they will be enabled to dispose of the principal which would be the case if the land remained in its present state unconverted.

20. Do you propose to affect the trusts of the will? The trusts will remain intact, but the Trustees will have power to deal with the property.

21. If a suit were entered upon for the actual division of the property, would it be desirable? The cost of a suit would be as much as the property is worth, and possibly would not affect the object in view. They are a number of small properties none of them of much value, and a commission to divide the property into six or seven shares would run away with all the purchase money.

22. *Mr. Lee.*] The will then gives the absolute fee simple to all the parties, I understood you to say? It gives it to the Trustees of the will upon trust to divide amongst all the children absolutely, subject to the restriction as to the married daughters' shares.

23. Then, by granting the power of sale the Legislature does alter the will? No, it would not alter the will, because the persons interested under the will would have the same interest in the money derived from the sale as they now have in the land.

24. Under the will the female portion of the legatees though unmarried were entitled to an absolute share in the fee simple, but now you propose to sell the property and to divide the proceeds among the male portion—to the female portion you do not give the absolute power over the proceeds? We give the interest of the money during life.

25. Not the principal? Not the power to dispose of the principal.

26. Then it does alter the will to that extent? No, because they have now an interest in the land which they cannot alienate during coverture, but when they become discoverd it may be disposed of.

27. The will provides that the property should be held and not disposed of? It provides that the shares of the married daughters should not be disposed of during coverture.

28. Does the will contain any power for the disposal of these properties? No, because the property is given out and out to the children. If none of the girls had been married they all could have concurred in selling the property and dividing the proceeds, as they are the absolute owners. The girls will have precisely the same interest in the money if the Bill should be passed as they have now in the land.

29. Will it be beneficial to the parties concerned that this power should be granted? Extremely beneficial; the property is now lying unproductive, it brings nothing in. There is no objection made, but all the parties are desirous that the Bill should pass.

30. *Chairman.*] Do you know the value of this property? I cannot form an idea. There are a number of properties scattered over the country. I should think at the outside it would not be worth over £2,000.

31. *Mr. Lee.*] Are the Trustees in this will in existence? All of them, and are all consenting parties. Mrs. Roberts is now married to Mr. Lackey, and he is also a consenting party.

ROBERTS' TRUST BILL.

APPENDIX.

(To evidence given by R. Holdsworth, Esq., 12 October, 1869.)

In the Supreme Court
of New South Wales. }
Ecclesiastical Jurisdiction. }

BE it to all men known by these presents that on the thirtieth day of May in the year of Our Lord one thousand eight hundred and forty-nine the last will and testament of Joseph Roberts late of Concord near Sydney in the Colony of New South Wales deceased a true copy whereof is hereunto annexed was exhibited and proved before this Court And that administration of all and singular the goods chattels credits and effects of the said deceased in anywise belonging was and is hereby committed to Martha Roberts of Concord aforesaid and James Roberts of Carrawang in the Colony aforesaid Executrix and Executor in the said will named they having been first duly sworn well and truly to administer the same and to pay the lawful debts of the said deceased and the legacies in the said will contained so far as the goods chattels credits and effects of the said deceased shall extend and the law shall bind them And also to exhibit unto this Court a true full and perfect inventory of all the goods rights and credits of the said deceased when they shall be lawfully called thereunto and that they believe the said goods chattels credits and effects do not exceed the value of five hundred pounds. No. 1,996.
Testator died 7th
May, 1849.

Dated at Sydney this thirtieth day of May in the year of our Lord one thousand eight hundred and forty-nine.

ALFRED STEPHEN. (L.S.)

G. P. F. GREGORY, (L.S.)
Registrar.

THIS is the last Will and Testament of me Joseph Roberts of Concord near Sydney gentleman: I give and devise unto my niece Anne Faris all that my farm and lands containing eight acres or thereabouts situate at Lane Cove her heirs and assigns for ever such farm and land in the event of her marriage to be settled to her separate use and not to be anticipated or liable to the debts control or interference of any husband with whom she may intermarry I give and devise to my son James Joseph all that my farm and land adjoining my present residence and known as Ferguson's Grant his heirs and assigns for ever I give and devise unto my son Joseph James all that my farms and lands adjoining my last-mentioned farm and purchased by me of the Waterloo-house his heirs and assigns for ever And in case either of my said sons or both shall die under age and without issue I direct that the said farms shall follow and be included in the general residuary devise hereinafter mentioned I direct that until my said sons shall attain the age of twenty-one years my Trustees and Executors hereinafter named shall receive the rents issues and profits thereof and apply the same with the rents issues and profits of my other properties in manner hereinafter mentioned I direct my said Trustees and Executors to pay all my just debts funeral and testamentary expenses as soon as conveniently may be after my decease out of my personal estate I give devise and bequeath unto my said Executors and Trustees their heirs executors administrators and assigns all the rest residue and remainder of my real and personal estate upon trust to be equally divided between all my children by my wife Martha living at my death or born in due time afterwards (J.R.) share and share alike as tenants in common their heirs and assigns for ever the shares of such as are girls to vest at the age of twenty-one years or marriage with consent of my Trustees and Executors for the time being and to be settled to their separate use and not to be anticipated or made liable to the debts control or interference of any husband with whom they may intermarry And the shares of such as are sons to vest at the age of twenty-one years and in case of the death of any one or more of my said children dying under the age of twenty-one years and without issue the shares or share of such child or children is to go to the surviving child or children in the same manner as their her or his original share or shares I direct my said Trustees and Executors during the minorities of my children respectively to receive the rents issues and profits of my personal estate and to apply as much thereof as shall be necessary in and towards the maintenance education and advancement in life of all my children by my said wife living at my decease or born in due time afterwards And to invest the surplus if any as to my said Trustees and Executors shall seem most advisable and such investments to follow the destination of the original estate (J.R.) I wish my son Richard Hutchinson Roberts to be brought up to the Church I appoint my wife Martha Roberts and my brother James Roberts Trustees and Executors of this my will and guardians of the person and estate of my said children.

In witness whereof I have hereto set my hand this twenty-sixth April, 1849.—“Joseph Roberts.” Signed by the said Testator in our presence who in his presence and in the presence of each other at his request have hereto subscribed our names as witnesses.—GEO. ROWLEY, THOS. ROBERTS.

We certify that the writing hereinbefore contained on this and the two preceding sheets is a true copy of the Original Probate of the Will of Mr. Joseph Roberts the same having been therewith examined by us this twelfth day of October, A.D., 1869.

R. HOLDSWORTH,
Solicitor, Pitt-street, Sydney.
EDWD. S. W. NORTH,
Clerk to Holdsworth & Brown,
Solicitors, Sydney.

1869.

LEGISLATIVE ASSEMBLY.
NEW SOUTH WALES.

PROPOSED EXCURSION TO CLONTARF, MIDDLE HARBOUR.
(CORRESPONDENCE RESPECTING.)

Ordered by the Legislative Assembly to be Printed, 21 October, 1869.

Laid on Table in reply to Question No. 4. See Votes and Proceedings, No. 15, of Thursday, 21 October, 1869.

THE PRINCIPAL UNDER SECRETARY to R. O'SULLIVAN, Esq.

Colonial Secretary's Office,
Sydney, 16 October, 1869.

SIR,

I am directed by the Colonial Secretary to inform you that it is the determination of the Government to prohibit "the Grand Excursion to Clontarf, Middle Harbour, on Tuesday next, the 19th instant, under the management of the Committee of the Fund for the released Irish State Prisoners," and that he trusts that the good sense of the Committee will suggest to its members the extreme danger that would spring from a meeting of the released State Prisoners with a large body of people, such as is in contemplation; and that the Committee will, in the interests of peace, order, and good feeling in our community, be quite willing to forego their intended demonstration.

I have, &c.,

HENRY HALLORAN.

R. O'SULLIVAN, Esq., to THE PRINCIPAL UNDER SECRETARY.

Committee Rooms,
2, Park-street, Sydney,
18 October, 1869.

SIR,

In reply to your communication (69.1051) of the 16th instant, I beg leave to inform you that the Committee of the Fund for the released Irish State Prisoners have abandoned their intention of carrying out the Excursion to Clontarf, Middle Harbour, advertised to take place to-morrow, 19th instant. They have come to this resolution lest their act should be made a pretext for prolonging the incarceration of the State Prisoners yet in confinement in Western Australia and Great Britain.

I have, &c.,

RICHARD O'SULLIVAN,
Hon. Secretary, Committee of the Fund
for the released Irish State Prisoners.

1869.

—
LEGISLATIVE ASSEMBLY.
NEW SOUTH WALES.

—
PROGRESS REPORT FROM THE SELECT COMMITTEE

ON

MR. ALEXANDER WALKER SCOTT—LAND TAKEN
BY HUNTER RIVER RAILWAY ;

TOGETHER WITH THE

PROCEEDINGS OF THE COMMITTEE,

MINUTES OF EVIDENCE,

AND

APPENDIX.

—
ORDERED BY THE LEGISLATIVE ASSEMBLY TO BE PRINTED,
11 *November*, 1869.
—

SYDNEY: THOMAS RICHARDS, GOVERNMENT PRINTER.

—
1869.

1869.

EXTRACTS FROM THE VOTES AND PROCEEDINGS OF THE
LEGISLATIVE ASSEMBLY.

VOTES NO. 23. FRIDAY, 15 JANUARY, 1869.

2. Land taken by Hunter River Railway:—Mr. Lee presented a Petition from Alexander Walker Scott, formerly of the City of Newcastle, but now of Sydney, Esquire, one of the Trustees of the Newcastle Proprietary Grammar School, setting forth an unsatisfied claim on account of land near Honeysuckle Point, Newcastle, taken by the Hunter River Railway, and praying for inquiry, with a view to relief, in the premises.
Petition received.

VOTES NO. 24. TUESDAY, 19 JANUARY, 1869.

6. Land taken by Hunter River Railway ("*Formal*" Motion):—Mr. Burns, on behalf of Mr. Lee, moved, pursuant to Notice, That the Petition presented by Mr. Lee, on 15th January, from Alexander Walker Scott, Esquire, relative to Land taken by Hunter River Railway, be printed.
Question put and passed.
Ordered to be printed.

VOTES NO. 4. FRIDAY, 1 OCTOBER, 1869.

2. Mr. Alexander Walker Scott—Land taken by Hunter River Railway:—Mr. Lee presented a Petition from Mr. Alexander Walker Scott, formerly of the City of Newcastle, but now of Sydney, one of the Trustees of the Newcastle Proprietary Grammar School, referring to a Petition presented by him to the Legislative Assembly during its last Session, stating certain grievances sustained by him; and praying that his said Petition may be referred to a Select Committee, with power to send for persons and papers; and that he may be heard before such Committee in person, or by his counsel or solicitor.
Petition received.
9. Mr. Alexander Walker Scott—Land taken by Hunter River Railway:—Mr. Lee moved, pursuant to amended Notice No. 5,—
(1.) That the Petition presented by him to this House last Session from Mr. A. W. Scott, and ordered to be printed 19th January, be referred to a Select Committee for inquiry and report.
(2.) That such Committee consist of Mr. Burns, Mr. Wisdom, Mr. Farnell, Mr. Wilson, Mr. J. Campbell, Mr. Lyons, Mr. R. Stewart, Mr. Forster, Mr. Sutherland, and the Mover, and have power to send for persons and papers.
Debate ensued.
Question put and passed.

VOTES NO. 26. THURSDAY, 11 NOVEMBER, 1869.

2. Mr. Alexander Walker Scott—Land taken by Hunter River Railway:—Mr. Lee, as Chairman, brought up a Progress Report from, and laid upon the Table the Minutes of Proceedings of, and of Evidence taken before, the Select Committee, for whose consideration and report this matter was referred on 1st October, 1869, together with Appendix.
Ordered to be printed.

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1869.

**MR. ALEXANDER WALKER SCOTT—LAND TAKEN BY HUNTER RIVER
RAILWAY.**

PROGRESS REPORT.

THE SELECT COMMITTEE of the Legislative Assembly, appointed on the 1st October last to inquire into and report upon "*the Petition presented to this House by Mr. A. W. Scott, and ordered to be printed on the 19th January, 1869,*"—with power to send for persons and papers—and to whom was referred on the 1st October, a *Petition from Alexander Walker Scott, formerly of the City of Newcastle, praying that the Petitioner may be heard before such Committee in person, or by his Counsel or Solicitor*—have agreed to the following Progress Report:—

Your Committee have taken certain evidence, but are unable to complete their inquiries.

They therefore recommend the further consideration of the subject to a future Session of Parliament.

No. 3 Committee Room,
Sydney, 11 November, 1869.

BENJAMIN LEE,
Chairman.

PROCEEDINGS OF THE COMMITTEE.

THURSDAY, 7 OCTOBER, 1869.

MEMBERS PRESENT :—

Mr. Wisdom,	|	Mr. Burns,
	Mr. Farnell.	

Copies of Mr. Scott's petition of 15 January, 1869, before the Committee.
 Motion made (*Mr. Burns*) and *Question*,—That Mr. Lee be the Chairman of this Committee,—
agreed to.

In the absence of the Chairman, Mr. Burns took the Chair.
 Committee deliberated.

Clerk instructed to summon A. W. Scott, Esq., for next meeting.

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

THURSDAY, 14 OCTOBER, 1869.

MEMBERS PRESENT :—

Mr. Lee in the Chair.

Mr. Burns,	|	Mr. Farnell.
------------	--	--------------

Petition of A. W. Scott, Esq., praying that he may be heard before the Committee in person, or by his Counsel or Solicitor, on the Table.

Committee deliberated, and agreed that the prayer of the petition be granted.

A. W. Scott, Esq., called in and informed that the Committee had decided to permit H. B. Bradley, Esq., to appear as his Solicitor in this inquiry.

Present—H. B. Bradley, Esq., *Solicitor*, who addressed the Committee on behalf of Mr. Scott, and produced various documents and plans in support of his client's case.

Room cleared.

Committee deliberated as to the necessity of having certain documents before them in furtherance of the enquiry.

Mr. Bradley recalled, and again addressed the Committee.

Committee deliberated.

Clerk instructed to summon P. F. Adams, Esq., and John Rae, Esq., to give evidence at next meeting, and to produce various letters and plans having reference to the land in question.

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

THURSDAY, 21 OCTOBER, 1869.

MEMBERS PRESENT :—

Mr. Lee in the Chair.

Mr. Forster,	|	Mr. J. Campbell,
Mr. Burns,		Mr. R. Stewart,
	Mr. Farnell.	

Present—H. B. Bradley, Esq., *Solicitor for Petitioner*, and A. W. Scott, Esq.

P. F. Adams, Esq. (*Surveyor General*), called in and examined.

Witness *produced* Land Sales Book for the year 1840; also book containing Government notices for the year 1831; official map of Newcastle in the year 1839; *handed in*—tracing (White's survey), showing four portions of land applied for by James Henry Crummer; articles and conditions of sale of certain portions of Crown Lands; Government notice of 1 August, 1831, respecting Regulations of 1 July, 1831, as to disposal of Crown Lands; Grant by purchase of 10 ac. 2 r., in the parish of Newcastle, to James Mitchell; do. do., 9 ac.; do. do., 1 ac. 1 r. 20 p.; do., do., 1 ac.

Witness withdrew.

John Rae, Esq. (*Under Secretary for Public Works*), called in and examined.

Witness *produced* plan showing land taken by the Hunter River Railway Company from Messrs. Croasdill and Scott, 4 July, 1854; and *handed in*—letter from H. K. James to Chairman of Board of Directors of the Hunter River Railway Company, 29 July, 1854; letter from Messrs. Holden and M'Carthy to Crown Solicitor, 5 June, 1860; do. do., 6 May, 1862; do. do. to Commissioner for Railways, 2 July, 1862; letter of H. B. Bradley to Chief Clerk, Railway Branch, 3 April, 1866; do. to Commissioner for Railways, 27 July, 1866; do. do., 16 September, 1867; appointment of Mr. George Vindin, as Arbitrator
 for

for Messrs. Croasdill and Scott; appointment of Mr. William Biden, as arbitrator for Commissioner for Railways; plan showing the land taken from the Trustees of the Newcastle Grammar School; award made by the arbitrators, 24 June, 1868; plan of extension into Newcastle; and letter from Chief Clerk, Railway Branch, to Crown Solicitor, 6 September, 1860; do., do., to Messrs. Holden and M'Carthy, 4 August, 1862.

Ordered to be appended. (*Vide Appendix A 1 to A 12.*)

Witness withdrew.

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

THURSDAY, 28 OCTOBER, 1869.

MEMBERS PRESENT:—

Mr. Lee in the Chair.

Mr. J. Campbell, | Mr. Farnell.

Present—H. B. Bradley, Esq., *Solicitor for Petitioner*, and A. W. Scott, Esq.

W. D. Maitland, Esq., *Government Surveyor*, called in and examined.

Witness produced original survey of the Honeysuckle Point allotments.

Witness withdrew.

A. W. Scott, Esq., *Petitioner*, examined, and *handed in*—Names of Proprietors, &c., of Newcastle Proprietary Grammar School; also, letter of Under Secretary to Messrs. Bradley & Son, respecting certain land taken from the Trustees of the Newcastle Proprietary Grammar School, which letter was ordered to be appended. (*Vide Appendix B.*)

H. B. Bradley, Esq., *Solicitor*, examined, and *handed in* letter of H. B. Bradley to Chief Clerk, Railway Branch, 3 April, 1866; also, letter of Chief Clerk, Railway Branch, to H. B. Bradley, on the subject of the Newcastle Grammar School Trustees Land claim, 16 August, 1866.

Ordered to be appended. (*Vide Appendix C 1 and C 2.*)

Clerk instructed to summon John Williams, Esq., *Crown Solicitor*, for next meeting.

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

THURSDAY, 4 NOVEMBER, 1869.

MEMBERS PRESENT:—

Mr. Burns, | Mr. Farnell,
Mr. Wisdom, | Mr. R. Stewart,
Mr. Sutherland.

In the absence of the Chairman, Mr. Burns took the Chair.

Present—H. B. Bradley, Esq., *Solicitor for Petitioner*, A. W. Scott, Esq., and John Williams, Esq., *Crown Solicitor*.

H. B. Bradley, Esq., *Solicitor*, again examined.

Alexander Brown, Esq., called in and examined.

Witness withdrew.

John Williams, Esq., *Crown Solicitor*, examined.

Committee deliberated.

Motion made (*Mr. Farnell*) and *Question*,—That Mr. Geo. Vindin and Mr. William Biden be summoned to give evidence at next meeting,—*agreed to.*

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

THURSDAY, 11 NOVEMBER, 1869.

MEMBERS PRESENT:—

Mr. Lee in the Chair.

Mr. Farnell, | Mr. J. Campbell.

Present—H. B. Bradley, Esq., *Solicitor for Petitioner*, and A. W. Scott, Esq.

George Vindin, Esq., called in and examined.

Witness withdrew.

Room cleared.

Committee deliberated.

Chairman submitted Progress Report.

Same read and agreed to.

Chairman to report.

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1869.

LEGISLATIVE ASSEMBLY.

NEW SOUTH WALES.

MINUTES OF EVIDENCE

TAKEN BEFORE

THE SELECT COMMITTEE

ON

MR. ALEXANDER WALKER SCOTT—LAND TAKEN BY
HUNTER RIVER RAILWAY.

FRIDAY, 21 OCTOBER, 1869.

Present :—

MR. BURNS,
MR. J. CAMPBELL,
MR. FARNELL,MR. FORSTER,
MR. LEE,
MR. R. STEWART.

BENJAMIN LEE, ESQ., IN THE CHAIR.

H. B. BRADLEY, Esq., appeared as Solicitor for Petitioner.

Philip Francis Adams, Esq., examined :—

1. *Chairman.*] You are the Surveyor General of the Colony? I am.
2. *Mr. Bradley.*] Have you the official map of Newcastle, in use in the year 1839? I produce it.
3. Will you give your attention to the part of this map which is commonly called Honeysuckle Point, in order to see if you can recognize there four allotments of land, as to which I shall put some questions to you? I see those allotments.
4. Have you the applications of James Henry Crummer for those portions of land? They cannot be traced; it is supposed in the office that the applications were verbal.
5. Can you trace without a rigid search into the records of your office in respect to what lands these applications were made? Yes, without any difficulty.
6. Will you be good enough to state to the Committee? They are the lands you called my attention to on the map.
7. Will you state the areas of those four lots respectively? No. 1, 10 acres 2 roods; No. 2, 9 acres; No. 3, 10 acres 1 rood 20 perches; No. 4, 1 acre.
8. Are those allotments particularly shown upon the small plan now lying before you? These surveys are charted on the map then in use.
9. The map that has just been marked by the Clerk is the map prepared by George Boyle White? It is a correct tracing of his original survey.
10. Do you produce the Land Sales Book used by the Government Auctioneer in and about the year 1840? I do. (*The witness produced the same.*)
11. Do you find in that book certain articles and conditions of sale of Crown Lands on the 9th September, 1840? I do.
12. Will you read the heading? "The articles and conditions of sale by public auction, at the Colonial Treasury in Sydney, on Wednesday, 9th September, 1840, commencing at 11 o'clock, by Peter Laurentz Campbell, Esquire, Acting Colonial Treasurer, acting for and on behalf of Her Majesty the Queen, of the following portions of land advertised by the notice dated 10th August, in the *Gazette* of the 12th August, under the conditions detailed in the Government order of the 1st August, 1831, No. 22, and other subsequent orders, of which those more particularly necessary to be noticed are hereinafter mentioned, namely."

P. F. Adams,
Esq.
21 Oct., 1869.

- P. F. Adams, Esq.
21 Oct., 1869.
13. Will you be kind enough to cast your eye down these Conditions, and see whether you observe any reference in these Conditions to the reservation of water-frontage on any of those lots, then about to be offered for sale? I do not.
 14. Is this a copy of those Conditions (*handing the same to the witness*)? It is.
 15. Have you a book containing the Government notice of 1st August, 1831? I have. (*The witness produced the same.*)
 16. Will you turn to the 14th clause of that notice, and read it to the Committee? "No land within 100 feet of high-water-mark on the sea-coast, harbours, bays, or inlets, is to be considered open to purchase, unless for the purposes of commerce or navigation."
 17. Is this a copy of the Government notice (*handing a paper to the witness*)? It is.
 18. Will you look at the sales book again? (*The witness referred.*)
 19. Do you see the descriptions there of the four portions of land at Newcastle, which you pointed out upon the plan? I do.
 20. Do you see who is the purchaser of those lots? J. Mitchell.
 21. Will you be good enough to read from the book the price per acre for which each lot was purchased, telling me the lot to which you refer? The first is No. 26. There is no area expressed here, by a clerical error; but the next refers to it as 10½ acres. That was purchased at £36 an acre. The next, marked here as No. 29, but 25 on the plan, has an area of 9 acres—£29 per acre. The next lot, No. 30 here, but No. 23 on the plan, contains 1 acre 1 rood 20 perches—£58 per acre. The next lot, No. 31 in the book, and 24 on the plan, 1 acre—£85 per acre.
 22. Can you identify the description in this grant from the Crown as being the description in the first lot referred to by you (*handing the same to the witness*)? This is the deed of grant referred to as No. 26, the first lot, 10 acres 2 roods.
 23. Will you say if that be the grant of the second lot (*handing the same to the witness*)? It is, for 9 acres.
 24. Will you state if this be the grant of the third portion (*handing the same to the witness*)? It is, for 1 acre 1 rood 20 perches.
 25. Will you state if this be the grant of the remaining portion (*handing the same to the witness*)? It is, for 1 acre.
 26. Have you a personal acquaintance with the locality in question? A slight acquaintance.
 27. Will you take in your hand Mr. White's original plan—From your personal knowledge, and on view of the plan, for what purpose or purposes does it appear to you that these four allotments of land are chiefly adapted—I mean, are they suitable for the purposes of commerce, or in part for purposes of commerce and in part for purposes of navigation, or for the purpose of mansions for the wealthy, or for agriculture? Part of the 10 acres portion—the frontage of it is suitable for wharfage and for navigation, and it may be a small portion of the 9 acres; but the rest is not suitable for purposes of navigation; the water is too shallow.
 28. Is the residue of these lands, or the greater portion of the residue, chiefly suitable for the purposes of trade and commerce, either in an enlarged or in a restricted sense for stores, workshops, and other shops? Quite suitable for that.
 29. Is it suitable for agriculture? Yes.
 30. Any considerable portion of it? The soil is sandy, but it might be cultivated.
 31. Advantageously? Yes, as advantageously as any land about Newcastle.
 32. I mean with reference to a comparison with Hunter's River land generally? Yes; it is sandy land.
 33. Would any man reasonably purchase that tract of country for any other purpose than the purposes of trade, commerce, and navigation? Yes, I think it was well suited for the purpose for which it was bought—for a school.
 34. *Mr. Forster.*] Is this reservation of 100 feet, which I understand to have been taken up by the railway authorities, one of a number of similar reservations, or is it the only case you know of? It is one of a very large number of cases; in fact the reservation was made in every case after the Orders in Council were issued.
 35. I think you read some order to that effect? I did—the Government notice of August, 1831.
 36. These reservations were made in consequence of this order? Yes. There is a previous order to this in August; there is one in July, 1831:—"The Crown reserves to itself all lands within 100 feet of high-water-mark on the sea-coast, creeks, harbours, and inlets; all mines of gold, silver, &c."
 37. Then, in fact, had the Government any power to alienate this land? In a legal sense I should think they had.
 38. As a matter of fact was the land alienated or not with these reservations generally made? According to this deed I think it was not. However, that is a legal question upon which I am not prepared to give an opinion.
 39. Has not this practice prevailed in regard to all lands similarly situated—have not these reservations been made ever since in all other parts of the colony? In almost all, if not in all.
 40. Have the Government consented at any time, in consequence of applications from the people who held these reserves included in the land in their possession, to rescind these reservations? They have by certain clauses in the Alienation Act, which empowered them to do so.
 41. These reservations have been rescinded? Yes.
 42. What has been the practice in regard to these rescissions—have the Government handed them over? No, the occupiers have paid for them.
 43. They have always paid for them? Yes. In paying for them the Government did not acknowledge the title of the people who held them.
 44. They sold the land to them in fact? Yes.
 45. In some cases have the applications for these rescissions been refused? Yes.
 46. On what grounds generally? That they were required for public purposes.
 47. In that case did you ever hear of the person who held the reservation asking to be paid for the reservation? I cannot call to mind any case where it has been done, but it is exceedingly likely it may have been.
 48. Do you know of any case where the Government have agreed to pay for a reservation when they held it for public purposes? I think not.
 49. On the other hand you say that where the alienation has been made, the party who took it paid for it as if he were buying it in the market? Such has been the practice.

50. Do you see any difference between this case and those other cases which have been dealt with as you describe? None whatever—the same words are used in all the deeds.
51. I presume if this be admitted as a case for compensation it is likely to create a great number of similar claims? It would be a precedent.
52. Would it have been in the power of these parties who held this reserved land to sell it apart from the rest of their land? I do not think they could give a title to it.
53. In selling their land they would sell whatever right or title they had in it? I presume so.
54. Are you aware whether in any of the cases of sale you have become acquainted with, the parties who bought the land from the original holders bought it without any knowledge of this reservation being made? I think the reservation is so well known that there could scarcely be a case in which they could purchase without that knowledge.
55. Have you dealt lately with a number of these cases of land up the Parramatta River? A few.
56. Both under the present and under the former Government? The great bulk were dealt with by the ex-Surveyor General; these cases did not come to me.
57. Scarcely any alienation of the kind is made without reference to you and the Engineer of Harbours and Rivers? None whatever; it has always been the practice to refer them for the joint report of the Surveyor General and the Engineer of Harbours and Rivers.
58. Has it ever happened in a case where they have recommended that the application has been refused? Yes, the Government have refused in several cases where they have been recommended by the ex-Surveyor General and Mr. Moriarty.
59. *Mr. Campbell.*] Was this land measured to high-water-mark and sold? Yes.
60. Has that been the general practice in all other cases similarly situated? Yes.
61. *Chairman.*] Are there many cases where one-third of a purchaser's land has been resumed by the Crown under these conditions? Few, if any.
62. You state that the whole area of that land was sold by the Government and paid for by the purchaser? Sold to high-water-mark.
63. And Government have resumed one-third of that land without compensation? It would in this case be fully one-third.
64. The grant to the purchaser states the area of the different lots sold, and that area included up to high-water-mark? Yes.
65. If the original purchaser, Dr. Mitchell, had sold to any other purchaser, would he not have sold what that represented? I suppose he would have sold his right, title, and interest, whatever that might be.
66. *Mr. Burns.*] There was nothing in the conditions of sale to lead the purchaser to suppose that the Government would resume this land 100 feet above high-water-mark? Nothing whatever.
67. The deed would not lead any purchaser to infer that the Government might resume the land 100 feet from high-water-mark? I do not think it refers to 100 feet; it refers to the whole of the land. It was customary in alienating land in such a position as this of harbours* to reserve the right to the Crown to take at any time on paying compensation.
68. This grant contains only the usual reservation in all cases, whether near water or otherwise? It gives more than that because it grants to the Crown the right to resume the whole of it at any time by paying compensation.
69. I think most old grants contain the reservation that Government may make roads without stipulating as to compensation; here they make a stipulation as to compensation? The Government can in this case resume the whole of the land on payment of compensation, which they did, except for the 100 feet.
70. There was nothing to lead them to suppose that the Government would resume the 100 feet without compensation? There was nothing either for or against that supposition.
71. Any purchaser might well assume that he was in full possession of the land, and was not liable to be dispossessed without compensation? No, any one should know that the land might at any time be resumed.
72. That would not be on the face of the conditions of sale, or on the grant itself? It is on the grant itself—taking that grant as evidence; it also contains the special right to take the whole on payment of compensation; this is more conclusive in this than in ordinary cases where there is no special clause that the Government reserved to itself the right to take the land. It makes a discrimination between the 100 feet and the rest more apparent than it would if it had been the ordinary form of deed.
73. *Mr. Farnell.*] Prior to the passing of the Crown Lands Alienation Act the Government would have had no power to dispose of this land to the owner of the original grant? No.
74. What is the date of the Orders in Council in reference to this reservation? One the 1st July, 1831—the other 1st August, 1831.
75. Prior to the issue of these Orders in Council the grants issued did not contain these reservations, except in some cases? I think there were some special cases in which they did not, but I am not sure.
76. The Crown has no power to sell any of these reserves to any one other than the occupier or owner of the original grant—they could not sell these reserves to a stranger? I am not aware of anything to prevent it.
77. If there were an owner of a Crown grant containing one of these reserves, it would not be competent for the Government to put up the reserve for sale and sell it? I know of no legal objection.
78. The Government had no power to sell this land prior to the passing of the Crown Lands Alienation Act? They did not consider they had, or they would not have pointed to the Alienation Act of 1862.
79. Does not that say to be sold to the original grantee or alienee? The wording is to that effect.
80. Do you know whether there has been any recent survey of this land? Yes.
81. And that it does contain the exact area as specified in this grant, inclusive of this reserve? I could not say whether it corroborates the old survey, but I should imagine it did. Mr. White's surveys are all very accurate.
82. It is, comparatively speaking, a recent survey? It is within the last five or six years I think.
83. Has not this matter been sent to arbitration and settled? I believe it was by the Works Department.
84. *Mr. Burns.*] Were there not some general conditions in regard to the sale of Crown Lands in 1838? None that I can trace.
85. *Mr. Forster.*] Have you ever considered what the purpose of this reservation was? For any public purpose, according to the wording of the deed.

*NOTE (on revision):—I used the terms herein reported, but I meant the "headlands approaching harbours."

P. F. Adams, Esq., 86. Then in taking it for a railway it was taken for the purpose intended? I presume so; it came under that reservation. The reservation is unconditional.

87. *Mr. Farnell.*] We have a reservation in some grants, have we not, for taking timber for naval purposes, and metal for roads? In almost all grants; this grant contains them.

88. Some of the oldest grants contain the reservation for taking timber for naval purposes? Yes, even some of the very oldest.

89. *Mr. Bradley.*] You were asked by the Minister whether this land was not taken for a public purpose when taken for a railway purpose—are you aware that in fact the land was taken by the Hunter River Railway Company—a private company? I do not know whether the Hunter River Railway Company took the land in the first instance or not—they took some of it; but whether they took the 100 feet I do not know, or on what authority they took it.

90. You have stated, in effect, that proprietors may be allowed to purchase under the Crown Lands Alienation Act 100 feet above high-water-mark? Yes.

91. Will you be kind enough to listen to a clause of the Crown Lands Alienation Act, and see whether or not there is any error in that statement, No. 9, 25th Victoria, No. 1:—"The Governor with the like advice may authorize any proprietor of land having frontage to any harbour or river to fill in and reclaim any land adjoining thereto and lying beyond or below high-water-mark or to erect a wharf or jetty on or over the same and upon paying the money consideration to be determined by appraisers for the unimproved value of land, such land, or any land that may already have become reclaimed"? I never heard that there was any reclamation made in this case.

92. Do you not gather from that clause that you have been in error in assuming that the liberty to purchase to which you referred was above high-water-mark, or, in other words, the 100 feet reservation, whereas in fact it appears from the clause that such purchase has reference not to the 100 feet reservation but to land to be reclaimed? No, I cannot see that I have made any error.

93. Do you still think that the land to be purchased under that clause is not the land out seaward from high-water-mark, but the land in above high-water-mark? No; I understand the ninth clause to refer entirely to reclamation made below high-water-mark, and in practice we deal with it in that way.

94. Can you point out any instance within your memory—if not, will you endeavour to inform yourself, to be enabled to state to the Committee at a future time—in which a purchaser of land at a price per acre has been deprived of one-third of his estate without compensation whatever. Is there any such instance within the records of the Colony? I think not. I cannot at present recollect a case where so much as one-third has been taken.

95. I must trouble you to refer again to the conditions of sale to the Government notice of August, 1831. Will you look at the conditions of sale which you have already read. I direct your attention to this portion of the heading of the articles of conditions of sale "under the conditions detailed in the Government Order of 1st August, 1831, No. 22, and other subsequent orders, of which those more particularly necessary to be noticed are hereinafter mentioned"? Yes.

96. Will you look to the 14th Article of the Government notice, 1st August, 1831. I direct your attention to the passage—"No land within 100 feet of high-water navigation"? Yes.

97. Will you take in your hand the plan used at the sale—Mr. George Boyle White's plan—look at the allotments bounded by the harbour of Newcastle? Yes.

98. Are the dividing-lines between the allotments laid out to run from the road to the water? They are.

99. Looking to the conditions of sale in which it is stated that the lands will be sold in terms of the "Government Order of 1st August, 1831, and subsequent orders of which the more particular ones are enumerated below"; looking to the fact that no mention is made of reservation in those conditions; looking to the fact that in the Government notice the public are led to suppose that for the purpose of commerce and navigation, lands within 100 feet of high-water-mark may be offered for public sale; looking to the fact that these lands were offered for public sale and sold,—would you gather, as a purchaser at that sale, that you were buying land to high-water-mark or not? I should infer so.

100. Would you consider that you were buying land and water-frontage for navigation? I should imagine the purchaser would be acquainted with the order that was issued a very short time before this sale, and would be aware of the conditions that would be in his deed.

101. Do you not conceive that that plan, these conditions of sale, and the Government notice upon which these conditions were based, was calculated to lead—I should be sorry to say mislead—to lead bidders at that sale to purchase these lands as water-side lands? It might lead some people astray, but I do not think it led Dr. Mitchell astray.

102. That is not my question—Dr. Mitchell may have been more or less wise in his generation than other children of light—Is it not calculated to lead persons bidding at the sale to suppose that in this instance the Government were doing what they said they would do in certain cases for the purposes of navigation and commerce—that they were offering for sale land valuable for that purpose;—has it not that tendency? It has that tendency, but I should scarcely be prepared to admit it in the full.

103. *Chairman.*] Would lands, such as described in the plan there, if sold without the water-frontage, have brought anything like the price paid at that time? I am sure they would not.

104. Are you aware that in 1840 and 1841 there was universal depression in almost every interest? I think there was.

105. You consider the prices paid for the land at that time high? I think they were full prices.

106. The land would not have brought any such prices without water-frontage? Nothing like it, the chances of the Government stepping in to take the land being so remote that I do not suppose it entered into the consideration of the purchasers.

107. *Mr. Campbell.*] Suppose that property had been improved—that there had been extensive wharves and stores on that 100 feet—would the Government then have felt justified in resuming it in that way? I should not like to answer that question.

108. In cases where applications have been made for rescission of water-frontage the Act states that they are to be valued without reference to improvements, but in those cases you have dealt with have they been valued at anything near what they would have brought if they had been put up for public auction, where a stranger might go in to purchase? That is a difficult question to answer, for if they were put up only 100 feet back from high-water-mark they would be almost valueless—100 feet only would be unfit for almost any purpose.

109. Except where reclamation is to be added? Yes. I think the appraisements have been pretty fair to both parties. P. F. Adams, Esq.
110. *Mr. Burns.*] Do you think the Government could sell these reservations to other parties than the original purchasers? That is really too much a legal question for me to undertake to answer, but I think if you refer to the deed itself you will see that the reservation is absolute and full. 21 Oct., 1869.
111. Do you think there was anything in the circumstances, or at the time, that would lead Dr. Mitchell, who purchased for the Trustees of this Grammar School, to suppose that Government would resume at any time any portion of the land he purchased for the Grammar School, without compensation? It is probable he never contemplated any action upon that reservation.
112. The land sale took place in 1840, and the general conditions for the sale of Crown Lands were published in 1831? Yes.
113. Do you think, having regard to the conditions of sale at the time of the sale, he would anticipate the resumption of the land without compensation? I cannot suppose that he anticipated any action upon that reservation.
114. Then as a matter of equity, without regard to law, would you not consider that where Government took land from parties, they should give compensation? I am not in a position to answer that question.

John Rae, Esq., examined:—

115. *Mr. Bradley.*] What is your office at present? Under Secretary for Works. John Rae, Esq.
116. Do you produce from the Railway Department a plan shewing the land taken by the Hunter River Railway Company about the 4th July, 1854, from Messrs. Croasdill and Scott? I will forward it to the Committee as an exhibit. 21 Oct., 1869.
117. Do you produce a letter from Mr. H. Kerrison James, written on behalf of Mr. Scott, to the Chairman of the Board of Directors of the Hunter River Railway Company, dated 29th July, 1854? I do. (*The witness handed in the same. Vide Appendix A 1.*)
118. Do you produce a letter from Messrs. Holden and M'Carthy, to the Crown Solicitor, dated 5th June, 1860. I do. (*The witness handed in the same. Vide Appendix A 2.*)
119. Do you also produce a letter from the same gentlemen, dated 6th May, 1862? I do. (*The witness handed in the same. Vide Appendix A 3.*)
120. Also one dated 2nd July, 1862? I do. (*The witness handed in the same. Vide Appendix A 4.*)
121. Do you produce a letter of H. B. Bradley, to the Chief Clerk of the Railway Branch, Department of Public Works, dated 3rd April, 1866? Yes. (*The witness handed in the same. Vide Appendix A 5.*)
122. Any letter, minute, or other notification from the Minister for Lands to the Minister for Works, dated on or about the year 1866, that the land within 100 feet of high-water-mark had been taken by the Crown? I can find no letter, minute, or other notification in reference to this matter. I made inquiry at the Lands Department, and I had a letter this morning stating that after careful search they could not find any document of the kind.
123. Did you find another letter from myself to the Commissioner for Railways, dated 27th July, 1866? I did. (*The witness handed in the same. Vide Appendix A 6.*)
124. And another dated 16th September, 1867? Yes. (*The witness handed in the same. Vide Appendix A 7.*)
125. Do you produce the appointment of Mr. George Vindin, by Messrs. Scott and Croasdill, as an arbitrator for the purpose of determining the compensation to be paid to them in respect of land taken at Newcastle? I do. (*The witness handed in the same. Vide Appendix A 8.*)
126. Also the appointment by the Commissioner for Railways of Mr. Biden? Yes. (*The witness handed in the same. Vide Appendix A 9.*)
127. Is there a plan attached to that appointment? Yes. (*Vide Appendix A 10.*)
128. Does the plan shew the land referred to arbitration? Yes, the part colored red.
129. Do you produce the award made by the arbitrators, dated the 24th June, 1868? I do. (*The witness produced the same. Vide Appendix A 11.*)
130. Will you look at this plan? (*The witness referred to the plan.*)
131. Do you see four allotments upon that plan of various contents—10 acres 2 roods, 1 acre 1 rood 20 perches, 9 acres, and 1 acre? Yes.
132. Can you identify those lands from the records in your office as being the lands taken by the Hunter River Railway Company? I could not from my own knowledge; I think the Engineer-in-Chief would be more likely to do so.
133. Do you remember my calling upon you as Solicitor for Messrs. Scott and Croasdill, about three years ago, or a little more, previously to the arbitration taking place? Perfectly.
134. Do you remember that you put forward what you assumed to be the fact, that a small portion only of the land had been taken from Messrs. Scott and Croasdill, and that the whole 21 acres had not been taken by the Hunter River Railway? I do not remember putting forward that; I do not remember making any such statement. My impression was otherwise.
135. Do you remember negotiations being entered into between yourself and myself, for the purpose of limiting the taking to land occupied by the railway line, and for the restoration of the remaining part of the land to Messrs. Scott and Croasdill? I remember there were some negotiations of that nature.
136. Do you remember some with myself? I think there were some with yourself too—I know there have been negotiations at different times on the subject. I produce copy of letter from the Chief Clerk of Railways to the Crown Solicitor, dated 6th September, 1860, on this subject. (*Vide Appendix A 13.*)
137. *Chairman.*] Were you Commissioner for Railways in 1862? Yes.
138. Have you any knowledge of any correspondence at that time from you as Commissioner, to these parties, to the effect that the whole of the land would be retained for railway purposes? Yes; I think there was a little to that effect. I believe I can produce it; I know it was written. I append copy of letter from the Chief Clerk of Railways to Messrs. Holden and M'Carthy, of date 4th August, 1862, stating that the whole of the land taken must be retained for railway purposes. (*Vide Appendix A 14.*)
139. Are you aware whether the whole area of this land was submitted to arbitration, or only a portion? My impression is that only a portion was.
140. Then in point of fact that 7 acres did not form a portion of the land submitted to arbitration? It was my impression that it belonged to the Government.
- 141.

John Rae, Esq. 141. The award therefore was based upon the other portion only? If such be the fact it must have been so.

21 Oct., 1869. 142. *Mr. Burns.*] The conditions upon which the arbitrators were to consider the question referred to them for arbitration would be in writing and ought to be produced? I should have thought the plan would have spoken for itself.

143. Your impression is that the arbitrators were only to consider the question of compensation for the land that Government could not exercise the right of reservation over? Yes.

144. Have you ever known the Government to take so large a portion—in this case a third—of a man's property, without giving compensation? I do not at the present moment remember any such case.

145. *Mr. Bradley.*] Do you see in the appointment by Mr. Byrnes of Mr. Biden as an arbitrator that he is to arbitrate on behalf of the Commissioner in respect of the land described in the plan thereunto annexed, colored red? Yes; that confirms my previous answer.

146. *Chairman.*] In answer to a question by Mr. Burns you said you were not aware of any case where one-third of a purchase of land from the Crown had been resumed by the Commissioner for Railways for railway works without payment? I do not remember a case of the kind.

147. Are there many cases where any considerable portion has been resumed without compensation? Not many; there have been some cases where land has been given; but I cannot point out a case of a similar kind to this.

148. *Mr. Burns.*] Do you know whether, with reference to the land taken for the Morpeth Railway, the Government set up against the claim for compensation the right of reservation? No such right was claimed.

149. *Mr. Bradley.*] Do you know the land of the Australian Agricultural Company, adjoining the land which formerly belonged to the petitioner? I just know it, but I know very little about the situation of any of the land there.

150. You know that part of the free grant of the Australian Agricultural Company abuts upon the land of the petitioner? Yes.

151. Do you know what quantity of land was taken by the Railway from the Australian Agricultural Company at that point? I cannot remember.

152. If I show a document of your own it will perhaps refresh your memory (*handing the witness the "Report of the Commissioner for Railways on the origin and progress of Railways in New South Wales"*)? I take it for granted this is correct, I obtained the amount from Mr. Cowlshaw, the valuator—I am now referring to the Appendix, page 25.

153. What compensation do you find was paid to the Australian Agricultural Company for less than 2 acres taken from them? £7,900.

154. That was a portion of their 2,000 acre grant? Yes, I believe so.

155. Will you look down the column of claimants—do you see that in several instances the word "Crown" has been introduced as a claimant? I do.

156. Does that denote that the Crown was the proprietor of the land? I presume so.

157. Will you look a little below that and you will find "Clergy and School"? Yes.

158. Do you see the area of land taken in that last case was 20 acres 2 roods and 6 perches? Yes.

159. Will you look upon this plan (*handing to the witness plan marked A 12*), signed "Francis Bell"—does that convey to your mind an impression of the relative positions of Honeysuckle Point, of the Australian Agricultural Company's land, and of the portions of the Australian Agricultural Company's land taken by the railway line? Yes.

160. *Chairman.*] Are you aware that in 1854 the Hunter River Railway Company (a Company incorporated by Act of Parliament) took the land for railway purposes? I am aware of the fact through the documents in the office. I do not remember the exact date; I think it was in 1854.

161. Did that Hunter River Railway Company merge into the present Government Railway? Yes, the Government purchased the property from them.

162. With all their rights and liabilities? Yes; after considerable correspondence, on the 30th July, 1855, the purchase was completed by the Government from the Hunter River Railway Company for the paid-up capital, without any premium. The Sydney Company got a bonus of 7 per cent. The sum paid to the Hunter River Railway Company was as follows:—

Paid-up capital	...	...	...	...	...	...	...	£54,337
Discount on raising purchase money	...	...	...	...	...	...	...	2,717
							Making a total of	£57,054
They also took over the liabilities to complete the line to								
Maitland	...	...	...	...	...	...	...	250,000
							Making a total of	£307,054

THURSDAY, 28 OCTOBER, 1869.

Present:—

MR. J. CAMPBELL, | MR. FARNELL.
BENJAMIN LEE, ESQ., IN THE CHAIR.

H. B. BRADLEY, Esq., appeared as Solicitor for the Petitioner.

Duncan M. Maitland, Esq., examined:—

D. M. Maitland, Esq. 163. *Mr. Bradley.*] You are the Government Surveyor? I am.

164. Residing at Maitland? Residing at Maitland.

28 Oct., 1869. 165. Were you employed by the Government previously to the month of June, 1868, in the survey of the Honeysuckle Point land? I was.

166. Do you know Mr. George Vindin, of Maitland? I do.

167. What is he—a merchant? A storekeeper.
168. Do you know Mr. William Downing Biden? I do.
169. What is he? The Government Surveyor in the Singleton district.
170. Do you remember being examined as a witness before Mr. Vindin and Mr. Biden in the month of June, 1868, at Newcastle, upon the arbitration in which Mr. William Croasdill and Mr. Alexander Walker Scott were claimants, and the Commissioner for Railways was the party on the other side? I do.
171. Was it in respect of the same land—the Honeysuckle Point land, of which you had been employed by the Government to make a survey, that that arbitration took place? It was.
172. Of what nature were your instructions? They were verbal.
173. In pursuance of those instructions what did you do—that land was the subject of four grants from the Crown to James Mitchell? Yes, one of 10 acres 2 roods, one of 9 acres, one of 1 acre, and one of 1 acre 1 rood and 20 perches.
174. Those were the lands you surveyed? Yes.
175. Now, if you please, tell us what you did? I made an accurate outline first of all upon the enlarged scale of Mr. White's plan of the year 1841, or whatever it might be; I do not remember the date precisely. I then surveyed the land as it is, accurately placing every house and building as it stands on the ground on the paper. I then procured an old plan by which some of these allotments are leased or sold.
176. I was alluding more particularly in asking what you did, to whether you took surveys for the purpose of ascertaining the area deductible from the total area of the grants by reason of the reservation of 100 feet from high-water-mark? I did—100 feet from high-water-mark as it existed at the date of the first survey.
177. Which you gathered from Mr. White's plan? Yes.
178. And from your own survey? My own survey, confirming Mr. White's.
179. Do you remember stating to the arbitrators at the close of your examination the respective deductions from the several grants, caused by the reservation of the 100 feet from high-water-mark? I did so.
180. Have you subsequently gone over that work again? I have, very accurately.
181. Do you find some trifling difference between the figures you then swore to and those you now find? A very trifling difference; but the aggregate amount is the same within a perch or two.
182. That is to say, the aggregate amount of the deductions from the 21 acres 3 roods 20 perches is about the same as you stated to the arbitrators? Yes.
183. Although in respect to individual grants themselves some trifling difference might exist? Yes.
184. Will you state to the Committee what you found to be the deduction upon your more accurate recent survey from the grant of 10 acres 2 roods? 1 acre 2 roods 7 perches.
185. The deduction from the 9 acre grant? 3 acres 3 roods 31 perches.
186. From the 1 acre 1 rood 20 perches piece? 3 roods 4 perches.
187. From the 1 acre grant? 3 roods 5 perches.
188. Making a total deduction of how much from the area of the whole of the four grants? 7 acres 7 perches.
189. How many years have you been in the employment of Government as a surveyor? Between twelve and thirteen.
190. Have you been intimately acquainted with the subject of railway appropriations? My experience has not been great in this country.
191. Are you aware of any resumption by the Government of lands above high-water-mark, under the reservations of any grants of 100 feet from high-water-mark? I am not aware.
192. I do not allude to reclamations below high-water-mark—I understand you to say you are not aware of any resumption of the land 100 feet above high-water-mark? No, I do not remember a case at this moment.
193. Have you had occasion to peruse Government regulations? Only as regards the conduct of my own business.
194. Are you acquainted with the Government notice of 1st August, 1831? I am not. That was long before my time.
195. I read to you from the Government regulation of 1st August, 1831, No. 22, clause 14:—"No land within 100 feet of high-water-mark on the sea-coast, harbours, bays, or inlets, is to be considered open to purchase, unless for the purposes of commerce and navigation." I read to you from the articles and conditions of sale, by public auction, at the Crown Lands Office, on 9th September, 1840:—"The following portions of land as advertised by notice, dated 10th August, 1840, in the *Gazette* of 12th August, under the conditions detailed in the Government Order of 1st August, 1831, No. 22, and other subsequent orders of which those more particularly necessary to be noticed are hereinafter mentioned." In these articles and conditions no reference is made to reservation of water frontage. Having read those passages I ask you have you seen Mr. White's original plan? I have.
196. Supposing a purchaser at the Government sale of the 9th of September, 1840, with these articles and conditions read, and the Government notice referred to and the plan exhibited, showing the dividing lines of the allotments run right down to the water-side—do you consider that an ordinary purchaser would be led to expect that he would buy the allotments to the water-side, and assume that as the Government offered it to purchase it was under the 14th clause of the Regulations open to purchase on that occasion? I should deem it so.
197. Then supposing that as the fact was, one of the conditions of sale referred to the form of the grant by which the land would be granted, and in that form we find the reservation of 100 feet from high-water-mark—Is there not to your mind something repugnant between the plans, the conditions, the Government notice, the situation of the allotments, and the form of grant by which they were to be conveyed? Yes; they were incongruous no doubt. I think that was a very great oversight of some person or persons at the time the grant was issued. Possibly the purchaser should have looked more carefully into the wording of the deed.
198. Would you not conceive, as an honest man going to a public sale held by the representative of the Crown, that you were about to buy that which the Crown offered to sell? It undoubtedly would have been my impression, because the express quantity is mentioned—10 acres and a half, 9 acres, 1 acre, and 1 acre and a fraction over.
199. Can the area of the grants having reference to the water on the one side and that road on the other by possibility be made up without the 100 feet? No, not a square inch more than I have said—14 acres and a trifle over.

D.M.
Maitland, Esq.
28 Oct., 1869.

200. It has been suggested that if the claim of the petitioner be considered with favour, a large number of other claims will arise, which the Government would have to meet, and that this case would be a precedent, if acceded to, of great inconvenience—Do you consider, with reference to that view of the case, that if the petitioner has a just claim upon the good faith of the Government and the public, the existence of any possible number of other just claims should prevent the petitioner's claim receiving attention? Certainly not.
201. Or should prevent the consideration of the other just claims? I know of no parallel claim in my district; even if there were a hundred it does not lessen the obligation to meet this.
202. *Chairman.*] You have, in answer to one of the questions, said that you thought the purchaser should have exercised more care in the examination of what he was really purchasing? I had no business to make such a statement.
203. How could the purchaser think otherwise than that he purchased what was offered? I mentioned simply that the motion would have been taken at an earlier date, for instance, at the time of the deeds being issued; the most cursory perusal would have enabled the purchaser to ascertain it. The land would have been valueless without the water-frontage.
204. Would the land, if sold without water-frontage, have brought any such sums in 1841 as £58 per acre, £85 per acre, and £29 per acre? No, it would not have been worth so much by a great deal.
205. You are not aware of any similar case in your own district, or any other, where one-third of purchased land has been resumed by the Crown? I know of no parallel case; my experience of New South Wales is limited to my district, with the exception of an occasional visit elsewhere.
206. *Mr. Farnell.*] In reference to the 10 acre grant, you have told us that the area of the reserve in that grant is 1 acre 2 roods and 7 perches? Yes.
207. The fact then is that purchasers under that reservation in the grant would purchase only 8 acres 3 roods 33 perches? Yes.
208. Of course the same principle would apply to the other grants? Yes, it would.
209. I suppose you are aware that the regulation then in force—the Order in Council—reserves to the Crown all lands within 100 feet of high-water-mark? High-water-mark in certain descriptions of estuaries—where there is any deep water, any navigable creek, such as Dorah Creek, at Lake Macquarie; and upon all the harbour waters of Newcastle we now measure any land only to within 100 feet of high-water-mark. On Mosquito Island, for instance, there have been two or three free selections within the last few years, and they are all measured to within 100 feet of high-water-mark.
210. Have you had any experience in measuring old grants issued previously to the Orders in Council—have you found any of these reservations in them? I do not recollect a case at present.
211. Of course you are aware that in some of the old grants the Crown reserved the right of cutting timber and of making roads? I am quite aware of that.
212. Did you survey this land for the purpose of sale by the Government? No; it was measured twenty years before—nearly thirty years ago; this was measured by me only in 1866.
213. You have ascertained, by a more recent survey, that this reservation was included in the area of the land sold by the Crown to Dr. Mitchell? Most undoubtedly.
214. It appears that in one of these cases there is a grant of 1 acre, and you ascertained that the reservation taken out of that 1 acre amounts to 3 roods 5 perches? Yes; leaving 35 perches only.
215. So that the person purchasing, as he supposed, 1 acre, actually had only 35 perches? Yes—less than a quarter of an acre.
216. You are connected with the Survey Department? Yes.
217. Not with the Railway Department? No.
218. *Mr. Campbell.*] Considering the then only partially developed state of the coal mines at Newcastle in 1840, do you not think that any person purchasing this land as an investment must have had regard to the water-frontage with reference to the prospective value of this land? Most undoubtedly. I myself, during the time I was with the railway, projected a railway from Honeysuckle Point to the Deep Water, which was not carried into effect.
219. Supposing you had been purchasing on your own account at that time, you would have looked for remuneration upon your outlays to the prospective value of the water-frontage? Yes, most undoubtedly.
220. *Mr. Farnell.*] Does the water-frontage give value to the land on that account? Yes, certainly; it is a frontage to the open harbour.
221. What do you think would be the value of the land resumed? At the present moment I would not venture to place a value upon it, for the value has been determined by better judges—the arbitrators.
222. *Chairman.*] Are you aware whether the arbitrators took the whole matter into their consideration in making their award? I was before them merely as a witness.
223. *Mr. Farnell.*] Could you give any idea proximately of the value of the 7 acres that have been taken? I should be sorry to say. I have not given it my attention, and could give only a haphazard reply.
224. *Chairman.*] Do you know by whom this land was taken for railway purposes originally? I was not in the colony at the time.
225. *Mr. Campbell.*] There is one portion of this land much more valuable than the rest with regard to the water-frontage? I should say the lower portion is the more valuable. By the lower portion I mean the portion nearest the coal shoots of the A. A. Company.
226. *Mr. Bradley.*] Is the situation of the Honeysuckle Point grant one suitable for the purposes of commerce for the erection of shops or stores, workshops, and purposes of that kind? There are a large number of shops upon it now.
227. Then I understand your answer to be that it is suitable for the purposes of commerce and trade? Yes.
228. Might a portion of it be made useful for the purposes of navigation as a wharf? Yes, the lower portion of it.

Alexander Walker Scott, Esq., examined :—

229. *Mr. Bradley.*] You are the petitioner in this matter? I am.
230. Do you remember, some time prior to the month of September, 1840, yourself and a number of other gentlemen and some ladies associating yourselves for the purpose of establishing a Proprietary Grammar School at Newcastle? I remember it very well.
231. Is the paper before you a copy of the list of subscribers? This is a copy of the list made by me—when I do not remember. (*The witness handed in the same.*)
232. Did you reside formerly for many years at Newcastle? I did, and at Ash Island.
233. Are you well acquainted with the situation of these lands, the subject of this petition? I am thoroughly so.
234. Was the late James Mitchell deputed to purchase this land on behalf of the subscribers? He was.
235. Was it at the time supposed that these lands were likely to be valuable for the purpose of commerce and navigation, and were therefore a good investment to be made of the funds? Dr. Mitchell bought it, deeming it an excellent place for a Proprietary School, and that it must ultimately become valuable.
236. Were these lands afterwards granted by the Crown to Mitchell, and conveyed by himself to you and William Croasdill? They were conveyed to Mr. Croasdill and myself, as trustees.
237. Did you become aware, sometime in the year 1854, that these lands were taken by the Hunter River Railway Company? Yes. Mr. Neilds, who was Secretary to the Hunter River Railway Company, came to me at Ash Island, and served me with a notice that the whole of the land would be required for the Hunter River Railway Company.
238. The whole of the four grants? Yes—the word “grants” was not mentioned—the whole of the land we had purchased from the Crown in 1840 for a Proprietary School would be required.
239. Did you direct Mr. Henry Kerrison James to make the claim put forward in his letter? Yes, Mr. Croasdill and myself.
240. Did yourself and Mr. Croasdill employ Messrs. Holden and M'Carthy to conduct the prosecution of your claim upon the Commissioner for Railways? We did.
241. Did you, in the year 1866, employ myself to proceed therein? We did.
242. Did you concur with Mr. Croasdill in the appointment of Mr. Vindin as an arbitrator? I did.
243. You have heard it stated by the witness, Mr. Maitland, that about one-third of the whole area of the lands purchased by Dr. Mitchell for your trust, has been severed in virtue of the reservation of 100 feet from high-water-mark? I have.
244. What effect, in your judgment, has that severing had, first of all upon the value of the residue of the land that was submitted to arbitration? To deteriorate the value very materially.
245. What has been a secondary effect of that in regard to expenses? In my opinion the effect has been by lessening its value to throw the whole of the arbitration costs, amounting to £650 odd, upon the trustees; because I believe there is a certain proportion fixed, which the applicants failing to attain they are liable to pay the expenses.
246. So that a double injury has been sustained by yourself and co-trustee in this respect, that the land valued has had an inferior value assigned to it from the more valuable part being taken off, and also that the expenses have been in addition cast upon you which you believe they would not have been if the whole of the land had been arbitrated upon as the whole had been taken? I think we should not have been subject to the expenses of the arbitration.
247. You have heard the 14th clause of the Government regulations of the 1st August, 1831, and the articles and conditions of sale by which this land was sold? Yes.
248. Do you think that the general effect of these conditions referring to that order was to lead bidders at that auction to suppose that the Government then intended, although they did not always intend, to offer land within 100 feet of high-water-mark; that they did then intend to open this allotment then put up to sale as open to purchase, and intended to sell? I was certainly under that impression that the whole of the land offered for sale, and for which they took payment, was our own, excepting any small portion that might be required for some particular Government purpose. I certainly never thought we were liable to have our whole frontage taken away.
249. Some evidence was elicited from the Surveyor General by the Honorable the Minister for Lands to the effect that this case might form a precedent for inconvenient claims upon the Government—do you believe that it was ever contemplated in offering waterside lands for sale, measuring the area up to the water, to take the price from the purchaser, and then to take the lands back again without any compensation? I cannot conceive it to form any precedent for other claims, for I never heard and probably never can, hear of such a claim being made again.
250. Do you believe then in fact that the Government of the day intended to sell these lands at the waterside? Certainly they did; that is my impression.
251. *Chairman.*] Were you present at the sale? I do not remember, but I think I was not; I am not sure; it is so long ago.
252. *Mr. Bradley.*] Was any demand ever made upon yourself, or to your knowledge upon your co-trustee, by Government, for this 100 feet reserve? Never; we purchased the land in 1840; it was taken from us by the Railway Company in 1854—that is 14 or 15 years after—and it then became the *bonâ fide* property of the Company.
253. *Chairman.*] When did the Government set up a claim to this 100 feet? Not until 1866—twenty-six years after its purchase; they did not make a claim upon the trustees; they made the claim upon the Railway Commissioner; they ignored us as proprietors, and yet in the arbitration we were the sufferers.
254. *Mr. Bradley.*] Did you cause a memorial by yourself and co-trustee to His Excellency the Governor in-Chief to be presented through myself in the month of August, 1868, or thereabout? Yes.
255. Is that (*handing a paper to the witness*) a letter from the Colonial Secretary of 28th August, 1868, signed “Henry Halloran”? Yes.
256. In which you are informed that the Government do not consider the memorialists entitled to any consideration in consequence of such resumption? Yes. (*The witness handed in the same. Vide Appendix B.*)
257. Do you remember the gold discovery in New South Wales, about the year 1851? Yes, perfectly.
258. Did a very large increase in value take place in landed property, particularly at Newcastle? At that time I believe it did.

A. W. Scott,
Esq.
28 Oct., 1869.

- A. W. Scott, Esq.
28 Oct., 1869.
259. Do you remember whether in 1854 the value of land in Newcastle was very considerable? Yes.⁷
260. Is the quantity of land at Newcastle available for navigation and commercial purposes large or small? The City of Newcastle proper—I use the word “proper,” for really a great deal of the City of Newcastle is unfit for commercial purposes, on the side of the hills for instance—the water-frontage is good, but as a commercial place it must stretch away from Newcastle proper.
261. In the direction of the land that belonged to yourself and co-trustee? In the direction of that land, towards Bullock Island, and stretching away towards Burwood and other coal mines, and must pass by the land in question.
262. Do you know the land of the A. A. Company adjoining this land of yours? Yes, perfectly.
263. Do you know the portion of the A. A. Company’s land taken by the railway? Yes, I know it by the plan.
264. Is that a part of their 2,000 acre free grant? Yes; they have no other land at Newcastle that I am aware of.
265. Do you remember an ineffectual attempt to arbitrate the question many years ago, in which Mr. Heslop and Mr. Merewether were named arbitrators? I do; shortly after the Government took possession of the railway from the Railway Company.
266. Did that arbitration comprise the whole area of the lands granted to Mitchell, or only a portion of them stripped of water-frontage? The whole of the land that was purchased on account of the proprietors of the Grammar School.
267. Will you look upon the plan (B 13.) showing the relative position of the Honeysuckle Point property of the A. A. Company of the allotments marked 8, 9, and 10? Yes.
268. You see the position of the Bank of Australasia? Yes.
269. You know the locality? Perfectly.
270. About what distance is there between the allotments 8, 9, and 10, and the boundary of your late property? About 500 yards.
271. Have you any acquaintance with the value of property in Newcastle about the year 1854, as to sales that had been made? Speaking in general terms, I have; I owned a good deal of property myself.
272. Do you think that the sum of £1,500 per acre, placed by yourself and co-trustee upon your estate taken by the Railway Company, was a moderate price for that land in 1854? I remember Mr. Croasdill and myself considering the subject, and we estimated the value of the land at Honeysuckle Point at £1,500 per acre as a very moderate value, and we made our demand against the Government for that amount.
273. Did you, in making that valuation, avail yourselves of the large experience you both had as old residents in Newcastle? We did, as I say, we consulted together before we arrived at that value.
274. *Chairman.*] At what do you estimate the value of the 7 acres of land resumed by the Crown under the 100 feet reservation, at the time it was resumed? I think, so far as my memory goes, our calculation was somewhat complicated—we took the area, the roadside frontage, and then the interior at a less value. According to Mr. Bingle and other people with whom we conversed I think we reckoned it as worth at least £2,000 an acre.
275. In making your valuation were you aware of any sales having taken place in Newcastle at that particular part or in that neighbourhood, where any such price had been obtained? Not at that particular place.
276. Had there been any sales of land in Newcastle where £1,500 an acre had been realized? Yes, and far more. I have known land belonging to Captain Gregory to be sold, in earlier times, at from £1,500 to £2,000 an allotment.
277. *Mr. Bradley.*] The allotments being less than a quarter of an acre? Yes, about a sixth of an acre; it had water-frontage.
278. *Mr. Farnell.*] In the City of Newcastle? Yes; at that time it had only the one wharf; now it is all wharf-frontage. I think it was £1,500 or £2,000, but I am speaking only from memory.
279. *Chairman.*] The amount awarded by the arbitrators is about £700 an acre? Yes.
280. Would you consider £750 an acre a fair value for the 7 acres—the subject of your petition? By no means; that land has greatly increased in value, as indeed has all land in Newcastle having frontage to anything like deep water.
281. *Mr. Farnell.*] After the Hunter River Railway Company had taken possession of this land how long did they hold it before Government took it off their hands? I think only a few months. I had been thinking Bullock Island would be made the main starting-point; the place was surveyed at a considerable cost from the city of Newcastle to Wallis Creek, Maitland—some £500 or £600—at my own private expense, by Mr. Cornelius C. Lundie, an English surveyor, intending to promote a railway company, and when the Hunter Railway Company came into existence they purchased these plans from me at about half the price.
282. Then under the Act of Parliament they took the whole of this land that you held in trust for the purposes of a school? Yes.
283. And held possession of it for a few months? Yes, it appears to me to have been only a few months.
284. Was any application made by the trustees of this land to the Hunter River Company for compensation? Yes, and it was proposed to submit the matter to arbitration; and Mr. Heslop and Mr. Merewether were appointed the first arbitrators, but everything was then in an unsettled state, as the railway had passed from the hands of the Company into the hands of the Government.
285. That is to say, before there was sufficient time to settle the arbitration between the Hunter River Railway Company and the trustees the property went over to the Government by some arrangement with the Company? Yes.
286. Then the trustees put in a claim for compensation from the Government for this land? That is provided for in the Act. I do not know that there was any written application on either side.
287. Mr. Henry Kerrison James’ letter was sent in by your authority? Yes.

Henry Burton Bradley, Esq., examined :—

288. *Chairman.*] You are the solicitor for the Petitioner? I am. I have been engaged by him and his co-trustee since the early part of the year 1866. Not having received the original notice of the land taken by the Hunter River Railway Company, and desiring to ascertain the fact of the relations between the petitioner and the Railway Commissioner I had, early in 1866, several interviews with Mr. Rae, then Commissioner for Railways, with Mr. Byrnes, the then Minister for Works, and with the Crown Solicitor, upon the subject of the land taken. On the 3rd April, 1866, I addressed to the Commissioner for Railways, through his Chief Clerk, the letter which I produce (*the witness handed in the same. Vide Appendix C 1*), in which I desire the Commissioner to state the amount he is willing to pay for the freehold and inheritance of the land taken, and for the damage sustained by the taking of the same; afterwards, by the Commissioner's request, I waited upon him in the presence of the Minister. At that conference the Commissioner for Railways, Mr. Rae, maintained that only some 3 or 4 acres upon the road had been taken by the railway, while I maintained that the whole estate of the petitioner had been taken. On the 16th April I had a conference with the Commissioner for Railways, when the Commissioner corrected his error as to the fact, and then stated his desire to reduce the quantity of land taken for railway purposes, the railway requiring only a small part, but that the Government desired to retain the remainder of the estate for other purposes. I derived the impression at that time that a device was developing itself for keeping the petitioner's land and dealing as cheaply as possible with the subject of compensation. On 2nd May, 1866, I had a long interview with the Crown Solicitor, who stated that he was instructed to ascertain the views of my clients upon a proposal which might be submitted to them, to limit the quantity of land taken to the portion then required for railway purposes and to restore the remainder, upon which I afterwards advised with my clients. About 16th August following I received from the Commissioner his letter of that date, from which I read the following extract :—“It is admitted that the whole of the estate of your clients has been taken, that is the whole of the Honeysuckle Point, excepting the strip of land extending 100 feet from high-water-mark, which has been reserved to the Crown in the grant, and therefore cannot be considered as taken from your clients.” (*The witness handed in the same. Vide Appendix C 2.*) In the year 1855 I prepared a conveyance (that I will observe is the year following the taking of the land) from the Honorable Alexander Warren to William Croasdill, of 20 perches of land—No. 10, on the railway plan, spoken to by Mr. Scott, the petitioner, this morning, for which 20 perches Mr. Croasdill paid the sum of £1,000. In 1860 I was solicitor for Mr. Croasdill in his arbitration with the Commissioner for Railways, in respect of the taking of portions of three lots, of which No. 10 was one, and Mr. Croasdill was paid £2,500 for 35 perches of that unimproved land. I have been intimately acquainted with the value of land in the Hunter River District since and previous to the year 1854, having the charge of large estates situated midway between Newcastle and Hexham. In that year, 1854, I obtained upon sales by auction for Hexham land not possessing water-frontage, an average exceeding £90 per acre. I have calculated the consideration money paid by Mr. Mitchell in respect of each allotment purchased by him at the Crown Land Sale, at the prices of that sale, and I find that the whole area of land contained in each grant has been paid for at the price per acre bid for the same, without any deduction or allowance.

H. B.
Bradley, Esq.
28 Oct., 1869.

THURSDAY, 4 NOVEMBER, 1869.

Present :—

MR. BURNS,	|	MR. FARNELL,
MR. R. STEWART,	|	MR. SUTHERLAND,
MR. WISDOM.		

JOHN FITZGERALD BURNS, Esq., IN THE CHAIR.

H. B. BRADLEY, Esq., appeared on behalf of the Petitioner.

Henry Burton Bradley, Esq., further examined :—

289. *Chairman.*] I understand you desire to supplement the evidence given by you to the Committee at the last meeting? If the Committee please to allow me there are two or three little matters which will take little time to state, and which will place the matter before them more simply than they can get it in any other manner. The Hunter River Railway Company's Act, assented to on the 18th October, 1853, clauses 77 and 78, required the Company, before commencing their railway, to make a plan and book of reference, and to advertise their intention in the *Government Gazette*. I look upon the original advertisement by that Company, dated 1st July, 1854, published in the *Government Gazette*, 4th July. This is the advertisement to which I refer (*handing the same to the Chairman*). It is the advertisement required by the Act, and refers to the taking of the petitioner's land for the purposes of the railway. The plan which has been produced by the Railway Department and which is now upon the table, signed “Charles Kemp, Chairman,” is the plan by that advertisement referred to. The first Government Railways Act, 18 Vict., No. 40, empowered the Government to purchase the property of the then existing Railway Companies. The subsequent Act, 22 Vict., No. 19, clause 2, enacted among other things that all the railways and lands of the said Companies should vest in the Commissioner for Railways, and that all moneys due and owing by the said Companies should be recoverable from the Commissioner for Railways, and that all questions for compensation for lands taken or injuries committed by the said Companies should be settled, and the amount paid under the provisions of this Act as if the lands had been taken and the injuries occasioned by the Commissioner for Railways. Clause 45 enacts, among other things, that “in estimating the purchase money or compensation to be paid the value of the land taken and the damages sustained should be estimated according to the value of the land at the time of the notice given that the same was required for railway purposes.” I was present at the arbitration at Newcastle, which has already been spoken to by other witnesses. Mr. James Byrnes, then the Commissioner for Railways, was examined, and stated in his evidence, among other things, that the 100 feet, by the terms of that arbitration withheld from the consideration of the arbitrators, had been taken from him by the Minister for Lands about two years before that time. Mr. Byrnes was Minister for Works at the time I am speaking of, and held the office of Commissioner for Railways in addition. This statement was made in June of last year.

H. B. Bradley,
Esq.
4 Nov., 1869.

Alexander Brown, Esq., examined:—

- Alex. Brown, Esq.
4 Nov., 1869.
290. *Mr. Bradley.*] Do you at present reside in Sydney? I do.
291. Did you reside for many years at Newcastle? Yes, over eighteen years.
292. Do you know the portion of land adjoining the Australian Agricultural Company's estate, there known as Honeysuckle Point? Yes, and lived many years close to it—adjoining it.
293. Do you see it shewn upon the plan before you? I do.
294. Do you remember the property so far back as when it belonged to William Croasdill and Alexander Walker Scott? Yes, it was in my hands many years; when it was their property I had the use of it.
295. Are you, and have you been for many years past, proprietor of property in Newcastle and its neighbourhood? Yes, and am to the present day.
296. Did you know the Honeysuckle Point property in the year 1854? Yes.
297. Was the value of land in and about Newcastle very considerable in 1854? It was very high at that time.
298. Was that year shortly after the gold discovery? Some time after the gold discovery.
299. Gold was discovered in this country in 1851? Yes; but the first rise in the price of land there was before that time, from the period when the trade with California sprung up. The value of land at Newcastle began to rise before gold was discovered here.
300. Was there a great increase in the coal trade of Newcastle between the years 1840 and 1854? A great increase; in fact it has increased every year since 1836—doubled every year, or trebled.
301. The petitioner's petition has reference to a question affecting land 100 feet from high-water-mark, extending all along the water-frontage of the 21 acres 2 roods, which formed the estate formerly belonging to Messrs. Croasdill and Scott? Yes.
302. Giving your attention to that space of land 100 feet from high-water-mark along the whole margin of these grants—can you state the value that that land would have produced in 1854, at per acre, or can you give the Committee an approximate idea of the value of that land? Being the water-frontage I should think it would be worth about £2,000 an acre.
303. Is that land suitable for the purposes of commerce and trade? It could be made so at little expense.
304. I must inform you that 14 acres or thereby of the 21 acres 2 roods, belonging to Messrs. Croasdill and Scott at one time, has been already disposed of by arbitration. With reference therefore to that 14 acres and odd, I ask you now whether the value of that 14 acres is not largely depreciated by cutting off from it the 100 feet of high-water-mark—the 100 feet reservation? Decidedly so.
305. Would not the value per acre of the 14 acres be very much greater if the 14 acres were taken on any part of the estate running down to the water instead of shut off from the water? Yes.
306. *Mr. Farnell.*] How do you arrive at it that this land is worth £2,000 an acre? I gave £1,000 an acre for land of the A. A. Company, somewhere far back, away from any road. I think the A. A. Company sold some land as high as £4,000 or £5,000 an acre, opposite the same place.
307. By selling it in small allotments? They sold it in quarter acre allotments and less.
308. You are not a land valuer by profession? No; I merely refer to what I bought myself on my own account.
309. I suppose you do not think you paid too much for your land? I never would do that.
310. *Chairman.*] In what year did you buy the acre you have now spoken of? I think it was somewhere about the latter end of 1853 or 1854.
311. Does the increase in the consumption or raising of coal at Newcastle increase the value of the land there? Yes; the coal trade has you may say altogether made Newcastle.
312. Do you know whether there has been any arbitration with reference to this matter? I was once before a Committee of this House with reference to this land, I think, but I do not recollect anything about it just now.
313. You do not know anything about an arbitration case with reference to this land? No.
314. *Mr. Bradley.*] You were asked whether you bought your land too dearly from the Company? Yes.
315. Have you made money by buying and selling land in the neighbourhood of Newcastle? Yes.

John Williams, Esq., examined:—

- J. Williams, Esq.
4 Nov., 1869.
316. *Chairman.*] Do you remember an arbitration case that occurred with reference to some land at Newcastle taken by the Government for the Hunter River Railway from Messrs. Croasdill & Scott? I know there was one—I did not attend it myself at Newcastle; I delivered a brief to Mr. Isaacs.
317. The matter was gone into at Newcastle? Yes.
318. Who was the arbitrator for the Government? Mr. Biden, a surveyor.
319. Do you know whether in dealing with the claim for compensation the arbitrators did not take into consideration this land for which compensation is now sought? I have been informed that they did. Their so doing was improper no doubt—that is to say, it caused a larger amount to be awarded against the Commissioner for Railways than would have been if they had kept within the bounds of their authority.
320. Have you any papers with reference to that authority? The submission and award will show what land they dealt with.
321. Will you look at the papers before the Committee, and see if you are correct in your first statement? It does not appear by these papers that they did.
322. What other papers are there? No others. I will explain if you will allow me: From the award it would appear that they dealt with the land only actually submitted to them, but I believe in making up the amount to be awarded the whole area taken—that is, the land referred to in the award, and also the land the subject matter of this inquiry, was included, and the amount to be paid calculated upon the gross area of the whole.
323. How do you know this? From one of the arbitrators. I inquired in what way the amount was arrived at.
324. Was that shortly after the award? Immediately after the award.
325. You speak of the party who represented the Government? Yes.

326. You have no official knowledge of the matter beyond this verbal statement from Mr. Biden? No; J. Williams, Esq. I inquired of Mr. Biden—I am not sure as to whether I did of any one else—in what way the amount was arrived at; and I was informed by him that it having been intimated to them in some way that this land should have been in the arbitration, they thought it only fair to the claimants to calculate upon the whole area. 4 Nov., 1869.
327. Would it appear to you that the award would have been excessive if they had not taken this into consideration? I cannot speak to that—I am no judge of value.
328. From the statement you made to the Committee it appears that although it is erroneously done, still the arbitrators did take into account the value of this land, and awarded the amount they thought ought to be paid in respect of it, although technically that is only an award for land excluding this 100 feet frontage? I believe so.
329. *Mr. Farnell.*] I understand that the Government did not recognize the claim of the petitioner to this 100 feet, but that the arbitrators in making the award took into consideration the whole area of the land? I so understood; and that is my present belief in the matter. Of course the only matter in dispute between the Commissioner for Railways and Messrs. Scott and Croasdill was as to the land taken from Scott and Croasdill; the land was not taken from them because it never belonged to them; it belonged we say to the Crown, and strictly speaking nothing should be awarded to them for this land so taken, as against the Commissioner for Railways.
330. *Chairman.*] Do you know that Messrs. Scott and Croasdill actually paid for the land to which you say the Crown had a right? I believe they did, looking to the description in the deed.
331. As a matter of equity, that would be a claim for consideration? Not in the way I have just heard it put by my learned friend in his examination of Mr. Brown. I did not feel that I had any right to interfere, for I am here only as a witness; but with great respect to him I should say he is basing his claim upon a wrong mode of calculation.
332. Legally? Legally, and I think equitably.
333. *Mr. Farnell.*] Even supposing the petitioners were entitled to this 100 feet reserve—upon what basis would you compensate them? I think the proper mode of compensating them would be this: They paid so much per acre for $7\frac{1}{2}$ acres of land; that $7\frac{1}{2}$ acres they did not get; the purchase money, therefore, and interest should be refunded to them; but I imagine that neither legally nor equitably have they any claim to the increased value of land which they never had. The breach of contract, in respect of which they claim compensation, was committed when the grant issued—that is, they received $7\frac{1}{2}$ acres less than they ought to have had; the breach of this contract, therefore, cannot be said to have any relation to the value of the land in 1854.
334. Can you tell me whether the Government acted upon that principle in dealing with the claims for compensation of parties at Morpeth, whose land was taken for railway purposes? I could not without reference say whether there was any such reservation in Mr. Close's grant; that is a deed of much older date than the deeds of grant of this land.
335. *Mr. Farnell.*] I think all grants issued subsequently to 1828 contained this condition with reference to the reserve? I could not answer that question, and I do not think any one can without inquiry.
336. You are aware from your experience that a great many of the old grants do not contain such a reservation? Yes. I do not know from what date the reservation was made, but I know that many old grants do not contain that reservation.
337. When the petitioners purchased that land, or whoever purchased it on their behalf—the purchasers received the grant and took the land with the conditions in the grant, subject to certain restrictions? They did so; and if the Government then committed a breach of contract in not giving them the whole of the land for which they had paid, I would submit that then in respect to that breach of contract they should have had the money and interest refunded, and that damages cannot be calculated for that breach of contract on the basis of the improved value of land at a date long after the breach of contract.
338. Are you aware that applications are made under the Crown Lands Alienation Act by persons holding original grants, for the purchase of these reserves? Yes, it is often done. There is one now with respect of land in Sydney, I think, by Mr. Butler.
339. Those persons who are now making applications to purchase these reserves, when they originally purchased the land of course thought it was granted to them to high-water-mark? I cannot say what they thought; I can only speak as to the deed.
340. However it is the fact that persons do apply to purchase these reserves? Yes.
341. Previous to the passing of the Crown Lands Alienation Act there was no power vested in the Crown by which these lands could be disposed of to the original purchaser? Not without competition.
342. Could they sell this land to any person besides the original grantee? I cannot speak to that without consideration; that involves a legal question.
343. *Mr. R. Stewart.*] I suppose the parties had no means of claiming until after the Crown Lands Alienation Act was passed? It was not their property—it was never given to them—it was never taken from them—as it was never theirs.
344. *Mr. Wisdom.*] This occurred before the passing of the Crown Lands Alienation Act? Long before that; the injury sustained was the receiving 14 acres, instead of 21.
345. *Mr. Stewart.*] In fact they only held the land upon sufferance? Yes, and the Crown never interfered with them.
346. *Mr. Wisdom.*] Mr. Vindin was the arbitrator for Messrs. Scott and Croasdill? Yes; and an attorney at Maitland, Mr. Colquhoun, was the umpire.
347. Have you had any conversation with Mr. Vindin about the arbitration? I think I had, some time after the arbitration.
348. Did you understand from him that in giving their award, this $7\frac{1}{2}$ acres was taken into consideration? I did.
349. Did Mr. Biden tell you that Mr. Vindin had also taken this matter into consideration? Mr. Biden first told me. I asked him in what way he had arrived at this sum, and he told me. I afterwards asked Mr. Vindin if it was so, and he said it was.
350. There was no reference to the umpire—the arbitrators agreed among themselves? I know we paid him his fees; I do not know whether he joined in it.
351. Was there much said in the course of the arbitration about this $7\frac{1}{2}$ acres? I was not present. Mr. Isaacs appeared on behalf of the Crown. I understood from Mr. Biden that Mr. Bradley commented very

J. Williams, Esq. very strongly on the injury his clients sustained in having those $7\frac{1}{2}$ acres withdrawn from arbitration, and that therefore the arbitrators thought it right to take it into account in making up the amount, and they did so.

4 Nov., 1869. 352. I suppose they did not tell you what amount they would have given for the 14 acres? I cannot say as to that. I think Mr. Biden has the calculations. In speaking to me he referred to some papers he had. 353. *Mr. Farnell.*] Do you not think it would be the proper course for the Committee to examine Mr. Biden and the other arbitrator? I think so; it will enable the Committee to see in what way the amount awarded was determined upon.

THURSDAY, 11 NOVEMBER, 1869.

Present:—

MR. J. CAMPBELL, | MR. FARNELL.

BENJAMIN LEE, ESQ., IN THE CHAIR.

H. B. BRADLEY, Esq., appeared on behalf of the Petitioner.

George Vindin, Esq., examined:—

G. Vindin, Esq. 354. *Chairman.*] You were appointed one of the arbitrators in the matter of Mr. Alexander Walker Scott's claim against the Commissioner for Railways? As arbitrator in the matter of the Grammar School Trustees *v.* the Commissioner for Railways, in June, 1868.

11 Nov., 1869. 355. For certain lands taken for railway purposes in the town of Newcastle? Yes.

356. What was the matter submitted to the arbitrators in that case; what was the area of land for which compensation was sought? The area of the whole of the land was 20 acres 3 roods 20 perches; but we were instructed that we were only to consider as to the value of 16 acres 28 perches, and that the disputed portion of land, being the 100 feet above high-water-mark, would be arranged for in some other way.

357. Was that award made by the umpire or by the arbitrators? By the arbitrators.

358. In making that award did the arbitrators take into consideration the circumstances outside the matter of the 16 acres 28 perches? They did not. We were instructed in the opening address of the counsel that we had nothing to do with that. Here is the award as agreed upon by us:—

16 acres 28 perches, at £375	...	...	...	...	£6,065	12	6
Interest on land, at the rate at which the Bishop said it was	...	...	...	...
let—£100 per annum, and 8 per cent. interest added for	...	...	...	...
fourteen years	...	...	...	...	2,240	0	0
For compulsory sale	...	...	...	...	1,576	8	2
					£9,822	0	8

359. I see here a memorandum as to the matter just referred to—"Difference between this and 16 acres 28 perches caused by reserve of 100 feet from high-water-mark?" We were told we were not to take that 100 feet above high-water-mark into consideration at all. We can only give compensation for 16 acres 28 perches, although we can go into the question of severance.

360. What do you consider the value of that remaining portion of the land—the water-frontage—the present market value? That is a matter that would require some little consideration.

361. You have a tolerably good idea of the value of property at the present time at Newcastle? I take it that the value at that time should be estimated.

362. I want to know both your idea of the value now and at the date of the arbitration? ———

363. In the evidence given before you at the time of the arbitration was it clearly shown that the Government had sold the whole area of the land to the Trustees of the Grammar School? If I recollect rightly it was shown by a printed document that Mr. Rae produced—a report of the Railway Commissioner I think it was—that the whole area, amounting to 21 acres 3 roods 20 perches, was transferred to the Commissioner for Railways, and it was then stated by the Solicitor General, I think, that the difference between this and the 16 acres 28 perches was caused by this reserve of 100 feet.

364. Then in making your final award in favour of the Commissioner, for the sum of £9,822 0s. 8d., you did not take into account all the circumstances of the case, but simply dealt with the matter placed before you? We simply dealt with the matter referred to us of the 16 acres 28 perches, leaving the 5 acres out of the question altogether.

365. *Mr. Farnell.*] You were instructed not to take into consideration this reserve, and in awarding this amount of money you did not include it at all? We did not; you will observe that the award was made at so much per acre, and that only 16 acres were taken into account.

366. *Mr. Campbell.*] Do you look upon this water-frontage as land that ultimately will become very valuable? I should fancy that ultimately it must become very valuable—water-frontage is so circumscribed at Newcastle.

367. The expenditure of a small amount in improving it would make it very valuable? No doubt it would make it very valuable in time to come.

368. *Mr. Bradley.*] It was stated by the Crown Solicitor upon the occasion of the last meeting of the Committee that you had informed him that the arbitrators had taken into account, in awarding the amount mentioned, the value of the 100 feet above high-water-mark as well as that to which your attention had been specially directed? I have no recollection of having had any conversation with Mr. Williams on the matter; I certainly could not have told him so, as I had a clear and distinct recollection of how we arrived at the decision before I turned to my notes; and in fact Mr. Biden and myself were so near in our estimate that we did not think it worth while to trouble the umpire, and agreed to the award.*

* NOTE (on revision):—I wish to add: I do remember having a conversation with the Crown Solicitor at Morpeth. He asked me if Mr. Biden and I agreed as to our award. I said, "Yes, we did not require to call in the umpire; that Mr. Biden and I put on paper the amount we deemed fair; the difference was so small we agreed to decide without calling in the umpire." My conversation with the Crown Solicitor was in general terms.

**MR. ALEXANDER WALKER SCOTT—LAND TAKEN BY
HUNTER RIVER RAILWAY.**

APPENDIX.

(To Evidence given by John Rae, Esq., 21 October, 1869.)

A 1.

H. Kerrison James to The Chairman of the Board of Directors of the Hunter River Railway Company.

Sydney, 29 July, 1854.

Sir,

Referring to the notice served upon A. W. Scott, Esq., of Ash Island, Newcastle, conformably with the provisions of "An Act to establish and incorporate a Company to be called the Hunter River Railway Company" to the effect that the Company requires the surrender, for purposes of the said Act, of—

"All those parcels of land, with houses and outbuildings, set out for the purposes of the Hunter River Railway, situated in the parish of Newcastle, in the county of Northumberland, and containing by admeasurement 20 acres 2 roods and 6 perches, or thereabouts, and more particularly delineated in the plans thereof above referred to,—"

I am authorized by Mr. Scott to inform you that the title deeds of the said estate are in my possession, and that the same may be inspected by the Solicitor to the Company at any time; and that Mr. Scott, as trustee of this estate, values the same and will claim compensation at the rate of £1,500 (fifteen hundred pounds) per acre, free and clear of all deductions whatsoever for compensation to present lessees, occupants, or otherwise.

I have, &c.,
H. KERRISON JAMES.

A 2.

Messrs. Holden & M'Carthy to The Crown Solicitor.

Sydney, 5 June, 1860.

Hunter River Railway.—In the matter of the Honeysuckle Point Land.

Sir,

Referring you to our letter on this subject of 30th August, 1859, we beg to inquire whether any decision has been arrived at as to the course of action intended to be taken by the Government to settle the claim for compensation in this case?

We have, &c.,
HOLDEN & M'CARTHY.

A 3.

Messrs. Holden & M'Carthy to The Crown Solicitor.

Sydney, 6 May, 1862.

In the matter of the Honeysuckle Point Land—Hunter River Railway.

Sir,

Referring to previous correspondence on this subject, and in particular to our letters to you of 30th August, 1859, and 5th June, 1860, we have the honor to renew the inquiries thereby made as to the course intended by the Government in reference to the award of compensation in this case.

This matter has now been pending since the year 1854, and the delay in its settlement has withheld from its proper application a considerable fund, which would have been available for the building and endowment of a Grammar School at Newcastle.

We have, &c.,
HOLDEN & M'CARTHY.

A 4.

Messrs. Holden & M'Carthy to The Commissioner for Railways.

Castlereagh-street, Sydney,
2 July, 1862.

Sir,

On the 6th May last we recalled to the attention of the Crown Solicitor a letter we addressed to him on the 24th April, 1861, on the subject of a claim of the Trustees of the Newcastle Grammar School to compensation for land appropriated as the site of the Railway Terminus at Honeysuckle Point.

The Crown Solicitor informs us in answer, that both our letters were referred to you, but that he has not been instructed to communicate with us in reply, and suggests that it may be advisable to communicate with you direct.

This we now do accordingly, referring not only to the letters above adverted to, but to our previous correspondence extending over many years, which will, we think, sufficiently show that the delay in settling this matter does not rest with us or with our clients, and that we have urgent grounds for requesting that it may not be yet further continued.

We have, &c.,
HOLDEN & M'CARTHY.

I certify that this is a true copy of the original letter, as extracted from the records of this office.—JOHN RAE, Public Works Department, 21/10/69.

A 5.

H. B. Bradley, Esq., to The Chief Clerk, Railway Branch, Department of Public Works.

Margaret-street,
Sydney, 3 April, 1866.

Sir,

Adverting to the subject of the claim of Messrs. Scott and Croasdill, upon the Commissioner for Railways, for land at Newcastle, taken for railway purposes, and herein to your letter of 4th of August, 1862, addressed to Messrs. Holden and M'Carthy, I am now instructed, as the Solicitor for Messrs. Scott and Croasdill, to request that you will have the goodness to state the amount which the Commissioner is willing to pay for the freehold and inheritance of the land taken, and for the damages sustained by the taking of the same.

The land taken is described in four grants from the Crown to James Mitchell, as being—

a.	r.	p.
10	2	0
9	0	0
1	1	20
1	0	0
21	3	20

which are in their entirety conveyed to my clients. The land taken is stated to be only 20 acres 2 roods and 6 perches. I presume the Commissioner takes the whole, and that a small triangular piece adjoining Dangar has escaped measurement or consideration by your surveyor.

I have, &c.,
H. B. BRADLEY.

Appd. 5/4/66.—J.R.
Mr. Cowlshaw. B.C., 5/4/66.

A 6.

H. B. Bradley, Esq., to The Commissioner for Railways.

Margaret-street,
Sydney, 27 July, 1866.

Sir,

Acknowledging the receipt of your letter of the 24th instant, in which you inform me that "as the readiest means of bringing the matters in dispute" between the Trustees of the Newcastle Grammar School and yourself, "to an issue, so as to ascertain the amount of *damage done to the land* in question, William Dean, of this city, Esquire, has been appointed to act as arbitrator on behalf of the Government,"—I am desirous of receiving information upon two points; the first is,—whether the arbitrator appointed is the auctioneer of that name? the second,—whether it is intended (as it is to be inferred from the language of your letter) to raise any question on the matter of fact, that the whole estate of my clients was taken for railway purposes, as it is obviously essential that the Trustees should be informed as to what they are going to arbitrate.

I have, &c.,
H. B. BRADLEY.

A 7.

H. B. Bradley, Esq., to The Commissioner for Railways.

64, Margaret-street,
Sydney, 16 September, 1867.

Sir,

In the matter of the land taken from the Trustees of the Newcastle Proprietary School for railway purposes, in consequence of the former reference having become inoperative through the decease of the late Mr. William Dean, the trustees have appointed George Vindin, of West Maitland, Esquire, arbitrator on their part, for the purpose of determining the amount of compensation to be paid to them in respect of the land taken, and for all damages sustained by reason of the exercise of the powers vested by law in the Commissioner for Railways, and have directed me to notify the fact to you and request that you will proceed to appoint an arbitrator to act on your behalf, in terms of the Government Railways Act.

I have, &c.,
H. B. BRADLEY,
Solr. for Trustees.

Wrote, notifying appl. 28/9/67.
Mr. Bradley.

A 8.

IN the matter of the land taken from the Trustees of the Newcastle Proprietary School, for railway purposes.

WE do hereby appoint George Vindin, of West Maitland, in the Colony of New South Wales, Esquire, an arbitrator on our part, for the purpose of determining the amount of compensation to be paid to us in respect of the land taken, and for all damages sustained and that may be sustained by us by reason of the execution of the Railway Works and otherwise, by reason of the exercise of the powers vested by law in the Commissioner for Railways. Witness our hands, this eleventh day of September, in the year of our Lord one thousand eight hundred and sixty-seven.

WILLIAM CROSDILL.
A. W. SCOTT.

IN the matter of the arbitration between Alexander Walter Scott and William Croasdill, Trustees of the Newcastle Grammar School and the Commissioner for Railways.

I, GEORGE COLQUHOUN, do solemnly and sincerely declare, that I have no interest, either directly or indirectly, in the property in question, and that I will faithfully and honestly, and to the best of my skill and ability, hear and determine the matters referred to me, under the provisions of an Act, intituled, "*An Act to make more effectual provision for the construction by the Government of Railways in the Colony of New South Wales, and for the regulation of such Railways.*"

GEORGE COLQUHOUN.

Made and subscribed this 8th day of June, 1868, }
before me, at Newcastle,— }

GEO. J. FRANKLAND, J.P.

In the matter of the arbitration between Alexander Walker Scott and William Croasdill, Trustees of the Newcastle Grammar School, and the Commissioners for Railways.

We, the arbitrators appointed in this matter, do hereby nominate and appoint by this writing under our hands, George Colquhoun, as umpire, to decide any matters on which we may differ, or which shall be referred to him under the provisions of the Act, intituled "*An Act to make more effectual provision for the construction by the Government of Railways in the Colony of New South Wales, and for the regulation of the same.*"

GEO. VINDIN.
WM. D. BIDEN.

In the matter of the arbitration between Alexander Walter Scott and William Croasdill, Trustees of the Newcastle Grammar School, and the Commissioner for Railways.

I, GEORGE VINDIN, do solemnly and sincerely declare, that I have no interest, either directly or indirectly, in the property in question, and that I will faithfully and honestly, and to the best of my skill and ability, hear and determine the matters referred to me under the provisions of an Act, intituled "*An Act to make more effectual provision for the construction by the Government of Railways in the Colony of New South Wales, and for the regulation of such Railways.*"

GEO. VINDIN.

Made and subscribed this 8th day of June, 1868, }
before me, at Newcastle,— }

GEO. J. FRANKLAND, J.P.

In the matter of the arbitration between Alexander Walter Scott and William Croasdill, Trustees of the Newcastle Grammar School, and the Commissioner for Railways.

I, WILLIAM DOWNING BIDEN, do solemnly and sincerely declare, that I have no interest, either directly or indirectly, in the property in question, and that I will faithfully and honestly, and to the best of my skill and ability, hear and determine the matters referred to me under the provisions of an Act, intituled "*An Act to make more effectual provision for the construction by the Government of Railways in the Colony of New South Wales, and for the regulation of such Railways.*"

W. D. BIDEN.

Made and subscribed this 8th day of June, 1868, }
before me, at Newcastle,— }

GEO. J. FRANKLAND, J.P.

A 9.

To all to whom these Presents shall come,—

The Commissioner for Railways sends, Greeting :

WHEREAS the Commissioner for Railways, for the purposes of that portion of the Great Northern Railway passing through the County of Northumberland, in the Colony of New South Wales, has taken possession of certain lands situate at Honeysuckle Point, near the City of Newcastle, in the said Colony, described in the plan hereto annexed, coloured red, of which Alexander Walter Scott and William Croasdill, both of Newcastle, Esquires (Trustees of the Newcastle Grammar School) were in possession, and claim to be entitled :

And whereas the said Alexander Walter Scott and William Croasdill claim the sum of thirty-two thousand eight hundred and twelve pounds eight shillings as compensation for the taking of the said land, and for all the damage which they have sustained, or may sustain, by reason of the said works, and the Commissioner for Railways has declined to pay the above-mentioned sum, and is desirous of appointing an arbitrator, so as that the question of disputed compensation in the matter aforesaid may be settled by arbitration, in pursuance of the provisions of the Act of the Governor and Parliament of New South Wales, 22 Victoria, No. 19: Now therefore know ye, that in pursuance of the provisions of the said Act, the Commissioner for Railways doth hereby appoint William Downing Biden, of Singleton, in the said Colony, surveyor, to be arbitrator, on behalf of the Commissioner for Railways, for the purpose of determining the amount of compensation, if any, to be paid by the Commissioner for Railways in respect of the premises: Provided always that nothing herein contained shall be taken as a waiver of the right of the Commissioner for Railways to require the said Alexander Walter Scott and William Croasdill to produce evidence of their title to the said lands, after the making of any award hereunder.

In witness whereof the Commissioner for Railways has hereto set his hand and official seal, at Sydney, in the Colony aforesaid, this twenty-seventh day of September, in the year of our Lord one thousand eight hundred and sixty-seven.

JAMES BYRNES,
Commissioner for Railways.

The Seal of the Commissioner for Railways was }
affixed hereto, in the presence of,— }

R. MOODY, Chief Clerk.

A 10.

In the matter of the arbitration between the Commissioner for Railways and the Trustees of the Newcastle Grammar School.—
(Award.)

To all to whom these Presents shall come—

We the undersigned William Downing Biden of Singleton in the Colony of New South Wales Surveyor and George Vindin of West Maitland in the said Colony Esquire send, Greeting :

WHEREAS the Commissioner for Railways for the purposes of that portion of the Great Northern Railway passing through the County of Northumberland in the said Colony some time since under and by virtue of the provisions of and subject to the enactments contained in an Act of the Governor and Parliament of New South Wales passed in the twenty-second year of the reign of Her present Majesty number nineteen intituled "*An Act to make more effectual provision for the construction by the Government of Railways in the Colony of New South Wales and for the regulation of such Railways*" took possession of certain lands at Honeysuckle Point in the City of Newcastle described in the plan hereunto annexed coloured red: And whereas Alexander Walter Scott and William Croasdill both of Newcastle claim to be entitled to the said land as trustees for the Newcastle Grammar School: And whereas the said Alexander Walter Scott and William Croasdill claimed the sum of thirty-two thousand eight hundred and twelve pounds eight shillings as compensation for the taking of the said land and for all the damages which they had sustained or might sustain by reason of the said works: And whereas the said Commissioner for Railways declined to pay the said sum: And whereas by the twenty-second section of the said Act hereinbefore referred to it was enacted that "If no agreement be come to between the Commissioner and the owners of or parties by this Act enabled to sell and convey or release any lands taken or required for or injuriously affected by the execution of any of the powers hereby granted or any interest in such lands as to the value of such lands or of any interest therein or as to the compensation to be made in respect thereof and if in any such case the compensation claimed shall not exceed one hundred pounds the same shall be settled by two Justices and if the compensation claimed or offered shall exceed one hundred pounds the same shall be settled by arbitrators as hereinafter provided": And whereas in pursuance of the provisions of and in the said recited Act James Byrnes Esquire being then the Commissioner for Railways did on the twenty-seventh day of September one thousand eight

eight hundred and sixty-seven by deed poll under his hand and seal appoint the said William Downing Biden to be arbitrator on behalf of the Commissioner for Railways for the purpose of determining the amount of compensation if any to be paid by the said Commissioner for Railways in respect of the premises: And whereas in pursuance of the provisions of the said recited Act the said Alexander Walter Scott and William Croasdill did on the eleventh day of September one thousand eight hundred and sixty-seven by writing under their hands appoint the said George Vindin as arbitrator on their part for the purpose of determining the amount of compensation to be paid to them in respect of the land taken and for all damages sustained and that might be sustained by them by reason of the execution of the railway works and otherwise by reason of the exercise of the powers vested by law in the Commissioner for Railways: And whereas the said arbitrators before they entered into consideration of any of the matters so referred to them as aforesaid respectively duly made and subscribed in the presence of a Justice duly authorized in that behalf the declaration required by the said statute: And whereas the said arbitrators before they entered upon the matters so referred to them did on the eighth day of June last in pursuance of the said statute by writing under their hands duly nominate and appoint George Colquhoun of West Maitland solicitor to be the Umpire in the matter of the said arbitration: And whereas the said George Colquhoun duly made and subscribed in the presence of a Justice duly authorized in that behalf the declaration required by the said statute: Now know ye that we the said William Downing Biden and George Vindin having taken upon ourselves the burthen of the reference and having before entering upon or taking into consideration any of the matters referred to us respectively made and subscribed in the presence of a Justice duly authorized in that behalf the declarations required by the said Acts which declarations are hereunto annexed and having been attended by the parties and their witnesses and having heard and considered the allegations and proofs of the respective parties and having viewed the said lands and buildings do make this our award in writing of and concerning the premises in manner following that is to say—We do award settle order and determine that there is due from the said Commissioner for Railways unto the said Alexander Walter Scott and William Croasdill and that the said Commissioner for Railways shall pay unto the said Alexander Walter Scott and William Croasdill the sum of nine thousand eight hundred and twenty-two pounds and eight pence as and for the purchase money and compensation for the interest of the said Alexander Walter Scott and William Croasdill in respect of the said land so taken by the said Commissioner for Railways and for all damages sustained and that may be sustained by the said Alexander Walter Scott and William Croasdill by reason of the execution of the railway works and otherwise by reason of the exercise of the powers vested by law in the said Commissioner for Railways: And whereas the said sum of nine thousand eight hundred and twenty-two pounds and eight pence which we have above awarded as such compensation is more than one-fourth less than the sum claimed by the said Alexander Walter Scott and William Croasdill whereby the costs of and incident to this arbitration are to be borne and paid by the said Alexander Walter Scott and William Croasdill: We further award adjudge and direct the said Alexander Walter Scott and William Croasdill to pay the said costs and we do further award and adjudge and settle the amount of the costs of this arbitration and incident thereto incurred by the said parties: And the amount of the costs of and incident to this award at the several sums hereunder mentioned that is to say—

Amount of law costs incurred by the said Alexander Walter Scott and William Croasdill in reference to this arbitration the sum of two hundred and twenty-four pounds nine shillings and sixpence.

Amount of law costs incurred by the said Commissioner for Railways in reference to this arbitration the sum of two hundred and eighteen pounds eighteen shillings and sixpence.

Amount of costs of and incident to this award—

William Downing Biden arbitrator's fee the sum of sixty pounds.

William Downing Biden necessary expenses incurred the sum of fifteen pounds.

George Vindin arbitrator's fee the sum of sixty pounds.

George Vindin necessary expenses incurred the sum of three pounds seven shillings.

George Colquhoun umpire's fee the sum of sixty pounds.

George Colquhoun necessary expenses incurred the sum of two pounds.

Costs of drawing and completing this award the sum of ten pounds and ten shillings.

As witness our hands and seals this twenty-fourth day of June in the year one thousand eight hundred and sixty-eight.

WM. D. BIDEN.

GEO. VINDIN.

Signed sealed and delivered by the said William Downing Biden }
and George Vindin in the presence of— }

ROBT. COLQUHOUN, Solicitor, Maitland.

A 11.

The Chief Clerk, Railway Branch, Department of Public Works, to The Crown Solicitor.

Department of Public Works,
Railway Branch,
Sydney, 6 September, 1860.

In *re* Honeysuckle Point Property—Claim of Trustees of Newcastle Grammar School.

Sir,

In reference to your letter of the 9th June last and subsequent correspondence, respecting a letter received by you from Messrs. Holden & M'Carthy, requesting to know if the Trustees "will be allowed in the event" of their acquiescing in the reduction of the land taken for the Great Northern Railway, to make an entirely new claim for compensation on the merits of the case as it will then stand, &c.,—I am directed by the Commissioner to inform you, that before the proposition of Messrs. Holden & M'Carthy can be entertained by the Commissioner, it will be necessary that they should state what terms the Trustees will consent to if the Commissioner should surrender so much of the land as is not required for Railway purposes.

I have, &c.,

R. MOODY,
Chief Clerk.

A 12.

The Chief Clerk, Railway Branch, Department of Public Works, to Messrs. Holden & M'Carthy.

Department of Public Works,
Railway Branch,
Sydney, 4 August, 1862.

Gentlemen,

In reply to your letter of 2nd ultimo, respecting a claim of the Trustees of the Newcastle Grammar School to compensation for land taken for Railway purposes, and referring to previous correspondence as to the quantity of land actually required for the Railway,—I am directed by the Commissioner to inform you that he has laid the whole matter before the Honorable the Secretary for Public Works, who has decided that the whole of the land taken must be retained for Railway purposes.

I have, &c.,

R. MOODY,
Chief Clerk.

(To Evidence given by Alexander Walker Scott, Esq., 28 October, 1869.)

B.

The Principal Under Secretary to Messrs. Bradley & Son.

Colonial Secretary's Office,
Sydney, 28 August, 1868.

Gentlemen,

In acknowledging the receipt of your letter of the 12th instant, covering a Memorial from Messrs. Croasdill and Scott, Trustees of the Newcastle Proprietary Grammar School, on the subject of their having been deprived of certain land,—I am directed by the Colonial Secretary to state, that it appears on reference to the Department of Lands that the land alluded to in the Memorial has been resumed by the Government for public purposes in terms of the deed; and that the Government do not consider the Memorialists entitled to any consideration in consequence of such resumption.

I have, &c.,
HENRY HALLORAN.

(To Evidence given by H. B. Bradley, Esq., 28th October, 1869.)

C 1.

H. B. Bradley, Esq., to the Chief Clerk, Railway Branch, Department of Public Works.

Margaret-street, Sydney,
3 April, 1866.

Sir,

Adverting to the subject of the claim of Messrs. Scott and Croasdill, upon the Commissioner for Railways, for land at Newcastle, taken for Railway purposes, and herein to your letter of 4th of August, 1862, addressed to Messrs. Holden and M'Carthy, I am now instructed, as the solicitor for Messrs. Scott and Croasdill, to request that you will have the goodness to state the amount which the Commissioner is willing to pay for the freehold and inheritance of the land taken and for the damages sustained by the taking of the same.

The land taken is described in four grants from the Crown to James Mitchell as being—

a.	r.	p.
10	2	0
9	0	0
1	1	20
1	0	0
<hr/>		
21	3	20

which are in their entirety conveyed to my clients. The land taken is stated to be only 20 acres 2 roods 6 perches. I presume the Commissioner takes the whole, and that a small triangular piece adjoining Dangar, has escaped measurement or consideration by your surveyor.

I have, &c.,
H. B. BRADLEY.

C 2.

The Chief Clerk, Railway Branch, Department of Public Works, to H. B. Bradley, Esq.

Department of Public Works,
Railway Branch,
Sydney, 16 August, 1866.

Newcastle Grammar School Trustees Land Claim.

Sir,

In reply to your letter of 27th ultimo, requesting to be informed,—

1st.—Whether the arbitrator appointed is the auctioneer of that name; and—

2nd.—Whether it is intended to raise any question on the matter of fact that the whole estate was taken for railway purposes,—I am directed by the Commissioner to inform you—

1st.—That the arbitrator appointed is Mr. William Dean, of Sydney, auctioneer; and—

2nd.—That it is admitted that the whole of the estate of your clients has been taken; that is, the whole of the Honeysuckle Point, excepting the strip of land extending 100 feet from high-water-mark, which has been reserved to the Crown in the grant, and therefore cannot be considered as taken from your clients.

I have, &c.,
R. MOODY,
Chief Clerk.

SEPARATE APPENDIX A.

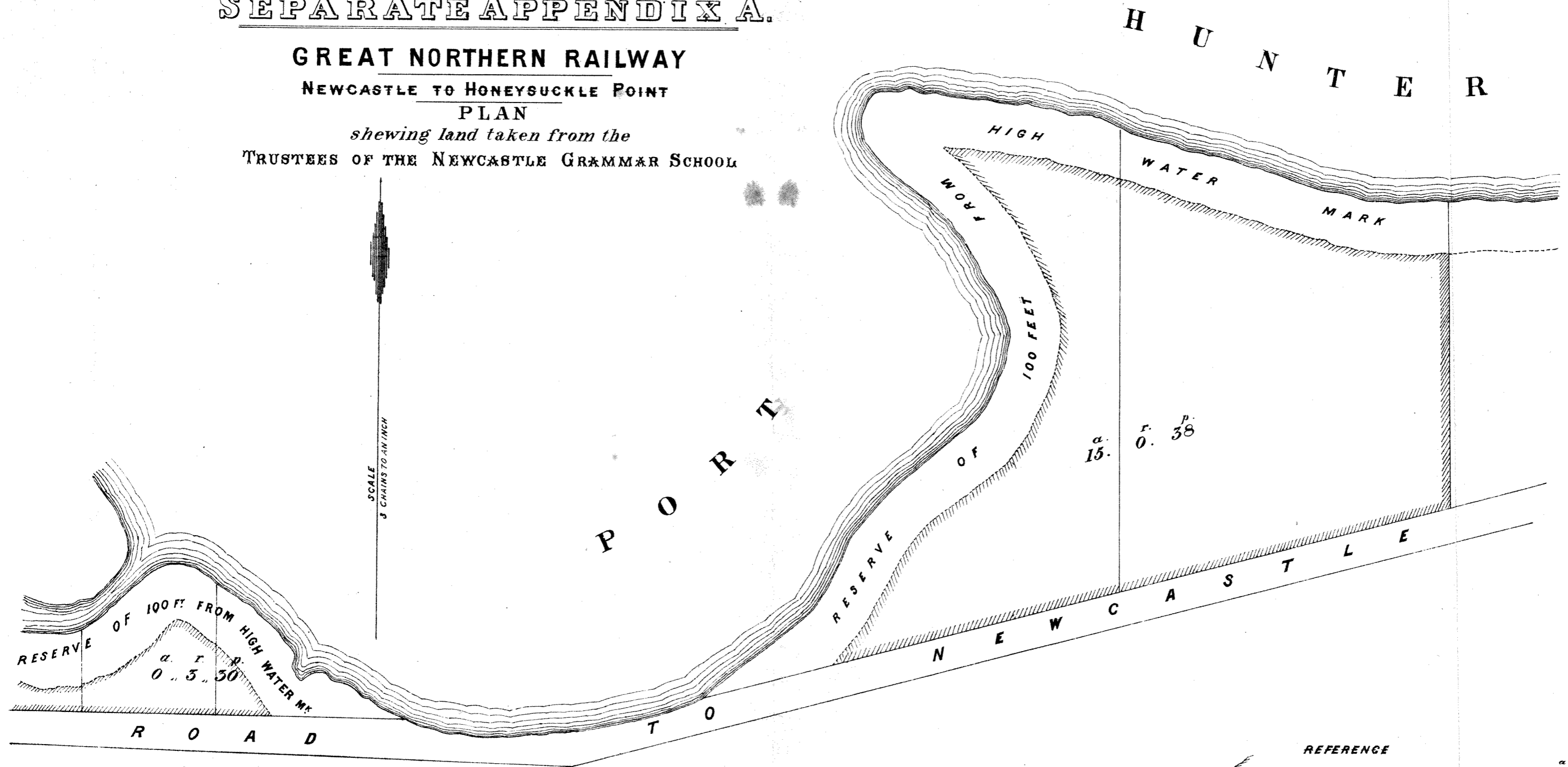
GREAT NORTHERN RAILWAY

NEWCASTLE TO HONEYSUCKLE POINT

PLAN

shewing land taken from the

TRUSTEES OF THE NEWCASTLE GRAMMAR SCHOOL



(Sig 186)

HANDED IN BEFORE THE SELECT COMMITTEE
ON PETITION OF A.W. SCOTT 21ST OCT 1869
(SIGNED) BENJAMIN LEE CHAIRMAN.

Litho & Printed at the Surveyor General's Office Sydney, Feb^r 1870.

REFERENCE
THE PORTIONS SHOWN THUS  ARE COLORED RED ON THE ORIGINAL & CONTAIN 16.0.28

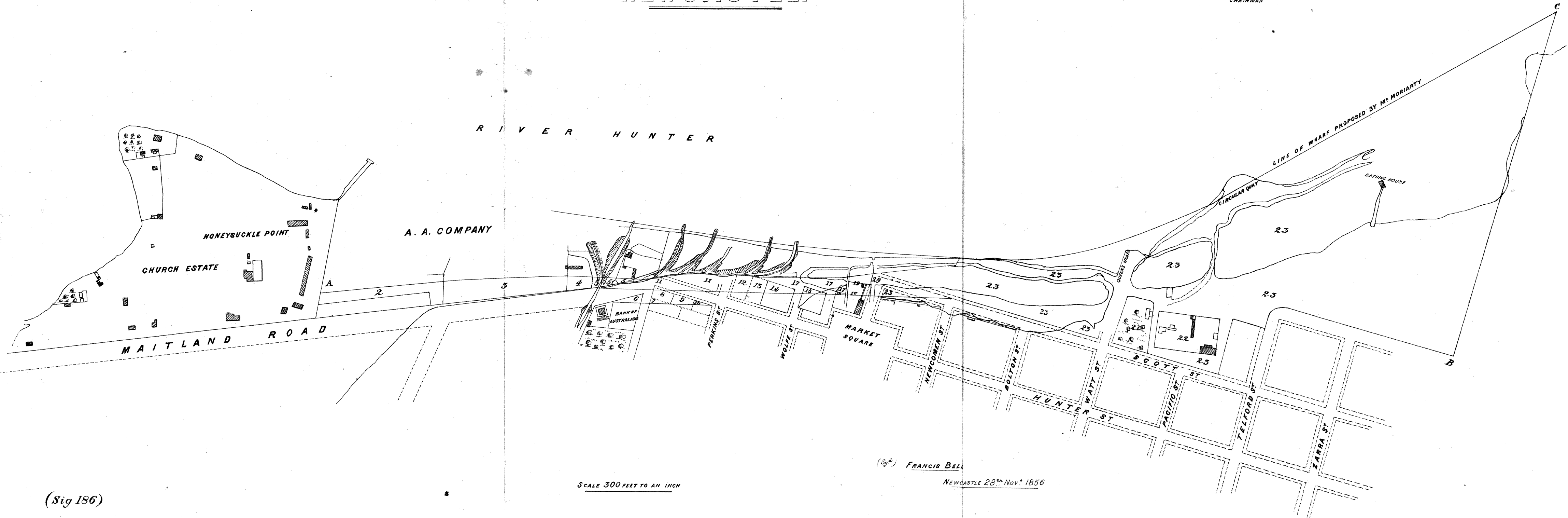
SEPARATE APPENDIX. B.

PLAN OF EXTENSION INTO NEWCASTLE.

HANDED IN BEFORE THE SELECT COMMITTEE
ON PETITION OF A.W. SCOTT 21ST OCT 1869.

BENJAMIN LEE CHAIRMAN

R I V E R H U N T E R



(Sig 186)

SCALE 300 FEET TO AN INCH

(Sg^d) FRANCIS BELL

NEWCASTLE 28TH NOV. 1856

1869.

LEGISLATIVE ASSEMBLY.
NEW SOUTH WALES.

PROGRESS REPORT FROM THE SELECT COMMITTEE

ON THE

CUMBERLAND AND CAMDEN BATHURST-BURR
AND THISTLE BILL ;

TOGETHER WITH THE

PROCEEDINGS OF THE COMMITTEE,

MINUTES OF EVIDENCE,

AND

APPENDIX.

ORDERED BY THE LEGISLATIVE ASSEMBLY TO BE PRINTED,
12 *November*, 1869.

SYDNEY : THOMAS RICHARDS, GOVERNMENT PRINTER.

1869.

**EXTRACTS FROM THE VOTES AND PROCEEDINGS OF THE
LEGISLATIVE ASSEMBLY.**

VOTES No. 16. FRIDAY, 22 OCTOBER, 1869.

10. Cumberland and Camden Bathurst-burr and Thistle Bill :—Mr. Roberts moved, “That” this Bill be now read a second time.
Debate ensued.
Mr. Lee moved, That the Question be amended, by the omission of all the words after the word “That,” with a view to insert the following words, viz. :—“this Bill be referred to a Select Committee for consideration and report.
“(2.) That such Committee consist of the following Members, viz. :—Mr. Forster, Mr. Burns, Mr. Lyons, Mr. Lackey, Mr. Roberts, Mr. Morrice, Mr. Hoskins, Mr. Farnell, Mr. Tunks, and “the Mover, and have power to send for persons and papers.”
Debate continued.
Question,—That the words proposed to be omitted stand part of the Question,—put and negatived.
Question,—That the words proposed to be inserted be so inserted,—put and passed.
Whereupon Question,—(1.) That this Bill be referred to a Select Committee for consideration and report.
(2.) That such Committee consist of the following Members, viz. :—Mr. Forster, Mr. Burns, Mr. Lyons, Mr. Lackey, Mr. Roberts, Mr. Morrice, Mr. Hoskins, Mr. Farnell, Mr. Tunks, and the Mover, and have power to send for persons and papers,—put and passed.

VOTES No. 18. WEDNESDAY, 27 OCTOBER, 1869.

2. Member of Legislative Council as Witness :—Mr. Roberts moved, *without previous Notice*, That the following Message be carried to the Legislative Council :—
MR. PRESIDENT,
The Legislative Assembly having appointed a Select Committee to consider and report upon the “Cumberland and Camden Bathurst-burr and Thistle Bill,” and that Committee being desirous to examine the Honorable Sir William Macarthur, Knight, Member of the Legislative Council, in reference thereto, requests that the Legislative Council will give leave to its said Member to attend and be examined by the said Committee, on such day and days as shall be arranged between him and the said Committee.
*Legislative Assembly Chamber,
Sydney, 27th October, 1869.* Speaker.
Question put and passed.

VOTES No. 27. FRIDAY, 12 NOVEMBER, 1869.

5. Cumberland and Camden Bathurst-burr and Thistle Bill :—Mr. Lackey, as Chairman, brought up a Progress Report from, and laid upon the Table the Minutes of Proceedings of, and of Evidence taken before, the Select Committee for whose consideration and report this Bill was referred on 22nd October, 1869, together with Appendix.
Ordered to be printed.

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1869.

CUMBERLAND AND CAMDEN BATHURST-BURR AND THISTLE BILL.

PROGRESS REPORT.

THE SELECT COMMITTEE of the Legislative Assembly appointed on 22nd October, 1869,—“*with power to send for persons and papers,*—for whose consideration and report was referred the “*Cumberland and Camden Bathurst-burr and Thistle Bill,*”—have agreed to the following Progress Report :—

Your Committee beg to lay upon the Table the Evidence taken in this matter, from which it will be found that valuable information has been given as to the necessity for some legislation with a view to the destruction of the plants indicated.

JNO. LACKEY,
Acting Chairman.

*No. 3 Committee Room,
Sydney, 12 November, 1869.*

PROCEEDINGS OF THE COMMITTEE.

WEDNESDAY, 27 OCTOBER, 1869.

MEMBERS PRESENT :—

Mr. Farnell,	|	Mr. Hoskins,
Mr. Roberts,	|	Mr. Lee.

Mr. Roberts called to the Chair.

Committee deliberated.

Clerk directed to summon John M. Antill, Esq.,—J. H. Neale, Esq., M.P.,—and Mr. James H. Balsh,—to give evidence at next meeting,—and Sir W. Macarthur, Knight, M.L.C.,—Clement Lester, Esq.,—and J. Badgery Esq.,—to give evidence on Wednesday next.

Committee deliberated.

Motion made (*Mr. Farnell*), and *Question*,—"That the Chairman be requested to move the House, that a Message be sent to the Legislative Council, asking leave for the Honorable Sir William Macarthur, Knight, M.L.C., to attend and be examined by this Committee,"—*agreed to*.

[Adjourned to Friday next, at *Eleven* o'clock.]

FRIDAY, 29 OCTOBER, 1869.

MEMBERS PRESENT :—

Mr. Roberts in the Chair.

Mr. Morrice,	|	Mr. Lackey,
Mr. Farnell,	|	Mr. Burns,
Mr. Hoskins,	|	Mr. Lyons.

Printed copies of the Cumberland and Camden Bathurst-burr and Thistle Bill before the Committee.

Clerk submitted letter from J. M. Antill, Esq., stating his inability to attend this meeting,—which was read by the Chairman.

Mr. J. H. Balsh called in and examined.

Witness withdrew.

John Morrice, Esq., M.P., a Member of the Committee, examined in his place.

Ordered,—That J. M. Antill, Esq., be summoned for Wednesday.

[Adjourned to Wednesday next, at *Eleven* o'clock.]

WEDNESDAY, 3 NOVEMBER, 1869.

MEMBERS PRESENT :—

Mr. Lackey,	|	Mr. Hoskins,
Mr. Morrice,	|	Mr. Lyons.

In the absence of the Chairman, Mr. Lackey took the Chair.

J. A. Badgery, Esq., called in and examined.

Witness withdrew.

Ordered,—That Sir W. Macarthur and W. R. Antill, Esq., be summoned for next meeting.

[Adjourned to Tuesday next, at *Eleven* o'clock.]

TUESDAY, 9 NOVEMBER, 1869.

[In consequence of the House not sitting this day (Prince of Wales's Birth-day), the meeting of the Committee was postponed, by direction of the Chairman, until Friday next, at *Eleven* o'clock.]

FRIDAY,

FRIDAY, 12 NOVEMBER, 1869.

MEMBERS PRESENT:—

Mr. Lackey,	|	Mr. Farnell,
Mr. Hoskins,	|	Mr. Lee.

In the absence of the Chairman, Mr. Lackey took the Chair.
Sir William Macarthur, Knt., M.L.C., called in and examined.

Witness withdrew.

Committee deliberated.

Ordered,—That letter from C. Lester, Esq., referring to the Bill under consideration, and letter from W. R. Antill, Esq., also referring to the Bill, be appended. (*Vide Appendix A and B.*)

Acting Chairman submitted Progress Report.

Same read and agreed to.

Acting Chairman to report to the House.

LIST OF WITNESSES.

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1869.

LEGISLATIVE ASSEMBLY.
NEW SOUTH WALES.

MINUTES OF EVIDENCE

TAKEN BEFORE

THE SELECT COMMITTEE

ON THE

CUMBERLAND AND CAMDEN BATHURST-BURR AND
THISTLE BILL.

FRIDAY, 29 OCTOBER, 1869.

Present:—

MR. ROBERTSON,
MR. LACKEY,
MR. MORRICE,

MR. FARNELL,
MR. BURNS,
MR. HOSKINS.

MR. LYONS.

R. H. ROBERTS, Esq., IN THE CHAIR.

Mr. James Henry Balsh called in and examined:—

1. *Chairman.*] Where do you live? At Wingecarribee.
2. Are you in any business? I am a farmer.
3. I suppose you are aware that a Bill has been brought in to provide for the destruction of the Bathurst-burr and certain thistle plants in the counties of Cumberland and Camden? Yes.
4. Can you give the Committee any information in reference to the spread of the thistle in the district in which you reside, and whether the plant is a valuable forage plant or not? I consider it a plant very injurious to the district. They came first in one's and two's, but now there are acres and acres covered with thistles. I may mention one particular place in the very centre of the district, belonging to the Hindmarshes—five brothers—who selected 1,600 acres in one block. They fulfilled their three years in 1865, and since that time* the land has been almost abandoned. I dare say there are two hundred acres of thistles on the ground at the present moment, from which the seeds are spread in every direction by the wind all over the country. The roads are now getting covered with thistles, and if it is allowed to go on, the whole district will be covered. People who are residents in the district are anxious to destroy them, but the seed from these places belonging to non-residents is continually restocking the ground.
5. Do you think it is desirable there should be some legislation in the matter, in order to ensure a united effort for their eradication? I certainly do.
6. You do not consider this plant a valuable forage plant in your district? No, I consider it very injurious.
7. *Mr. Lackey.*] How long have you been in the Camden district? Seven years.
8. Do you cultivate there? Yes.
9. Were these plants spread about the district when you first went to live there? No; the first year I never saw any, the second year it was a rare thing to see a plant of them, but now you can see acres of them.
10. Are they to be found in many parts of the district, or confined to any particular part? They are spread over the district, but many people take great pains in cutting them down.

11.

* NOTE (on revision):—A portion of the land,—referring to Mr. W. Hindmarsh's property. The other brothers have some tenants on the land.

Mr. J. H.
Balsh.

29 Oct., 1869.

- Mr. J. H. Balsh.
29 Oct., 1869.
11. You allude to the Scotch thistle? Yes; there is another one there which is not so injurious—the spotted thistle.
 12. Has the result of your observation led you to the conclusion that these thistles are only destructive in cultivated land, or in cultivated and uncultivated land both? In both. They are to be found where the bush is thin, or at the edges of the bush. Wherever you fell a piece of bush the thistle will spring up; in fact, I am not now felling any for fear of the thistles. I would rather clear a piece of bush than clear the thistles.
 13. Have any steps been taken by yourself or any of your neighbours to remedy this evil? Yes, many of us have tried to destroy them. I have myself employed people to cut them up and put salt upon the roots; I find that the most effectual way of killing them. If you cut them off they will shoot from every bit of root that is left, but by cutting them down with the hoe and dropping a little salt into the heart of them, it kills them.
 14. You think if that practice were generally adopted the plant would be entirely destroyed? Yes.
 15. Does the result of your experience lead you to believe that this plant would extend into districts of a different character to your own? Yes, the seed is carried about for long distances and in every direction by the wind. On one occasion I was standing talking to a person near Mr. Throsby's mill, 10 or 11 miles from Wingecarribee, when I saw the thistle-down flying about; the person I was talking to said it came from Wingecarribee whenever the wind blew from that direction. Illawarra lies exactly under us, and whenever the westerly winds prevail it goes down there.
 16. Do you think the plant is likely to take root in drier districts than yours? In our district every seed will grow, but in Illawarra and other districts which are drier, possibly many of them may not do so.
 17. Have you the Bathurst-burr in your neighbourhood? No, I have not seen the Bathurst-burr there.
 18. Mr. Farnell.] You think legislation is necessary for the purpose of eradicating these thistles? I do.
 19. Have you seen the Bill introduced to the House? Yes, I have seen it in the newspaper.
 20. Have you paid any particular attention to the various clauses of that Bill? I did not pay any very great attention to it, but it appeared to me to be effectual.
 21. However, so far as your opinion goes, all that you would require would be sufficient legislation to compel your neighbour to keep his land clean? Yes. I do not think last year I allowed one thistle to seed on my farm, but now it is literally covered with them. This year I could have got a shovel and shovelled the seed up like snow from the ground, when the wind was blowing from the Hindmarshes' land.
 22. Do you know how long the seed lies on the ground before it germinates? I should think, judging from my own place where I felled the timber and the fire ran that it must remain some time.
 23. You have spoken of destroying the thistles by cutting them down and putting salt on the roots—Is not that a very expensive way? Not particularly expensive; it is rather tedious work, but it effectually kills them, whereas if you cut them off and do not salt them, every bit of the root will send out shoots—five or six for one.
 24. Do you know of any other weeds or plants that are injurious to cultivation? Not in that district. I have seen the cotton plant, but they are mostly destroyed.
 25. Have you any brier? No.
 26. Have you seen the brier in any other locality? I have seen them at Sutton Forest.
 27. Do you think it necessary to legislate for the eradication of the sweet-brier? I think it would be a good thing. I have them in my own garden, but I cut them down every year before the seed dries. I have the smell of them without their being any injury to the farm whatever. I never allow them to seed.
 28. Do you think it necessary to legislate with reference to all kinds of weeds, so that every man should be bound to keep his farm clean? I hardly know that I should go so far as that. I should have no hesitation about thistles, and I certainly think, from what I know, that the sweet-brier is a great nuisance.
 29. Is not a weed called the dock very injurious and hard to eradicate? Yes.
 30. Do you think legislation necessary in reference to that? I certainly think it would be. It is a very bad weed is the dock, and very difficult to get rid of.
 31. Chairman.] I believe the process you have spoken of kills it—the application of salt? Yes, I believe it does, but I never tried it.
 32. Mr. Morrice.] Do you know how many kinds of thistles there are? Only the two kinds—the Scotch thistle and the spotted thistle.
 33. Is there not a smaller kind called the milk thistle? Yes; they are very good for cattle. You mean what we call the milk or sow thistle. Cattle are very fond of it, and it is always good ground it grows on.
 34. You would not recommend that that should be destroyed? Not by any means.
 35. You are not much accustomed to the sweet-brier? No, I have not seen much of it.
 36. Your district is too young to have them? Yes.
 37. Have you seen large fields covered with them at Sutton Forest? Yes.
 38. Do you think it necessary there should be some means taken to keep them down? I think it would be a very good plan.

John Morrice, Esq., M.P., a Member of the Committee, examined in his place:—

- J. Morrice, Esq., M.P.
29 Oct., 1869.
39. Chairman.] You reside near Sutton Forest? Yes.
 40. You are a considerable landed proprietor? Yes.
 41. Perhaps you will oblige the Committee by giving them any information you possess as to the spread of the thistle and burr, or any other plant you consider noxious? The only weeds that I know of, of that kind, are what we call the Scotch thistle and the spotted thistle; there are very few plants of the Bathurst-burr in our district, and I do not think there is much danger of its spreading with us, for it is a plant that the frosts kills, and the frosts generally come upon it before the seeds are ripe.
 42. Mr. Burns.] How does it get propagated? In some parts of Cumberland it will grow. It is brought into the district by travelling sheep and cattle from the Murrumbidgee and other districts where the burr grows. The sheep carry it in their wool, and you will often see cattle with great lumps of it sticking to their tails. It is not a plant that will take any great hold of its own accord in such a district as ours.

43. *Chairman.*] Do you consider it desirable that there should be some legislation for the eradication of these plants? I think so. J. Morrice,
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44. Do you imagine that they will prove injurious to the district unless some means are taken to stop their spread? Yes, the Scotch thistle and the spotted thistle will no doubt. I saw them first at my place about three years ago, and I have been at them almost constantly, every now and then, with my men to cut them up before the seed comes on them. I think it very desirable something should be done. 29 Oct., 1869.
45. *Mr. Lackey.*] How long have you been living at your present residence? I have only been living at my present residence for about six years, but I first resided in the district in 1835, and I have been there ever since.
46. Were any of these thistles there when you first lived in the district? There were a few of the spotted thistles.
47. Any of the Scotch thistle? No.
48. How long is it since you first noticed them? About three years ago.
49. Have you any idea how they were brought there? I do not know, but I think they were brought there by cattle, from seeing them in the different paddocks where they were put. I think they were brought in the tails of cattle and the wool of sheep.
50. Have you noticed them in cultivated or uncultivated land? In both.
51. Have you had them in your own cultivated land? Not much.
52. Have you had them in your uncultivated land? Yes, in paddocks where fat cattle have been.
53. Have you taken any steps to get rid of them? Yes, every year.
54. In what way? I have always sent a man with a hoe to take them out by the roots.
55. Do you think that the best plan? I have never tried any other.
56. Did you ever try the plan recommended by the last witness? No.
57. Have these weeds spread to any large extent in your district? They will spread very much if they are allowed to go on.
58. You think it desirable some measure should be introduced to prevent their spread? I do. Where the land is rich they will grow tremendously.
59. Is it your opinion that if some legislation on the subject is not resorted to these weeds are likely to become a very great nuisance? Yes, because some people are very careless and use no exertion to keep them down; if their neighbours cut them down their labour is useless, for the wind blows the seed from one farm to another.
60. Have you noticed the clauses of the Bill that has been introduced? Yes.
61. Is there anything in them that you consider very objectionable? I think they ought to be allowed one or two years before the Bill is put into operation, because it would be ruination to some people to put such clauses into force; some persons have so much of it that it would be impossible for them to eradicate it in the time.
62. What time do you think would be the correct time? I should say twelve months or a couple of years, and if they are not eradicated in that time then put the Act in force.
63. In the meantime public notice should be given that the Act would come into force at a certain time? Yes.
64. In the part of the Camden District you live in, weeds of this sort are more likely to germinate and take root than in other parts of the Colony, from its being a moist climate? Yes.
65. Do you think the Scotch thistle would spread in warmer districts? Yes; I have seen hundreds of acres of it on the banks of the Murrumbidgee, so thick that you could neither walk nor ride through them. There are three descriptions of thistles—the Scotch thistle, the spotted thistle, and the milk thistle. The milk thistle is a smaller plant than the other two, and is a very nourishing food for cattle, pigs, and other stock. There is no necessity to destroy them.
66. Do not cattle feed on the spotted thistle also? Yes, on the banks of the Murrumbidgee, where I have been accustomed to see them mostly; the cattle eat them when grass is scarce, and when they are coming up young they get very fat upon them.
67. Have you ever heard of their being cut down and made into a sort of hay for cattle food? No.
68. Is it your opinion that the spotted thistle ought to be included in this Bill, or merely the Scotch thistle? I would include both Scotch thistle and spotted thistle. As to the sweet-brier, I think that is as bad and worse than either of the thistles, particularly in the Berrima District, excepting where they have them as hedges, when of course they can be kept down and not allowed to seed. I have seen a cultivation paddock ploughed up and allowed to remain one or two years, which has then been completely covered with them. The seed is carried about by opossums and birds. I have myself been out on a moonlight evening, and on a hedge at my own place have shot fifty or sixty opossums which were there eating the berries. Not only opossums and birds, but pigs, cattle, and horses eat them; and wherever their dung is dropped over the fields the brier comes up; one berry will contain hundreds of seeds. The brier is most difficult to eradicate, the slightest fibre left in the ground sending up shoots. An old English farmer first had the farm where I am now living, and he cultivated on the English system, planting the whole place with these brier hedges. There were hedges there of these briers nearly as high as this room. When I went there to live the fields had become covered with them, and I had to employ several men to take them all up, but I found I had to go over the same thing every year, until I saw I had no other remedy but to take these hedges down. As I said before, the opossums, pigs, and cattle eating them, spread them over the whole country. It cost me a great deal to take up all the hedges, but since then I have been able to keep the fields tolerably clear, although there are a good many yet.
69. *Chairman.*] You think it desirable to include the brier in the proposed Bill, where it is not used for hedges? Yes. I know estates that have been neglected, where the fields are covered with it. The brier does very well for hedges or fences, if kept clipped or cut down every year, so as not to allow it to seed, and may be useful to some people in that way; but they are hedges I should never cultivate. When I took mine out, I sent to Camden for hawthorn, and planted it in their places.
70. *Mr. Hoskins.*] Is it your opinion that the weeds indicated in this Bill could not be eradicated without legislation of this kind. They could be, of course, if the people would do it.
71. Perhaps you do not understand my question. Do you think such stringent legislation as this Bill provides is necessary to cause the eradication of the weeds indicated in this Bill? I think it is rather too stringent.

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72. Do you think such peremptory legislation as this Bill indicates is required? I think it requires something of the kind; but I think one or two years should be allowed.
73. Do you think that self-interest would not prompt landowners and occupiers to eradicate these weeds without legislation at all? Some would do it, but not every one; for instance, people renting a farm would be careless when they were going to leave it.
74. Do you think that if this Bill became law everybody would eradicate thistles and Bathurst-burr? If you compel them to do it, of course they must do it.
75. But they would not do it unless put under the pains and penalties provided by this Bill? Not every one.
76. But if this Bill became law they would? Yes.
77. What would cause them to be more industrious? The penalties.
78. Would it be from the effect of the Bill, the knowledge that the Bill had become law, or from fear of their neighbours informing against them? I suppose from fear of their neighbours informing against them. Some would do it because the Bill had become law, and others for their own benefit.
79. You think, as a rule, the fear of penalties attached to any indifference on their part would cause them to eradicate these weeds? Yes.
80. Do you think it possible that under this Bill some persons could very seriously annoy and perhaps injure others? I think so; for instance, if the sweet-brier were included, as the Bill stands now, it would almost ruin some people.
81. Do you really believe that if this Bill becomes law all the Bathurst-burr and thistles in the counties of Cumberland and Camden will be eradicated? There would always be some, in my opinion, particularly where there were stock travelling.
82. Have you read this Bill attentively? I have.
83. I suppose you have observed one striking feature in this Bill,—what may be termed an arbitrary interference with the rights of private property? I think it is rather arbitrary.
84. Have you read the 2nd clause? Yes.
85. It provides that if, within fourteen days after having received notice, an owner or occupier of land does not eradicate these weeds, he is liable to a penalty not exceeding £20—Do you not think fourteen days too short a time? I think it is.
86. What time would you suggest? As I said before, I think there ought to be one or two years' notice before the Bill comes into operation.
87. And then? Then after that in some cases fourteen days may do, in other cases a month, in others six months.
88. Supposing an owner or occupier were away on some other business, or were not a resident, would it not be absurd to expect him to attend to the requirements of a notice in fourteen days? I think it is too sharp.
89. Would not sixty days be better? Yes, that would be quite sharp enough.
90. Do you not think it desirable that any information on which a Justice of the Peace should act in carrying out the provisions of this Bill should be given on oath? I think so. I do not think it should be left to one Justice to do it.
91. If a person can give such information not under the solemn obligation of an oath, do you not think he may do it capriciously or with a desire to injure his neighbour? It may be done.
92. From your knowledge of people in the bush do you think it would be done? I think some people would do it.
93. Do you think there would be as many cases in which that would be the cause as for *bona fide* reasons? No, not as many; there would be a good many I believe.
94. Will you be kind enough to turn to the 6th clause, which gives power to Justices to grant an order for the destruction of thistles—You will observe that the proprietor of adjacent land is to be compelled to clear half the road passing by his property—Do you think that is right? I do not think it is; I do not see why he should clear the road at all.
95. Who then is to pay for clearing the roads? Where there is not a Municipality I suppose the Government must do it, but where there is a Municipality I should say they should do it.
96. Then the cost of eradicating these thistles from the roads would be thrown upon the country? I do not see who else is to do it. One person might have his estate bounded by a road for miles and miles.
97. To carry out your view, if this Bill becomes law, would necessitate a tax upon the revenue of the country? I believe it would.
98. Do you think that if the weeds spoken of in the Bill were not eradicated from the sides of the roads, the Bill would not be efficacious in carrying out the objects intended? No; if any of these plants were left on the sides of the roads it would be of no use clearing the fields adjoining; the wind would blow the seeds upon them, and in a short time they would just be covered again. On the banks of the Murrumbidgee I have seen the flats covered with the most beautiful clover; in a year or two came a flood, and then the whole of the banks, instead of clover, were covered with Bathurst-burr, so thick that you could not walk through it; in a year or two afterwards came another flood, and then the banks became covered with thistles, which have been there ever since.
99. Have you looked at the 9th clause, which provides that when an occupier of Crown Lands in the counties of Cumberland and Camden is put to any costs in eradicating Bathurst-burr and thistles, under the provisions of this law, he may come upon the Crown, the actual owner of the land, for the cost so incurred—Do you think that just? It would be a very severe tax upon the revenue.
100. You could not give any approximation to its amount? No. I know there are Church and School Lands, for instance, on which a great deal of thistles grow, and it would cost the Government a great deal to clear them.
101. I gather from the general tenor of your replies, that that expenditure would be continuous, because the seeds are carried about by the wind? Yes. On my own property I find that the travelling cattle carry them in their tails and in their hair.
102. Do you think any amount of legislation would prevent that? No.
103. Would not that be as fertile a source of spreading Bathurst-burr and thistle as any other? Yes, quite as much so.
104. Have you remarked another feature of this Bill,—that no scale of compensation for the labour employed in extirpating these weeds has been provided—no fixed rate of wages—it is left to the discretion of

of the Justices—Do you think that is right? I do not see how you could fix any rate, because wages differ so much.

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105. The 11th clause provides that if the owner of land on which burr or thistle may have been growing be absent or unknown, the Municipality of the district may let his land for a term not exceeding fourteen years, and apply the rent in payment of any penalty or compensation that may have been imposed—Do you like that clause? I think it is rather severe.

106. Do you approve of the principle of allowing a Municipality to arrange the terms on which a man's land should be let? I think that would not be fair play.

107. Do you like the Bill, after having given these replies? Not without some alteration.

108. *Mr. Burns.*] Do you not think the Bill may be made a useful measure by making the penalties lighter and introducing some other amendments? I think so.

109. Do you think it likely that Bathurst-burr, thistle, or sweet-brier, although found to be objectionable, will be eradicated if no legislation takes place? No, I think not. Too many people are careless and will not take the trouble to destroy them; and those that will do so may just as well save themselves the trouble unless all are compelled to do the same. Therefore I think it necessary to have something to make it compulsory.

110. Do you think that if the time for bringing this Bill into operation were deferred for two years after it became law, much injustice could arise? No, not with some alterations.

111. The proprietors of land within the area mentioned in the Bill can be easily reached directly or through their agents? In most cases they can, but there are cases where they cannot be found.

112. Do you not think two years would be sufficient to inform every person concerned of the passing of the Bill? I think it ought to be.

113. What do you suppose would be the cost of clearing off these weeds per acre? It would vary very much.

114. Do you think the annual expense after the first year would be much? It would come to a good deal; people would have to be kept constantly at it, for if once they were allowed to seed, what had been done before would be all undone.

115. Do not the landowners find them a great evil now? Yes.

116. It is matter of constant complaint that they are spreading? Yes.

117. And you, as a landowner, think that unless legislation takes place they will spread more? Yes.

118. *Mr. Hoskins.*] But you have given evidence that we cannot prevent the introduction of the seed? We cannot prevent the seed from being brought by travelling cattle and sheep.

119. *Chairman.*] Although we cannot prevent the seed from being brought there, we may prevent the plants from seeding within the counties? Yes. I have seen the tails of cattle clotted in lumps with seed of these plants, and sheep on the Murrumbidgee with their whole fleece covered with them, so that you could scarcely put your finger on a clean spot.

120. You admit that it is desirable there should be some legislation on this matter? I think so,—to keep down the evil at all events.

121. *Mr. Lackey.*] You are aware that this Committee has been appointed for the purpose of considering, and where necessary amending this Bill, and that one of our duties is to make the Bill as practicable as we can—Having that in view, is it your impression that we can put the Bill in such a shape as to make it acceptable to the people of your district? I think so.

122. Supposing one or two years were allowed to elapse before this Bill came into operation, do you not think the seed from these noxious plants would become very widely spread in the meantime, and that the injury the district would sustain from the spread of these plants would be very great? If the people did not try to destroy them, of course it would. But it would be ruination to some people to be compelled to destroy them at once.

123. *Mr. Farnell.*] Would it not be better to leave it to the discretion of the Justices, as to the extension of time to be granted to each individual? I would not leave it with one Justice.

124. *Mr. Lyons.*] You think the expense would be too great to some parties? Yes.

WEDNESDAY, 3 NOVEMBER, 1869.

Present:—

MR. LACKEY,
MR. HOSKINS,

MR. MORRICE,
MR. LYONS.

JOHN LACKEY, ESQ., IN THE CHAIR.

Mr. John Alexander Badgery called in and examined:—

125. *Chairman.*] You reside in Sutton Forest? Yes.

126. You are aware of the fact of a Bill having been brought before the Legislative Assembly with a view to the destruction of the Bathurst-burr and certain thistle plants in the counties of Cumberland and Camden? Yes.

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127. You have been living for some time in the Sutton Forest district, have you not? Yes, I have lived there nearly all my life.

128. And you have had an opportunity of knowing the ravages of these thistle plants? Yes.

129. And the injury they have done to the grazing capabilities of the country? Yes, I have had a very good opportunity of observing the growth of these plants, and their effect on the country.

130. Have you noticed any particular description of thistles which you consider most objectionable? I know of two thistles which we regard as the worst.

131. What are their names? I do not know their proper names.

132. What names are they known by in the district? One is known as the "Scotch thistle," but I believe that is a mistake. I have brought samples of these thistles with me, and perhaps I had better show them to the Committee. (*Witness produced samples of thistles known in the Camden district as the "Scotch thistle,"*)

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- thistle," and the "hairy thistle," respectively.) This, which we call the "hairy thistle," has been in the district only three or four years, and we consider it by far the greatest nuisance and most dangerous plant.
133. How long is it since you first noticed the "hairy thistle" in your district? I think it is five years since I noticed the first I ever saw. The seed came, I believe, in some rye-grass seed brought from Mr. Ferris, of Sydney; for the year after that was sown I noticed this thistle, which was a strange plant to me.
134. Had you noticed it in any part of the district before? I had not. That was the first plant of the kind I had ever noticed.
135. It seems to spread about the district with very great rapidity, does it not? With very great rapidity.
136. You are of opinion, I understand, that the growth of this thistle does great injury to the grazing ground generally? Yes.
137. Is it your opinion that legislation is necessary to eradicate it? I think it is quite necessary. If something of the kind is not done I am afraid it will ruin our district.
138. Experience has proved to you that if it be not checked in some such way it will do great injury to the district? Yes, it will do a great amount of injury, if it does not altogether destroy its grazing capabilities.
139. There is a great amount of agricultural land in some portions of the Sutton Forest district—in what is called Yarrowa and Wingecarribee? Yes, there is a considerable amount of agricultural land there.
140. And land which is likely to be very greatly affected by the ravages of such plants as this? Yes; the soil being suitable to their growth is one great reason—the soil is very suitable.
141. The place is favourable to the growth of these thistles, both from the character of the soil and the moisture of the climate? Yes.
142. You think that if a careful farmer were to devote ever so much trouble, and be at ever so much expense in keeping his own farm clean, it would be of little or no use unless his neighbour kept his farm clean also? It would be almost impossible. If one farmer neglected to keep his ground clear, I think the adjoining farmer would have very great difficulty—in fact it would be almost impossible for him to keep his farm clear. It would be everlasting work to do anything in the shape of clearing.
143. The seeds of these plants are very easily conveyed about and propagated? Yes; the seed of the thistle is perhaps not more than a quarter the weight of the seed of what we know as the Scotch thistle; consequently it is carried about with much greater ease.
144. Have you ever observed it as a fact being carried about in large quantities by the wind? I cannot say that I have seen it carried about in large quantities, but I have observed that when there has been a westerly wind, which would carry them one way for a time, they have afterwards come up very thick in that direction, proving that they are carried by the wind.
145. Have you noticed the Bathurst-burr in your district or neighbourhood? Only in one place.
146. Then the district has not suffered much in consequence of their growth? No.
147. Have you noticed this Bill to make provision for the destruction of the Bathurst-burr and certain thistle plants in the counties of Cumberland and Camden? Yes.
148. Have you read it? Yes.
149. Do you think it is suitable for the objects which it is proposed to carry out? Yes, I think so.
150. Do you think there are any clauses in it of a very objectionable character? I have not gone so closely into it as to be able to speak about that. I have taken into consideration the intention of the Bill—to eradicate the thistle—but I have not gone into the clauses closely. I have not inquired into that part to which you refer.
151. You are decidedly of opinion that legislation is necessary? Yes, decidedly. I have mentioned the subject to a large number of landowners in our district, and every one of them has been in favour of the Bill; also some of the tenants.
152. Mr. Hoskins.] I suppose you think it is possible that there might be a large number against it? I do not think so, without they are interested. Perhaps I may as well explain what I mean by their being "interested." If, for instance, I rented a large property from you, and I was not compelled by the terms of the lease to destroy the thistles, the passing of this Bill might put me to considerable expense.
153. Is it not possible that the freeholders may object to the Bill? I do not think so.
154. It so happens that we have letters from large freeholders objecting to it? In the counties named?
155. Yes. Will you be kind enough to look at the Bill while I refer to some of the clauses—Your opinion as to the necessity for a Bill of this kind is, I understand, based on your knowledge of the fact of the spreading of thistles about the Sutton Forest district? Yes.
156. You, of course, do not take into view what may be the effect of this Bill on other parts of the counties of Cumberland and Camden? I am acquainted with the whole of the counties of Camden and Cumberland.
157. But you have principally referred, in the evidence you have given, to the necessity for a Bill of this character, believing it would be beneficial to the residents in the neighbourhood of Sutton Forest? I believe it would be beneficial to the whole—not to the residents of Sutton Forest alone. My occupation leads me all over the counties, and therefore I have an opportunity of judging.
158. The state of the climate you say about Sutton Forest is moist? About the particular part Mr. Lackey spoke of—the Yarrowa district.
159. You said that the Bill would be suitable there? I said that the soil was particularly suitable for the growth of thistles.
160. And that therefore the Bill would be desirable for that place? Yes.
161. But what do you say about those portions of the county of Camden which are not favoured with a moist climate; for instance, Picton? I think they have a moist climate there.
162. Well, the Oaks—Do you think the people about there would benefit by a Bill of this kind being passed? I have no doubt about it.
163. I infer from what you say that the weeds to be eradicated under this Bill—the Bathurst-burr and the thistle—operate more injuriously in pastoral districts than they do in agricultural districts? I think perhaps there would be more injury done to grazing land than to agricultural land, because agricultural land is frequently ploughed, and that would keep them down during the time it was in cultivation of course.

164. Therefore, on your own showing the Oaks district being an agricultural district, there would not be such an urgent necessity for a Bill of this character to apply to that district as to Sutton Forest? I do not consider that the Oaks is an agricultural district altogether. I have been all about there lately, and I think the people are getting their living there by grazing principally. I did not see so much agriculture going on.

165. Supposing a Bill of this kind became law—is it not a fact which comes under your cognizance as a grazier that the burr is communicated to districts in consequence of the burrs adhering to the skins and hides, and especially to the tails of cattle? Yes.

166. If a Bill of this kind became law, which made it compulsory on freeholders and leaseholders to eradicate the Bathurst-burr and thistles from their runs, and if the seeds were communicated by flocks of sheep and herds of cattle brought into the district for fattening purposes, would not that necessitate a large increased expenditure amongst the residents of the district to keep it down? I think it would be a mere trifle.

167. For instance, take the case of a person in the Sutton Forest district farming, 3,000 acres, where you say there is a good soil and a moist climate—how much would the cost be per year from the causes I have indicated? Considering that the farm were once cleared?

168. Yes. What would you suppose the estimated cost would be yearly to eradicate these weeds from seeds imported by strange cattle and sheep? A mere trifle—I think it would not be over a pound.

169. A pound a year? I think it would not be over that.

170. Your evidence is very different from that given by others? It may be, but I have had a great amount of experience, and that is my opinion. We are always bringing fresh cattle, and we occasionally bring weeds with them, but when we find them growing we take them up.

171. Is it not possible that those weeds may be blown from your land to the land of other persons? Not if we take them up before they seed.

172. But when cattle and sheep are travelling, may not these weeds be dispersed over other people's land? No doubt a few seeds may drop on other people's land the same as on ours.

173. Then if the owners of land or farmers did not closely watch the travelling stock of other persons passing through the district, would it not be possible for that stock to leave some seeds on the runs? It would be quite possible.

174. Would not that entail increased vigilance, and consequently increased expense? The expense would be very trifling.

175. If a man is despatched to watch a herd of cattle travelling over a run, that will involve expense? But there is no need to watch. Some time after the cattle have gone, if they found the seeds growing they would have the plants taken up, and an end put to them for the time.

176. *Mr. Lyons.*] Have you any knowledge of how long these seeds are coming up? No; I think that, in all probability, they would lie in the ground for a considerable time. Some would lie longer than others. They contain a great amount of oil, and seeds of that kind remain longer than seeds of a different kind.

177. *Mr. Hoskins.*] Do you consider it necessary that the Government should be armed with powers to enable them to compel people to keep their land clean and freed from Bathurst-burrs and thistles? I do.

178. Of course, it must be admitted that if such a law were passed it would necessitate an increased cost to the revenue, inasmuch as the Government would have to keep a staff of employés to see that there was no evasion of the law? I do not know that that would be necessary.

179. Then how are you going to find out whether they do it or not—do you think that one person would inform against another? Yes.

180. Do you think that is a desirable state of things to bring about? Yes.

181. To set one neighbour against another? I do not think it would set one neighbour against another. My next neighbour might have a lot of these thistles on his property; if he let them go to seed they would be sure to seed my place. If this Act were passed, I should give him notice to cut the thistles; but we should not quarrel over it.

182. From your knowledge of the people who live in this and in every other country, do you not think that a Bill of this kind might be so worked as to enable one person to vexatiously annoy another? I do not think so.

183. Are you not of opinion that this Bill, which you say is desirable, admits of a very arbitrary interference with the rights of property-holders? It may be arbitrary, but I think it is necessary under the circumstances.

184. The Sutton Forest district is very highly favoured. In times of drought elsewhere, there is plenty of water there, and plenty of grass; while other portions of Camden, in the neighbourhood of Picton, and other places, are not so highly favoured. Now is there not a description of thistle which could be used for food of cattle in seasons of drought, and which would enable a stockholder to sustain the lives of his stock when he had no grass for them? I know that the cattle do eat what we call the Scotch thistle when there is a great scarcity of grass, but I understand that it does them more injury than good—it kills a great number of the cattle.

185. Assuming that there is no grass in the district in the time of drought, do you not think it would be better to have a weed growing which would preserve the life of a large number of the cattle than to eradicate it and lose the cattle altogether? I do not think the cattle ever benefit by it in the counties of Camden and Cumberland. I have travelled over the two counties for years, and I never saw the cattle eating these thistles so as to benefit them.

186. Do you think it would be better that the cattle should die of starvation than that the thistles should be kept on the ground? I can hardly understand that.

187. You will not push your support of this Bill to that point. I have received a letter from a resident in the county of Cumberland whom you know very well—and who is a large landowner (*Mr. William Antill*). It is in consequence of what he says that I am putting these questions to you. He speaks in his letter of the fact that these thistles keep the cattle alive during droughts. He says—"Many small farmers use the Scotch thistle, so-called, for feeding their cattle and pigs in winter and during a drought" ? On Maneroo?

188. This is on this gentleman's property where he resides? It would cost him something considerable to get rid of the thistle, and that may be one reason why he would oppose such a measure. When I was on Maneroo

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Maneroo a short time ago, I spoke to Mr. Ryrie, of Micalago, on the subject. He said that the cattle ate the thistles. I said to him—"If you had never had them would you like to have them?"—and he said, "No."

189. But if people had these thistles on their runs and they were subject to drought, would it not be hard to compel them to eradicate what would be the only sustenance for their cattle in seasons of drought? I do not think that would be the only means of subsistence. There are other weeds which the cattle eat to a considerable extent, as the Scotch thistle.

190. Will you look at clause 1 of this Bill—It recites that it shall be lawful for any Justice of the Peace, upon the written application of any person, to serve or cause to be served a notice to destroy the burrs or thistles—It does not provide that the person making application should do so upon oath—Do you think that a desirable state of things? I cannot go into those clauses. That is a kind of thing I am not well acquainted with. I can only speak of the injury which the thistle has done and is likely to do—the thistle and burr.

191. But this Committee has been appointed to express an opinion not only on the desirability of eradicating the Bathurst-burr and thistle plants in the counties of Cumberland and Camden, but also on the merits of the Bill—which is unusual, and confers such arbitrary power on the Government? I am not prepared to give an opinion on clauses of that kind.

192. Do you think it desirable that upon the mere statement of a person when that statement is not fortified by oath, a Magistrate should be empowered to take action against another and to saddle him with costs? I am not sufficiently up in law to understand these things.

193. You are a sensible man, and I have known you for years. I should like to ascertain from you whether you consider it right that Magistrates should take initiatory proceedings, and authorize persons to invade your property on the mere statement of a neighbour unsupported by an oath? Perhaps it would be necessary to have a statement on oath; but I do not see otherwise where there would be likely to be any injury done. It is not likely that I or any other person would go to a Magistrate and state that thistles or other noxious weeds were growing on a neighbour's property if such was not the case.

194. You entertain a better opinion of your neighbours than most people. At all events, do you not think it would enable a person who had a spite against another to seriously injure him? I do not think it likely.

195. Not if you did not compel the person laying the information before a Magistrate to make an affidavit? Perhaps it would be better to have his statement on oath, but I do not think any person would make a statement of the kind unless there was some truth in it,—unless there were some weeds of the prohibited kind existing on the land.

196. Of the "prohibited kind!" How are you going to indicate it—are we to specify in this law how many kinds there are? I thought that in all probability it would be the case.

197. Some of us do not understand them? You would have to ascertain. I think the sow thistle is indigenous, and it is not regarded as a great nuisance.

198. There are some thistles which are no nuisance? The sow thistle is no great nuisance, and I think it is a native as well.

199. If this Bill should be reported on favourably, would you suggest that the sow thistle should be exempted from its operation? I think so.

200. Is there any other thistle which, in your opinion, should be exempted? I do not know of any other.

201. You think that all other descriptions of thistles but sow thistles are noxious, and destructive to property? I do not know what may be classed as thistles—I am not up enough in botany.

202. There is the difficulty of legislation on a question of this kind? There are only two thistles in the counties of Camden and Cumberland that we know of which injure our property—these are the two [*exhibited to the Committee*], and I think it would be well if a Bill were passed compelling the destruction of them, whatever their names may be.

203. Then again, the 2nd clause provides a penalty. It says: "If any such owner lessee or occupier shall neglect or refuse to destroy all of the said plants then growing upon such land or upon the half of any public road adjacent thereto." Now I ask you whether you would consider it right that the owners or lessees of land, or small farmers, should be compelled to clear one-half of a public road of these thistles? I think so. I should have no objection to do it. I do not think any landowner having his own property clear would object to cut up the thistles along the road—it would never be a very large item.

204. Supposing, for instance, a man had half a mile frontage to a road, what would it cost him to eradicate the thistles and burrs on half the road to which his land had a frontage? I think it would be a very trifling amount.

205. How deep do the roots of these plants go into the ground? I think, in reference to this thistle, that if you go down 4 inches you get below the crown, and it will not grow again. The others go down to a greater depth; but no person cutting up thistles expects to destroy them at one cutting.

206. How many times would it be necessary for a person to go over this half a mile frontage? Two or three times.

207. And how much would that cost? I do not think it would cost much—say a pound a time. Along the road from Camden to Picton the thistles are thicker than in any other place I know of, and to go over half a mile there and cut up the thistles once would be about one week's work. It would have to be done three or four times, and would cost twenty-five or thirty shillings each time.

208. That would be six or seven pounds, on your own showing, but I think it would be remarkably expeditious working. The cutting down would have to be done three or four times in the first instance. Then, as thistles and burrs are taken from place to place by travelling cattle and sheep, the process would afterwards have to be repeated a good many times? It would have to be done occasionally. A person would have to watch, and if a thistle happened to spring above the ground it would have to be taken up. It would be no great hardship on the landowner.

209. It would be an increased expense in the management of his property? It certainly would, if he only had to bestow half an hour's labour on it.

210. And therefore it would diminish the profits derivable from the property? I suppose it would. If he devoted only half an hour to the work he would lose the value of that half-hour.

211. That is an addition to the original expense. Now we come to another portion of this clause. It is required that the party against whom information shall be laid should eradicate all these thistles or burrs within

within fourteen days after such notice shall have been given, or upon conviction of neglect or refusal be liable to a penalty of not more than twenty pounds nor less than five pounds. Do you think that fourteen days is sufficient time? I think it is sufficient time after the Act comes into force. The Act will not be brought into force in a day, but a little time will no doubt be given to those who have thistles on their property, to cut them down. After that I think fourteen days quite sufficient.

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212. Would you suggest that this Bill should come into operation as soon as it is passed? No, I think that would be unfair.

213. How soon after, do you think? Say six months. Perhaps that might be too long, but I think the people ought to have sufficient notice.

214. But after the Act has been brought into operation, do you think that fourteen days' notice would be too short a time to enable persons to eradicate these weeds? I do not.

215. Have you looked through the Bill to see if there is any scale of compensation for persons who eradicate weeds by order of the Justices? No.

216. Do you think it desirable that Magistrates should fix the scale of compensation to persons whom they direct to eradicate weeds growing on other people's land—capriciously, it may be—one set of Justices in certain cases giving one scale, and another set of Justices under other circumstances giving another scale? I think so.

217. You think it is desirable that there should be no fixed scale of compensation? I think it would be better perhaps to leave the matter in the hands of the Justices than to fix a scale.

218. There are other clauses very remarkable, and yet scarcely any witness seems to have looked at them. I should like you to look at the 11th clause. It says: "If the owner of any such land shall be unknown or absent from the Colony and such compensation or penalty cannot therefore be recovered from him and shall remain unpaid for three years after the right to recover the same it shall be lawful for such Municipality to let such land for any term not exceeding fourteen years and may receive the rents and profits thereof and apply the same in payment of such penalty or compensation and shall pay the surplus if any to the Treasurer of the Colony to be held by him upon trust for the person or persons entitled thereto." Do you think it right that any Municipality should be empowered to farm a man's land and do what they like with it, and charge what they like as compensation, and give him what remains when he returns? I do—I think so.

219. You think it right to arm either the Government of the Colony, or any municipal body, or other body delegated for that purpose, with power to manage a man's property in his absence? I think so. How would they do otherwise, in collecting assessments in a municipality where the owners of land are absent?

220. Have you looked at the 9th clause—as to waste lands of the Crown—It provides that on waste lands of the Crown, Justices can order the eradication of these burrs and thistles. If the Surveyor General, on being served with a notice, fails to eradicate them, the Justices can do it and charge the Crown—Do you think that is a desirable provision? I do in these two counties. I am speaking particularly of these two counties of Cumberland and Camden.

221. Do you not think that would entail a very large expense on the revenue? No, I think the expense would be very trifling.

222. *Mr. Morrice.*] I suppose that in eradicating the Scotch thistle and the spotted thistle, one or two might be dropped by cattle upon a run and missed? Yes.

223. Have you not seen that? Yes.

224. And would not those grow about? Yes.

225. Which thistle do you call the sow thistle—the one they call the milk thistle? Yes.

226. You would not recommend that that should be destroyed? No.

227. There is another plant called the dock—you know that? Yes.

228. That is a troublesome plant, too, is it not? Yes, it is troublesome to agriculturalists.

229. But not so much so as the thistle? No.

230. It is a troublesome plant? Yes, and there are many others; for instance, there is the sorrell.

231. You know also that in our district there is a plant called the sweet-brier? Yes.

232. You are aware that that is a very troublesome plant? Yes, it is very troublesome.

233. The seed of that is just as easily carried and thrown about as the thistles? I think the seed is liable to be carried about, but it does not grow so freely, I think, as the seed of the thistle.

234. Birds will carry the seeds about? Yes.

235. They are also carried about by horses and cattle and pigs? Yes.

236. And by opossums? I do not know whether the opossums carry them about, but the other animals you mentioned do.

237. Is the sweet-brier a very troublesome plant to eradicate? Very.

238. The slightest bit left in the ground will grow? Yes, at certain times of the year. I am not certain that it would do so at all times. I have heard that if they are taken up when they are in blossom, and the season is dry, the roots will die; but generally speaking, if a root is left in the ground, it will grow again.

239. Would you not recommend that a provision to eradicate the sweet-brier should be introduced into the Bill, as well as that relating to thistles? Yes.

240. It is a plant that is very hard to take off old cultivation paddocks? Yes, because in old cultivation paddocks the seed has been buried by the plough, and therefore it is frequently found springing up.

241. *Mr. Lyons.*] I understand from your evidence that you are in favour of this Bill? Yes.

242. You consider that it would be a mutual benefit to the farmers and graziers living in these counties? Yes.

243. You were asked just now as to the Bill being likely to be made objectionable in consequence of vexatious action which might be taken on it. Are you not aware that almost every Act of Parliament is liable to the same construction. If you felt disposed to act vexatiously under the Impounding Act, for instance, could you not put it into operation injuriously? Quite so. That was my feeling at the time the question was asked, but I did not explain myself sufficiently.

244. In regard to nearly every Act of Parliament, is there not a way in which people can annoy their neighbours by unnecessary and vexatious interference? Yes, in nearly every Act.

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245. I suppose you are not wedded to this particular Bill, and that all you require is that it should be so framed as to do justice to every party concerned? That is my desire.
246. And you think that if a canvass took place in those districts where the Bill would operate, there would be a majority in favour of it? I think I can say I am sure there would be.
247. I know that there is an objection to this measure, but I fancy from what I have heard, that if the measure is fairly dealt with there will be few complaints made about it? Very few indeed.
248. Your attention was called just now to the 2nd section of this Act—"Penalty for not destroying in pursuance of notice." Now I would like to direct your attention to the 3rd clause—"Power of Justices to give time to parties summoned"—Do you not think that takes the sting out of the second? It says,—“On the hearing of any matter under the last foregoing section it shall be lawful for the Justices hearing the same to decide as to the fact of such neglect or refusal. And if they shall be of opinion that due diligence has been used it shall be lawful for them to adjourn the hearing of the case to such day as they may see fit and if previous to such day of adjournment the said plants shall have been destroyed it shall be lawful for them to decline to make any order in the case?” I think that does away with the severity of the power given by the other clause.
249. How would you propose to deal with leaseholders in this matter—that seems to be the great difficulty—I do not think the objection comes so much from freeholders as from leaseholders—You would, I believe, give them a greater extension of time? I do not think a very great extension of time would be desirable, or that it would benefit the leaseholder, for this reason—if these thistles are not taken up every year they will spread about. If you had half your property cleared, and thistles growing on the other half, the half remaining would soon undo the work you had done on the first part.
250. You think that the great expense would be just clearing them the first year? That would be the great expense. There would be an annual expense for a time.
251. You think the annual expense would be greatly diminished if proper diligence were exercised? No doubt of it.
252. *Chairman.*] I did not understand your reply to Mr. Lyons' question as to how the cost of eradicating these thistles should be met in the case of tenants. Do you think it fair that tenants should be made to pay? I think it would be hard. I know of several instances where it would come hard on the tenants.
253. Then is it your opinion that the owner should pay solely? I think it would be better that the owner should pay a portion of the expense. But these are parts of the Bill I have not considered much. I have only considered it as to the desirability of passing an Act to eradicate these thistles.
254. You have not thought sufficiently of the Bill to give a decided opinion in regard to the question I have just put to you? No.
255. The operation and object of this Bill would be, I think, to make the landlord pay the whole expense of eradicating the burrs and thistle plants? That would be rather hard, I think. If the landlord were compelled to destroy them the first year, and leave the place clear to his tenant, then I think the tenant ought to be compelled to keep them down afterwards. I do not consider that hoeing them up for one year would be eradicating them.
256. *Mr. Hoskins.*] I will put a case to you. Suppose that there are persons in the counties of Camden and Cumberland who rent Crown Lands, or Church and School Lands (which are now declared to be Crown Lands), and that they are required, if this Bill becomes law, to eradicate thistles and burrs and other noxious weeds from their land,—would you not think it right that they should come upon the Crown for the expenses they incurred in eradicating those weeds? I think it would be better that they should do so than that the weeds should be allowed to grow.
257. But would you think it right that they should do so? I think if the Government was the landlord, it ought to be at their expense, the same as a private landowner. I do not see where the difference would be. The Government receives rent from the Church and School Lands, and out of the rent they received they might pay this expense the same as any other landlord.
258. Have you ever made any calculation as to what cost the Government would be put to in the event of this Bill becoming law, if the principle were embodied in it of which you are in favour? No.
259. *Mr. Lyons.*] Do you not think that this Bill is based upon something like the same principle as the Scab Act? Yes.
260. And that the Government should be called upon to pay towards eradicating a great evil? Yes. As a proof of that, I may state that I was told the other day—I think by Mr. Marks, of Kiama—that within the Municipality of Kiama they compelled people to destroy the thistles. My brother and myself lease a property from Mr. Throsby; we took it nearly two years ago, and in the lease he had a clause compelling us to keep down thistles and briers—such as we consider injurious,—therefore we are compelled by our lease to do so. He would not have done that unless he had found it necessary to keep the thistles down.
261. *Mr. Lyons.*] Could not the Government make an arrangement with their tenants—those who lease the Crown Lands—that the keeping down of the burrs and thistles should be a part of their contract? I imagine that they could do so, just the same as a private individual.
262. *Mr. Hoskins.*] Still they could not interfere during the currency of the lease? If Mr. Throsby had not bound us to destroy the thistles, and we had neglected them (as we might have done), his property would have been very much injured.
263. *Mr. Morrice.*] Do you not think it would be very hard upon a tenant, supposing he was going out of his farm—that he was in his last year? Yes, I have already said so.
264. Some tenants only rent their farms for one year at a time? If I rented a farm from year to year I should expect it clear when I went there, and the difficulty of keeping it clear would not be very great.
265. Would it not be all to the advantage of the landlord that the tenant for one year should clear out these weeds? Yes.
266. *Mr. Lyons.*] Did you not say that the duty should fall on the landlord and not on the tenant? Yes, where the thistles now exist.
267. *Chairman.*] With reference to the Church and School Lands—you think that the fact of these weeds being eradicated would increase their value materially as grazing property? Yes, there is no doubt of it.
268. And therefore the Crown would be benefited by it? Yes.
269. And as a natural consequence, they ought to pay the expense of eradicating the thistles? Yes.
270. *Mr. Lyons.*] Are you not of opinion that unless something is done, some of these lands will be perfectly useless? I would not say they will become perfectly useless, but they will be nearly destroyed.
- 271.

271. *Mr. Hoskins.*] Have you ever heard of an instance of a person giving up Church and School Lands or Crown Lands because there were so many noxious weeds growing on them? No, but I know an instance where they soon will.

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272. Where is that? At Razorback; and I could give you the reason. The Church and School Lands were let there at a nominal rental. The party who took them let them at an increase—all he cared about was the mere profit. Had that been private property, the chances are there would not have been so many thistles.

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FRIDAY, 12 NOVEMBER, 1869.

Present:—

MR. FARNELL,

MR. LEE.

MR. HOSKINS,

JOHN LACKEY, ESQ., IN THE CHAIR.

The Honorable Sir William Macarthur, Knight, M.L.C., examined:—

273. *Chairman.*] You reside at Camden? Yes.

274. You have heard, I presume, that some steps have been taken towards legislation with reference to the extirpation of the thistle? I have not had an opportunity of perusing the Bill, but I am aware that there is such a Bill in existence.

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275. You are acquainted with what is called the Scotch thistle? Yes. That commonly known by the name of the milk thistle (*Carduus marianus*), is not the true Scotch thistle.

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276. How many descriptions of thistles have you observed? There are two here which may be called troublesome weeds, particularly one—the true Scotch thistle, the scientific name of which is *Oniscus arvensis*. A great distinction between the two is, that the one which is commonly called the Scotch thistle here is only an annual plant, and not nearly so dangerous as is the true Scotch thistle. The true Scotch thistle is a plant with perennial roots; and if cut down, fifty young plants may spring up from the extremities of the roots of that plant. I cannot say how long these roots would remain in the ground, but I know that having to extirpate a small patch, the first which was discovered in our vicinity, I think it was five or six years before we could utterly destroy them, although fire and every other means were used that we could devise. I know also from reading that it is a difficult plant to extirpate by ordinary means, and that in the north of England and Scotland it is considered one of the worst weeds.

277. Did you succeed eventually in destroying these plants? Yes. There is a very simple means of getting rid of the plant, by the use of common salt. When the plant is cut off immediately beneath the collar—the point where the stem and roots unite—if a large plant, it is also scored across with a knife, and a small portion of common salt applied, which is rapidly fatal to the plant, killing it to the extremity of the roots.

278. Have you observed the injury caused by the Scotch thistle in your district? I am aware that it is an exceedingly troublesome weed where it is neglected; but I cannot say I have much experience with it as a destructive weed, because we have never permitted it to gain head with us; we take pains to extirpate it.

279. Are your neighbours troubled with it much? I believe they are; one of my neighbours in particular, who supplies us abundantly with young plants—the lessee of the Church and School Lands—occupying the heads of several of the watercourses which traverse our land; these, in heavy rains, bring down a quantity of seed. I should have observed that the seed of the *Carduus marianus* is a heavy seed, and not so likely to be blown about as the seed of the Scotch thistle, or *Oniscus arvensis*, which is very light, and may be blown for many miles immediately it is ripe; this renders it a much more dangerous weed.

280. Do you think it desirable that legislation should be resorted to for the purpose of destroying it? I do, most certainly.

281. You say you have not examined the Bill? I have not. Such a measure would require to be carefully considered to meet the cases of particular classes of individuals; but I do not think the subject is one that need be attended with any great difficulty.

282. Do you think the eradication of these plants would be likely to cause a large amount of trouble or expense to settlers generally, if taken in time? No.

283. From your own observation you feel persuaded that legislation would be possible? I think so. In answer to a former question, I would state that we are in the habit of sending round a man on horseback early in the season, with a spud and a small bag of salt; and I think if I say that one person is so employed for about a fortnight, that is the extent of the work for the year in keeping the thistles down; therefore I should not call it a very serious business; and it is to be remembered we have large nurseries of them immediately adjoining.

284. Is it your impression that the expense of eradicating these thistle plants should be borne by the landlord or by the tenant? By the tenant as the rule; but I should think those are questions that might be decided between landlord and tenant. In our case the tenants are bound by a clause in their leases to keep such weeds down, and we have power to enter and destroy when they fail to do so, charging the expense to the tenant. In our case it would be a hardship, did the law interfere to set aside such an arrangement.

285. In your case the farms were clean when they were given into the hands of the tenants? No doubt. I cannot imagine how it would be any great hardship to require the tenant to extirpate. Perhaps in some cases it may be desirable to divide the expense between landlord and tenant.

286. In the case of Crown Lands do you think the Crown ought to bear the expense? I do, especially along the railway lines. I would point out that there is another class of weed, the common dock, that is now abounding along the railway lines, to the very great injury of the adjoining proprietary. I am now about to make representations to the Minister for Works on the subject.

287. Various descriptions of wild weeds are propagated through going to seed on the railway lines? No doubt, particularly the dock.

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288. Is it your opinion that the Government ought to eradicate noxious weeds on the public roads generally? I should like to consider that question. I think along the railway lines they certainly should, but I think the neighbourhoods along all but the main lines of road ought to keep them down—I think it would be too onerous upon the Government to require them to keep them down.
289. Supposing the law were to require proprietors to keep the roads clear abutting upon their own lands, do you think it would be a very great hardship? Certainly not.
290. *Mr. Farnell.*] This Bill provides for the destruction of the thistle and Bathurst-burr—Is the Bathurst-burr very injurious? It has not been so in our neighbourhood, but it might have been if we had not taken great pains to extirpate it whenever it made its appearance. For instance, if in the neighbourhood of Camden it is very troublesome we give the police a hint about it and get it put down in that way. All about our own property we keep it down for our own sake.
291. *Mr. Hoskins.*] Have the police power to interfere in the matter? In waste places they get it done, and we pay them for doing it.
292. The public do not pay? The public do not pay, but it is done. I cannot say what has taken place within the last few years, because I have not at all interfered with police duties. I speak merely of what we used to do.
293. *Mr. Farnell.*] Do people generally in your neighbourhood try to extirpate the thistle? I think not, unless they are compelled. I think there is a remarkable degree of carelessness throughout the country in permitting these weeds to propagate themselves.
294. The dock is very injurious to cultivation land? It is, especially in low moist situations. These are portions of the roots of two docks that were cut off about an inch below the collar and then treated with salt, about a fortnight ago; they were taken out of the ground last evening; they are quite killed. (*The witness produced the same.*) I cannot say the state of these plants at the extremities of their roots, because I had no opportunity of examining them. Any refuse salt is sufficient.
295. In what way does the salt affect the plant—is it by mixing with the sap? I suppose it is; it is evidently the case with the thistle. The true Scotch thistle has very long ramifying roots, and the first I saw after it was cut down, I was surprised to see young plants come up at a distance of a couple of yards from the original stem. The effect of the salt if applied in sufficient quantity, and that is not large, is to kill to the extremities of the roots.
296. Do you think that in any legislation upon this matter it would be well to include the dock? I certainly do.
297. Any other weeds? The sweet-brier and the wild cotton plant have also been suggested; they are all easily destroyed if people will only take them in time.
298. Do you know whether the wild cotton plant is a native of this Colony? It is a native of South Africa. I have heard the history of its introduction—it was sent here by the Duke of Northumberland, in the earliest period of the Colony, to Captain, afterwards Colonel Johnstone.
299. Do you not think a Bill less cumbersome than the present Bill before the Committee would serve all the purposes of legislation in this matter? I have not yet had an opportunity of examining the Bill.
300. I would call your attention to the 11th clause of the Bill? It certainly is a stringent measure.
301. Do you think it would be wise to give Municipalities the power contained in that clause? I should doubt it; the period of three years is a short period, and that of fourteen years is a very long period.
302. *Mr. Hoskins.*] The power is a very great power? Yes, still there should be some remedy. I cannot imagine there can be much land in the Colony for which the owner could not be found.
303. Do you think a Bill merely giving power to persons on adjoining lands to go on and extirpate these weeds without any pains and penalties would be sufficient? No. People are often very delicate about interfering with a neighbour with whom they may be on good terms. I have an instance present in my mind of a considerable proprietor who has been the means of propagating one of these weeds very extensively,—a person to whom every one wishes well, but who certainly has been very negligent in the matter, in spite of the warning that the weed would become a very great nuisance.
304. If we were to legislate in reference to private individuals—compelling private individuals to extirpate these weeds—that would be insufficient unless we made provision for the destruction of the weeds on railway lines and other public thoroughfares? Yes, we must provide for the destruction of weeds on the railway lines, and I do not think such legislation would affect the railway authorities in any perceptible degree—they have abundant strength for the performance of the work. The means of extirpation are simple—it is only to apply them in time.
305. The railway lines tend more to the spread of these weeds than the ordinary public roads, because they cut through cultivated land? Yes, and the loose earth in the embankments are very favourable indeed to the growth of these weeds. Anybody who travels must observe the luxuriant growth and flourishing condition of the weeds along the line. Then again, on the lines of road the weeds are kept very much under by stock travelling up and down.
306. Do cattle eat these thistles? I believe they do, but I cannot say from experience. I have no doubt the milk thistle would be eagerly eaten after it had withered—it is a nutritive plant; but I doubt whether the other could be applied to that purpose; it is a rigid hard plant, affording little that I can discover to nourish an animal.
307. *Mr. Lee.*] Is there a small thistle known in the county of Cumberland—I do not know its botanical name—which bears a small yellow flower, and does not grow very high—it is rather common in the north? I am not acquainted with it; I know only two varieties of thistle there.
308. *Mr. Farnell.*] Would you confine legislation on this subject to the counties of Camden and Cumberland at first? So far as I know, I think it is very desirable to limit legislation to the counties of Cumberland and Camden at first until a good measure has been perfected, and then it will be easy to extend it county by county.
309. Do you think it would be wise to insert a clause in the Bill empowering the Government to extend, by proclamation, the operation of the Act? I think it very desirable.
310. Do you know any other parts of the Colony besides the counties of Cumberland and Camden where this weed exists? Yes, it existed in abundance at Gundagai, in the district of the Murrumbidgee, some years ago, and no doubt it does still. They have it in abundance in other parts of the Colony also.
311. I think you have referred to one of these thistles as being nutritious to cattle—Do you know that that grows freely at Maneroo? I am not aware.

312. In the winter months, when the snow is heavy, the cattle live upon it? It is a south of Europe plant, and I think is not a native of England. I never saw it growing wild in England, but I quite recollect first meeting it when travelling in mid-Italy, in the Campagna at Rome. The Bathurst-burr you meet immediately you cross the Po, going south—not to the north of it.

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313. Do you know a grass known as knot grass? Yes.

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314. Is not that a great pest in cultivation? It is.

315. Do you think it necessary to include that in the Bill? I think not. It spreads chiefly by means of its roots. I do not think it necessary to interfere with that. That is also an introduced plant.

316. Do you know how long the thistles referred to have been introduced here? No, I do not. I first recollect to have seen the milk thistle, that is the annual plant, at the huts of a road party employed to make a road across the Razorback, about the year 1830 or 1831. I do not recollect to have seen it before. The other thistle, the *Cnicus arvensis*, or Scotch thistle, is comparatively a plant of recent introduction—it is not more than eight years since I first saw it in this country.

317. The eradication of these thistles would not be very expensive to the parties? I think not.

318. It would require some attention for a few years only? That is all, in my opinion.

319. *Mr. Lee.*] Although you have not perused this Bill, you have no doubt that it is desirable to legislate in reference to this subject? I have no doubt at all that it is desirable to legislate, but I think it requires a good deal of consideration. I should be very tender in dealing with the rights of individuals.

320. You have, from your own practical experience, told us that an easy and cheap remedy is at hand, supposing legislation should insist upon the destruction of these plants, by the application of common salt? Yes.

321. It would be very inexpensive? Yes, a large plant might be destroyed by a dessert-spoonful of common salt, but I maintain the people ought not to allow them, except by misadventure, to become large plants. If they would only use their eyes at the proper time they would not find them difficult to deal with.

322. You think it desirable not to legislate in reference to agreements entered into between tenant and landlord, or landlord and tenant? I think so. The landlord might be made responsible as a last resort, allowing him to carry out the arrangement between the tenant and himself. It was foreseeing the possibility of these weeds becoming troublesome that induced us to insert the clause in our leases to which I have referred.

323. In legislating for the destruction of the Bathurst-burr and thistle, do you think it desirable to encumber the Statute Book or to harass individuals, by including a number of other weeds, as the sweet-brier, the dock, and the wild cotton plant? I do not think the plants desirable to enumerate are very numerous.

324. Will you be good enough to name them? Two species of dock, and the sweet-brier—the wild cotton plant I think of much less importance, but it is so easily destroyed that it might be desirable to include that. I do not know any others, but others may arise, and it may be desirable to give the Government the power to include others than those named.

325. *Mr. Hoskins.*] May I assume that you are not disposed to express any opinion in favour of this Bill? I cannot say, as I have never read a line of it except the clause to which I have been referred—the 11th clause; and I should not like to say a word either for or against it, excepting that I am favourable to a compulsory measure for the destruction of these plants.

326. If you are in favour of such a measure of legislation, would you propose to carry out its provisions by having persons appointed by the Government to enforce the observance of such a law? I think it would not require to have a person whose sole duty should be to see that it was fulfilled. I very much question whether there would be any such necessity.

327. Will you be kind enough to state what you consider the best way to have the provisions of such a law as you have indicated carried out? I am not prepared to state any opinion just now. I should like to read the Bill.

328. Will you be kind enough to state how, in your opinion, the law should be most efficaciously administered? That is a question to which I am not prepared to give an immediate reply.

329. May I ask would you prefer to have the law efficiently administered by the agency of disinterested persons appointed by Government, or to leave it to the action of the landlords or tenants holding contiguous lands? I am not prepared to answer that question. I presume there is some provision in the Bill appointing persons to see to the destruction of these weeds. I see no objection to the appointment of inspectors, who should be set in motion by parties feeling aggrieved. I should like to preface that remark by saying that I decline to give any opinion at present as a final opinion.

330. Then I apprehend you will admit that even through the agency of these inspectors there would be to a certain extent an interference with the rights of private property? It would be impossible, it appears to me, to enforce the destruction of these weeds unless you do interfere; you must give the power of entry to somebody.

331. Of course I presume you have reflected that, to carry out the provisions of a law for the eradication of these weeds, would necessitate the expenditure of public money in the appointment of a staff of officers? I do not think it would require an extensive staff of officers.

332. The counties of Camden and Cumberland extend over a very large area—How would you propose that these officers should be paid? I have never considered the question, and should be sorry to answer it off-hand.

333. Admitting that there may be a necessity for legislation of this kind, as I may admit, you perceive, when you reflect upon the matter, the difficulties attendant upon carrying it out? I do not think—although I will not take upon myself to point out the exact mode—there need be any great difficulty in the matter.

334. Then again there is another point—In addition to the expense which would be incurred in the payment of the salaries of officers, there would be the further expense to the public in the eradication of weeds on the highways and roads of the Colony? I do not think there can be if you make the proprietors of the lands abutting upon the roads answerable.

335. Would there not be the expense for eradicating these weeds on Crown Lands, and Church and School Lands, now declared to be Crown Lands? On Church and School Lands Government may make the tenants responsible, as we do.

The Hon.
Sir W. Macar-
thur.

12 Nov., 1869.

336. Then if the Government do as you do, and yours is a private arrangement, would it not be an alteration of the conditions under which the present lessees hold lands from the Crown? I am not so sure that there is not an inherent right on the part of the landlord to require from the tenant that the land shall be surrendered over to him in a like good condition to that in which he received it.

337. *Mr. Lee.*] You spoke of the Crown? Yes, and the Crown stands in the position of the landlord.

338. *Mr. Hoskins.*] Is it your opinion that legislation of the character you have indicated to ensure the effectual eradication of weeds in the county of Cumberland should come into operation immediately the Bill has passed both Houses of Parliament? I think not, nor do I think it would be required, because the mischief is done very nearly, that is, it will be done in the course of another month—all the mischief the season is capable of doing. If brought into operation in six months' time I think it will be sufficiently effectual.

339. Do you think six months will be a sufficient notice? I think it will, quite so—it ought to be sufficient to enable every tenant to enter into arrangements with his landlord; and really if the destruction of these weeds was only set about generally, it would cost such a trifle that it does not deserve to be considered a serious difficulty. What makes it so troublesome is, that perhaps one person in fifty destroys them and the remaining forty-nine do not.

340. It has been given in evidence that in portions of the counties of Camden and Cumberland, during seasons of drought, thistles are cut down by the tenants of farms or landowners after a time and the cattle eat them—that in point of fact they form their only means of sustenance—Would it be advisable to deprive these people of the only food for their cattle in seasons of drought? Yes, because they might then grow plants much more nutritive which would answer the purpose better.

341. Would not that entail a very considerable additional expense upon these people in the maintenance of their stock? No, all the nutriment they could get from the thistle I am quite sure might be obtained by a very little reasonable outlay.

342. *Mr. Lee.*] By turnips? By many means—I do not specify any particular plant. Wherever the thistle will grow luxuriantly other plants much more useful may be made to grow. It is the sluggard's excuse, and I certainly would not encourage such excuse.

343. I gather from your answer that you are decidedly of opinion that the spread of these noxious weeds has arisen principally from negligence? Wholly from negligence.

344. *Mr. Farnell.*] With reference to the question asked as to the expense of inspection, do not you think the police could be appointed to perform the duty—it would not entail much additional trouble on them? Very little, and really they want something to do.

345. Therefore it would involve no additional charge upon the revenue? Very little extra charge.

346. They would be employed in this duty only in one part of the year? It would only be necessary to be vigilant at one particular part of the year.

347. As it is their duty to be moving about, it would not entail any extra trouble upon them? Very little.

CUMBERLAND AND CAMDEN BATHURST-BURR AND THISTLE BILL.

APPENDIX.

A.

Clements Lester, Esq., to S. Lyons, Esq., M.P.

Denham Court,
1 November, 1869.

My dear Sir,

I have been requested by the Clerk of the Assembly to attend to give evidence on the Thistle Bill, on Wednesday next, but as it will entail considerable loss to me to attend this week, and put me to considerable inconvenience, I beg to state my objections to the Bill in writing, more particularly as I have a definite proposition to make to the Committee in lieu of the propositions contained in the Bill.

I agree with Mr. Roberts that it is absolutely necessary that something should be done to eradicate the plant, which is becoming a very serious pest, and will in a few years render thousands of acres of land in this Colony useless; but if his Bill be passed in its present shape, and carried out strictly, it will be attended with the grossest injustice and the greatest oppression to individuals, and in many cases lead to the confiscation of property.

- Objection 1st. It will place landlords completely at the mercy of their tenants—for the Bill does not give landlords power to go on to the tenant's land to eradicate the plant, but compels the tenant to do it, and gives him the power to deduct the cost out of his rent. Now an unscrupulous tenant with several sons might make an excellent living out of such a clause, for the law would allow 5s. a day for a labourer's wages, and the landlord would have no check against the tenant as to the number of days it might take to destroy the plant, for he would not be in a position to contradict him, thereby not only losing all his rent but brought into debt, and that not only for one year but for as long as the tenant's lease lasts; for they will find it too good a thing to let the plant die out too soon, and will doubtless *save a few seeds* to have something to do the following year.
- 2nd. That many estates are so thoroughly overrun with the thistle that neither the tenant or the landlord might be in a position to engage labour to eradicate it—especially within fourteen days—and probably in some cases not in several years, for I believe the seed will lie in the ground for several years without germinating, and then spring up.
- 3rd. That Courts of Petty Sessions are not the proper places to have the provisions of the Act carried out, for the Magistrates themselves in nine cases out of ten would be the parties against whom informations ought to be laid, being generally the greatest landholders in the various districts to which this Act extends—consequently the Act in many places would not be acted upon.
- 4th. The 2nd clause virtually gives the power to any two Magistrates to oppress and in many cases to ruin any individual who may have a large estate infested with this plant; for on an estate like the one I occupy, where deep gullies and rocky ravines exist, and where it would be difficult for a man to crawl into, but where nevertheless the thistle finds its way, it would be exceedingly difficult wholly to eradicate it, and it is quite possible for half a dozen men to be parading the run for a year to destroy them and then fail to do so; and this Bill renders the owner liable to a fine of £20 every thirty days, on the information of *any person* who by diligent search might spy a thistle growing, even let it be in ever so an inaccessible place.
- 5th. The 3rd clause is not sufficient to protect any person against whom any Magistrate has any ill feeling, and no Act of Parliament should put it in the power of any two men to inflict such an irreparable injury as is given in this Bill.
- 6th. There is nothing in this Bill to show on whom the fine is to be inflicted—whether on the tenant or landlord; but by the 4th clause it is to be presumed that the tenant is to be ruined first by successive £20 fines every thirty days, and having annihilated him the landlord is to be served the same way. But perhaps the most objectionable feature in the whole Bill is that no power is given to the owner to go on to the tenant's land (for he has no power by the common law) but is to be made liable to have his estate confiscated by the neglect or wilful misconduct of his tenant, who in the stead of eradicating might wilfully propagate it, knowing that the cost of destroying it would ultimately fall on his landlord.

These are my principal objections to the Bill, and to obviate them I beg respectfully to submit to the Committee the following suggestions for consideration:—

- 1st. Let a proclamation be made by the Government giving notice to all landholders to destroy the Bathurst-burr and thistle (and I would suggest the cotton plant and sweet-brier) within twelve months from the date of the proclamation.
- 2nd. At the end of that period let the Government appoint Inspectors, giving them power to employ labour to eradicate the plant.
- 3rd. Let the whole cost of this proceeding be made a rent charge on the land operated upon, to spread over a period of ten years.
- 4th. Let the owner or occupier receive a written notice from the Government of the cost incurred in eradicating the plant from his land—including Inspector's salary, interest on money, &c., &c., and demand that one-tenth part be paid into the Treasury every year for ten years, and in default make him liable to a fine of £10 per cent. on the amount due for neglect, and give the Government the power to distrain for the same as for rent; and if not sufficient distress found, let a portion of the freehold be sold—giving the tenant his remedy against his landlord for loss. By this means the obnoxious plant may be thoroughly eradicated, and the cost will fall on the parties beneficially interested, and without being oppressive to any; those who have hitherto been the most neglectful in allowing the plant to spread will be the greatest sufferers, but in no case could any injustice be done, or any hardship or oppression take place.

Yours faithfully,
CLEMENTS LESTER.

W. R. Antill, Esq., to James Hoskins, Esq., M.P.

Abbotsford, Picton,
28 October, 1869.

Dear Sir,

Being deeply concerned in the Bill now before Parliament for the destruction of the Bathurst-burr and thistle, I trust you will allow me to trouble you with a few remarks upon the subject. Should Mr. Roberts' Bill become law, it would be almost ruin to me and many others who hold land in this neighbourhood.

When I bought this place (Abbotsford), four years ago, I endeavoured to keep the thistles down, but found it quite impossible to do so, as there were hundreds of acres literally covered with them; all I could do was to have them cut up in the cultivation paddocks twice a year. Since then they have been multiplying themselves on the bush land to an enormous extent. Many parts of the bush are covered with land-slips, and on these places the thistles take such hold and increase so rapidly that it is now impossible to eradicate them. It would cost an incalculable sum to cut them up *one* year, but even cutting them up one year would be useless, as the seeds lie in the ground for years, and I am certain that if they were cut up for eight or ten years without allowing any to seed they would not then be exterminated.

I have fourteen or fifteen tenants, many of them poor men who have much difficulty in living at all, and if they were called upon to destroy them they could not possibly do it.

My brother has had them cut up on his land for ten years or more and has never allowed them to seed, yet last year it took several men two months to cut them up. There are the Church and School lands here which have many hundreds of acres of them as thick as they can grow. How could these be cleared? It must be remembered that each individual thistle must be cut up, if at all, by the hoe, so the expense either to the Government or to the tenants would be very great. To the latter it would be a great hardship, as their leases expire at the end of next year, so they would derive no benefit from the cost. It is the same with almost every holder of land about here and all the lower part of the county.

It is all very well for the people about Sutton Forest, Nattai, &c., to petition in favour of the Bill—they having perhaps a few score on their land or none at all, but with us the expense would be most oppressive. Include the sweet-brier, and some of them would alter their cry about the necessity of the Bill. This bush is more injurious than any other in the Colony except the Bathurst-burr; in some fields I have seen about different parts of the county a rabbit could scarcely pass through. The birds carry the seeds about in all directions.

With regard to the Bathurst-burrs the case is widely different. Their appearance down the country is comparatively recent, and consequently the numbers are few except in the towns of Parramatta, Campbelltown, &c. They therefore could be easily destroyed, and as very few bullock teams from up the country now visit these counties, they could at very small cost be kept down. It is by the hair of the bullocks and horses the burrs are carried about.

Many small farmers use the Scotch thistle (so called) for feeding their cattle and pigs in winter and drought.

May I request you will kindly bring these remarks before the Committee, and oblige—

Yours faithfully,
W. R. ANTILL.

1869.

LEGISLATIVE ASSEMBLY.
NEW SOUTH WALES.

FRIENDLY SOCIETIES.
(RETURN RESPECTING.)

Ordered by the Legislative Assembly to be Printed, 19 October, 1869.

RETURN to an *Address* of the Honorable the Legislative Assembly of New South Wales, dated 10 March, 1868, praying that His Excellency the Governor would be pleased to cause to be laid upon the Table of this House,—

“ A tabular Return showing—

“ (1.) The names of all Societies certified under the Friendly Societies Act,
“ the date of certificate, the amount of fees, and to what fund placed.

“ (2.) A similar Return of all Branch Societies.

“ (3.) A similar Return of all alterations or amendments in the Rules of
“ these Societies or Branches thereof.”

(*Mr. Sutherland.*)

FRIENDLY SOCIETIES.

No.	Name of Society or Branch.	Nature of Document.	Date of Certificate.
1	Third Australian Building Investment and Benefit Society.....	Rules.....	— 1854.
2	Sydney District Grand United Order of Odd-fellows.....	Amended rules.....	10 May, 1854.
3	Australian District of the Ancient Order of Foresters, Friendly Society ...	Do.	22 Nov., 1854.
4	Sydney Land and Benefit Building Society.....	Do.	24 Nov., 1854.
5	Court Sydney Branch No. 2,001 of the Australian District of the Ancient Order of Foresters.	Do.	22 Mar., 1855.
6	Australian Benefit Investment and Building Society.....	Alteration in rule.....	— 1855.
7	Mutual Building and Investment Society.....	Rules.....	14 April, 1855.
8	Second Australian Benefit Investment and Building Society.....	Alteration in rules ...	26 April, 1855.
9	Shipwright and Boat-builders' Provident Union and Literary Institute ...	Rules.....	— 1855.
10	Court Old England, an auxiliary branch of the Australian District of the Ancient Order of Foresters.	Amended rules.....	15 May, 1855.
11	Sydney Land and Benefit Building Society.....	Alteration in rules ...	28 July, 1855.
12	Court Royal Oak No. 2,222 of the Ancient Order of Foresters.....	Rules.....	— Oct., 1855.
13	Third Australian Benefit Investment and Building Society.....	New rule.....	— Nov., 1855.
14	The Fireman and Coal-trimmers' Benevolent Society.....	Rules.....	8 Dec., 1855.
15	Moreton Bay Benefit Investment and Building Society.....	Do.	31 Dec., 1855.
16	Ipswich Equitable Investment and Building Society.....	Do.	16 Oct., 1856.
17	New South Wales Investment and Building Society.....	Do.	17 Oct., 1856.
18	Ipswich Mutual Benefit Investment and Building Society.....	Do.	18 Oct., 1856.
19	Sydney District Grand United Order of Odd-fellows.....	New rule.....	30 Oct., 1856.
20	Court Morning Star, No. 2,002, an auxiliary branch of the Australian District of the Ancient Order of Foresters.	Rules.....	24 Feb., 1857.
21	Ancient Order of Royal Foresters.....	Do.	16 May, 1857.
22	Fireman and Coal-trimmers' Benevolent Society.....	Amended rules.....	2 June, 1857.
23	Court Ancient City of Lincoln No. 2,000 of the Ancient Order of Foresters	Rules.....	26 April, 1857.
24	Albury Building and Investment Society.....	Do.	13 Oct., 1857.
25	Australian Union Benefit Society.....	Revised rules.....	do.
26	Atlas Investment and Building Society.....	Rules.....	13 April, 1858.
27	United Waterman's Benefit Society.....	Do.	27 April, 1858.
28	New South Wales Independent Order of Odd-fellows, Manchester Unity, Friendly Society.	Do.	30 April, 1858.
29	Court Robin Hood No. 2,223 of the Ancient Order of Foresters.....	Do.	31 May, 1858.
30	Third Australian Benefit Investment and Building Society.....	New rule.....	— 1858.
31	Hebrew Mutual Benefit Society.....	Rules.....	3 Aug., 1858.
32	New South Wales Ancient Order of Foresters Friendly Society.....	Do.	17 Nov., 1858.
33	Moreton Bay Benefit Investment Building Society.....	Do.	— 1859.
34	Australasian Holy Catholic Guild of Saint Mary and Saint Joseph.....	Reformed rules.....	4 July, 1859.
35	Union Investment and Building Society.....	Rules.....	25 July, 1859.
36	Brisbane Co-operative Society.....	Do.	12 Aug., 1859.
37	Sydney District Branch Independent Order of Odd-fellows Manchester Unity Friendly Society.	Do.	30 July, 1859.
38	Court Sydney Branch No. 2,001 of the Foresters Friendly Society.....	Do.	25 Aug., 1859.
39	Court Old England, an auxiliary branch of the New South Wales District of the Ancient Order of Foresters.	Revised rules.....	25 Aug., 1859.
40	Loyal United Brothers Lodge No. 3,592 of the Independent Order of Odd-fellows Manchester Unity.	Rules.....	— Oct., 1859.
41	Australian Union Benefit Society.....	Amended rules.....	17 Jan., 1860.
42	Loyal Fountain of Refuge Lodge No. 3,369 Independent Order of Odd- fellows Manchester Unity.	Rules.....	14 Mar., 1860.
43	Third Australian Benefit Investment and Building Society.....	Additional rule.....	11 April, 1860.
44	Court Morning Star No. 2,002, an auxiliary branch of the New South Wales District of the Ancient Order of Foresters.	Revised rules.....	4 May, 1860.
45	Saint Benedict's Roman Catholic Benefit Society.....	Rules.....	12 Jan., 1860.
46	United Waterman's Benefit Society.....	Alteration in rules ...	19 July, 1860.
47	Loyal Strangers' Refuge Lodge Independent Order of Odd-fellows No. 2,433 Manchester Unity.	Rules.....	27 June, 1861.
48	Protestant Alliance Friendly Society.....	Do.	30 July, 1861.
49	Sons of Perseverance Lodge Friendly Society.....	Do.	2 Sept., 1861.
50	Court Pride of Australia No. 2,488 auxiliary branch of Australian District of the Ancient Order of Foresters.	Do.	2 Sept., 1861.
51	Court Royal Oak No. 2,222 Ancient Order of Foresters.....	Do.	20 Nov., 1861.
52	New South Wales District of the Ancient Order of Foresters.....	Additional rules.....	11 Jan., 1862.
53	Loyal Albert Lodge No. 4,196 Independent Order of Odd-fellows Man- chester Unity Friendly Society.	Rules.....	19 Mar., 1862.
54	The Shipwrights' Provident Union and Literary Institute.....	Do.	20 Oct., 1862.
55	Loyal Balmain Lodge No. 4,329 Independent Order of Odd-fellows Manchester Unity.	Do.	4 Nov., 1862.
56	New South Wales District of the Ancient Order of Foresters Friendly Society.	Alteration in rules ...	12 Nov., 1862.
57	Loyal Prince of Wales Lodge No. 4,036 Branch of Sydney District of the Independent Order of Odd-fellows.	Rules.....	26 Nov., 1862.
58	New South Wales Independent Order of Odd-fellows Manchester Unity	Do.	16 Mar., 1863.
59	New South Wales United Operative Bakers' Friendly Society.....	Do.	26 Mar., 1863.
60	Sydney District Grand United Order of Odd-fellows.....	Alteration in rules ...	13 May, 1863.
61	Saint Patrick's Branch of the Australasian Holy Catholic Guild of Saint Mary and Saint Joseph.	Reformed rules.....	12 June, 1863.
62	Loyal Strangers' Refuge Lodge No. 2,433 Independent Order of Odd- fellows Manchester Unity.	Rules.....	12 June, 1863.
63	Phoenix Investment and Building Society.....	Do.	29 Aug., 1863.
64	Wesleyan or Protestant Union Benefit Society.....	Amended rules.....	24 Sept., 1863.

No.	Name of Society or Branch.	Nature of Document.	Date of Certificate.
65	Original Travellers' Home Lodge No. 731 Friendly Society	Amended rules.....	20 Oct., 1863.
66	Loyal United Brothers' Lodge No. 3,592 Independent Order of Odd-fellows Manchester Unity Friendly Society.	Do.	— Nov., 1863.
67	New South Wales District of the Ancient Order of Foresters	Do.	25 Feb., 1864.
68	Sydney District Branch Independent Order of Odd-fellows Manchester Unity.	Rules,	2 April, 1864.
69	Phoenix Investment and Building Society	Amended rules.....	11 May, 1864.
70	Loyal Fountain of Refuge Lodge No. 3,369 Independent Order of Odd-fellows.	Do.	2 Sept., 1864.
71	Loyal Victoria Lodge No. 3,932 Independent Order of Odd-fellows Manchester Unity.	Rules	19 Sept., 1864.
72	Sydney Operative Painters' Society.....	Do.	20 Oct., 1864.
73	Good Samaritan No. 3 Division of the Sons of Temperance	Do.	24 Nov., 1864.
74	Sydney General Co-operative Society (Limited)	Do.	28 Nov., 1864.
75	Court Robin Hood No. 2,223 New South Wales District of the Ancient Order of Foresters.	Amended rules.....	20 Feb., 1865.
76	Alliance Investment and Building Society.....	Rules	19 April, 1865.
77	Rose of Australia No. 2 Division of the Sons of Temperance	Do.	27 April, 1865.
78	Wandering Minstrel Lodge No. 2,079 Sydney District Independent Order of Odd-fellows Manchester Unity.	Amended rules.....	30 May, 1865.
79	City and Suburban Building and Investment Society	Rules	30 Sept., 1865.
80	Mutual Benefit Building Society.....	Do.	24 Jan., 1866.
81	Court Ancient City of Lincoln No. 2,000 New South Wales District of the Ancient Order of Foresters.	Amended rules.....	27 Feb., 1866.
82	Loyal Balmain Lodge No. 4,329 Independent Order of Odd-fellows Manchester Unity.	Rules	27 Feb., 1866.
83	Widows and Orphans Society of the New South Wales District of the Ancient Order of Foresters.	Do.	28 Feb., 1866.
84	Sydney United Laborers' Benefit Society	Do.	16 Mar., 1866.
85	Most Ancient Order of Royal Foresters in New South Wales	Do.	13 July, 1866.
86	Ancient Order of Royal Foresters	Amended rules.....	4 Sept., 1866.
87	Australian Permanent Building and Investment Society.....	Rules	26 Sept., 1866.
88	Loyal St. John's Lodge No. 3,931 Independent Order of Odd-fellows (Limited)	Amended rules.....	19 Oct., 1866.
89	German Association	Rules	16 Nov., 1866.
90	Ancient Order of Foresters, New South Wales District	Amended rules.....	8 Dec., 1866.
91	Protestant Alliance Friendly Society	Do.	29 Jan., 1867.
92	Australasian Holy Catholic Guild of Saint Mary and Saint Joseph	Do.	31 Jan., 1867.
93	Original Travellers' Home Lodge No. 731 Grand United Order of Odd-fellows.	Do.	6 Feb., 1867.
94	Mutual Benefit Building Society.....	Do.	13 Feb., 1867.
95	Loyal Mariners' Rest Lodge.....	Alteration in rule.....	12 Dec., 1866.
96	Hand of Friendship No. 10 Division Sons of Temperance	Rules	23 Mar., 1867.
97	Court of Prince of Wales No. 3,126 of the Ancient Order of Foresters Friendly Society.	Do.	12 April, 1867.
98	Australasian Holy Catholic Guild of Saint Mary and Saint Joseph	Amended rules.....	6 April, 1867.
99	Saint Patrick's Branch of the Australasian Holy Catholic Guild of Saint Mary and Saint Joseph, Parramatta.	Do.	5 June, 1867.
100	Court Old England, an auxiliary branch of the New South Wales District of the Independent Order of Odd-fellows.	Do.	15 Aug., 1867.
101	Star of Hope Division No. 14 Sons of Temperance	Rules	9 Sept., 1867.
102	New South Wales Independent Order of Odd-fellows Manchester Unity	Amended rules.....	6 Nov., 1867.
103	Loyal Rose of Denmark Lodge No. 39 Independent Order of Odd-fellows	Rules	19 Nov., 1867.
104	Loyal Ryde United Friends Lodge No. 48 Independent Order of Odd-fellows Manchester Unity.	Do.	21 Nov., 1867.
105	City and Suburban Building and Investment Society	Amended rules.....	20 Jan., 1868.
106	Court Loyal Oak No. 2,222 Ancient Order of Foresters	New rules.....	13 Feb., 1868.
107	United Friends Society.....	Amended rules.....	11 May, 1868.

Fees for Certificate.

Under the 8th section of the Friendly Societies Act, 17 Vict., No. 26, for every certificate of rules of any Friendly Society, a fee of five guineas shall be paid to the Attorney General or Barrister certifying; and for every certificate of rules of any branch of such Society, a fee of five guineas; and for every certificate of amendment, repeal, or alteration of rules of any Society, or branch, a fee of three guineas shall be paid.—W.E.P.

(1.)

RETURN of all Societies certified under the Friendly Societies Act in the Southern District, the dates of Certificates, the amount of Fees, and to what Fund placed.

Names.	Dates of Certificates.	Amount of Fees.	To what Fund placed.
Argyle Provident Benefit Building and Investment Society	21 Jan., 1859 ...	.....	.....
Gundagai Benevolent Society	31 Aug., 1860 ...	.....	.....
Union Dalton Benefit Society	25 May, 1864 ...	.....	.....

TEMPLE F. NATHAN,
Clerk of the Peace, Southern District.

(2.)

4

(2.)

RETURN of all Branch Societies certified under the Friendly Societies Act in the Southern District, the dates of Certificates, the amount of Fees, and to what Fund placed.

Names.	Dates of Certificates.	Amount of Fees.	To what Fund placed.
Independent Order of Odd-fellows, Manchester Unity, Friendly Society.	17 July, 1861 ...	.....	.....
Do. Loyal Burrangong Lodge, No. 29.....	7 Nov., 1864 ...	.....	.....
Star of South Division, No. 19, Sons of Temperance, Camden	26 Mar., 1868 ...	.....	.....

TEMPLE F. NATHAN,
Clerk of the Peace, Southern District.

(3.)

RETURN of the names of all Friendly Societies certified under the Friendly Societies Act in the Southern District, in which alterations and amendments in the rules have also been certified, the dates of Certificates of alterations and amendments, the amount of Fees, and to what Fund placed.

Names.	Dates of Certificates of Alterations.	Fees.	To what Fund placed.
Argyle Provident Benefit Building and Investment Society.....	25 Feb., 1862 ...	.....	.....
Same	13 July, 1863 ...	.....	.....
Independent Order of Odd-fellows, Manchester Unity, Friendly Society (Branch).	20 Nov., 1866 ...	.....	.....

TEMPLE F. NATHAN,
Clerk of the Peace, Southern District.

Fees for Certificates under 8th section of Friendly Societies Act, 17th Vict., No. 26.

For every certificate of rules of any Friendly Society, a fee of five guineas shall be paid to the Attorney General or Barrister certifying; and for every certificate of rules of any branch of such Society, a fee of five guineas; and for every certificate of amendment, repeal, or alteration of rules of any Society or branch, a fee of three guineas shall be paid.—W.E.P.

RETURN of Friendly Societies.

The names of all Societies certified under the Friendly Societies Act, the date of Certificate, the amount of Fees, and to what Fund placed.	A similar return of all Branch Societies.	A similar Return of the number of all alterations or amendments in the rules of these Societies, or branches thereof.
The Grafton Investment and Building Society, 23rd November, 1860. Odd-fellows Manchester Unity Friendly Society, 15th November, 1861. Odd-fellows Manchester Unity Friendly Society, 1st August, 1862. Odd-fellows Manchester Unity Friendly Society, 2nd December, 1863. The Hunter Building and Investment Society, 4th December, 1863. Maitland Building and Investment Society, 1st November, 1864. Odd-fellows Manchester Unity Friendly Society, 2nd November, 1864. Odd-fellows Manchester Unity Friendly Society, 16th August, 1864. Odd-fellows Manchester Unity Friendly Society, 21st November, 1866. Northumberland Building and Investment Society, 19th November, 1866. Lambton Co-operative Society, 6th February, 1867. Order of Foresters, 11th October, 1867. Happy Day Division of Sons of Temperance, 31st January, 1868. Newcastle District Branch of the Order of Druids, 21st March, 1868. United Building Investment and Loan Society of Maitland, 23rd March, 1868.	Rules of St. John the Baptist Branch of the Australasian Holy Catholic Guild, West Maitland, 23rd May, 1867. Newcastle Rules of St. Mary Star of the Sea Branch of the Australasian Holy Catholic Guild, 9th August, 1867.	Newcastle Investment and Building Society, 8th June, 1866. Odd-fellows M.U.I. Hunter River District Branch, 14th September, 1865.

AUG. CARTER,
Clerk of the Peace, H. R. District.

Fees to be paid for Certificates under 17 Vic., No. 26.

Clause 8.—For every such certificate of rules of any Friendly Society, a fee of five guineas shall be paid to the said Attorney General or Barrister so certifying; and for every certificate of rules of any branch of such Society, a fee of five guineas; and for every certificate of amendment, repeal, or alteration of rules of any Society or branch, a fee of three guineas shall be paid.—W.E.P.

(No. 1.)

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(No. 1.)

THE Names of all Societies certified under the Friendly Societies Act, the date of the Certificate, the amount of Fees, and to what Fund placed.

In the Western Districts.

Nil.

A true Return.

T. CHARLES GORE,
Clerk of the Peace.

(No. 2.)

THE Names of all Branch Societies certified under the Friendly Societies Act, the date of Certificate, the amount of Fees, and to what Fund placed.

Names of Branch Societies.	Date of Certificate.	Amount of Fees, and to what Fund placed.
1. Bathurst District Branch of the Independent Order of Odd-fellows, Manchester Unity, Friendly Society.	16th July, 1864.	No fees paid to me— T. CHARLES GORE.
2. Loyal Kincora Lodge, No. 4,195, auxiliary branch of the Bathurst District of the Independent Order of Odd-fellows, Manchester Unity, Friendly Society.	19th September, 1864.	
3. Loyal Sovereign Lodge, No. 4,693, auxiliary branch of the Sydney District of the Independent Order of Odd-fellows, Manchester Unity, Friendly Society.	7th November, 1864.	

A true Return for the Western Districts.

T. CHARLES GORE,
Clerk of the Peace.

(No. 3.)

A RETURN of the Number of all alterations or amendments in the rules of all Societies or Branch Societies certified under the Friendly Societies Act, the date of Certificate, the amount of Fees, and to what Fund placed.

In the Western Districts.

Nil.

A true Return.

T. CHARLES GORE,
Clerk of the Peace.

Fees for Certificates under the 8th section of the Friendly Societies Act, 17 Vict., No. 26.

For every certificate of rules of any Friendly Society, a fee of five guineas shall be paid to the said Attorney General or Barrister so certifying; and for every certificate of rules of any branch of such Society, a fee of five guineas; and for every certificate of amendment or alteration of rules of any Society or branch, a fee of three guineas shall be paid.—W.E.P.

THE CLERK OF THE PEACE, ALBURY, to THE UNDER SECRETARY, CROWN LAW OFFICES.

South-western District,
Albury, 31 March, 1868.

SIR,

In compliance with your circular (No. 4) of 23rd instant, I have the honor to inform you that the following are the names of all Societies certified under the Friendly Societies Act whose rules have been lodged with me, viz. :—

- The Loyal Albury Lodge, No. 4963, Goulburn District, Independent Order of Odd-fellows, Manchester Unity; certified 30 July, 1861. 44 amended rules, certified 30 September, 1867.
The Loyal Southern Star Lodge, No. 34, Wagga Wagga, Independent Order of Odd-fellows, Manchester Unity; certified 14 November, 1864—and
The Loyal True Briton Lodge, No. 40, Deniliquin, of the Manchester Unity, Independent Order of Odd-fellows; certified 18 February, 1867.

I cannot supply the information required relative to fees, as no returns have ever been made to me.

I have, &c.,
H. S. ELLIOTT,
Clerk of the Peace.

Fees for Certificates.

Under 8th section of Friendly Societies Act, 17 Vict., No. 26, a fee of five guineas is required to be paid to the Attorney General or Barrister certifying; and for every certificate of rules of any branch of such Society, a fee of five guineas; for every certificate of amendment, repeal, or alteration of rules of any Society or branch, a fee of three guineas is required to be paid.—W.E.P.

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A RETURN of the Friendly Societies in the Northern District, filed in Clerk of the Peace's Office at Armidale.

Name of Society.	Date of Certificate by Attorney General.	
Loyal True Friendship Lodge, No. 4840, Tamworth	10 October, 1862.	No fees of any kind have been received by me—ROB. I. PERROTT.
By-laws of Loyal True Friendship Lodge, No. 4840, Tamworth.	18 February, 1867.	
Loyal Star of the East Lodge, Grafton, amended laws	11 June, 1866.	
Loyal New England Lodge By-laws	26 November, 1867.	

Clerk of the Peace's Office,
Armidale, 28 March, 1868.

ROB. I. PERROTT,
Clerk of the Peace,
Northern District.

Fees for Certificate.

Under the 8th section of Friendly Societies Act, 17 Vict., No. 26, for every certificate of rules of any Friendly Society a fee of five guineas shall be paid to the Attorney General or Barrister certifying; and for every certificate of rules of any branch of such Society, a fee of five guineas; and for every certificate of amendment, repeal, or alteration of rules of any Society or branch, a fee of three guineas shall be paid.—W.E.P.

1869.

LEGISLATIVE ASSEMBLY.
NEW SOUTH WALES.

REGISTRAR GENERAL'S OFFICE.
(CORRESPONDENCE RESPECTING.)

Ordered by the Legislative Assembly to be Printed, 19 October, 1869.

RETURN to an *Order* made by the Honorable the Legislative Assembly of New South Wales, dated 1st October, 1869, That there be laid upon the Table of this House,—

“ Copies of Correspondence and of Documents in reference to the Registrar General's Office being closed on the 27th March last, in violation of the “ Act 7 Victoria, No. 16.”

(Mr. J. Stewart.)

SCHEDULE.

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2.	Registrar General to Principal Under Secretary. 30 March, 1869	2
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REGISTRAR GENERAL'S OFFICE.

No. 1.

MESSRS. FITZHARDINGE & SON to THE COLONIAL SECRETARY.

117, King-street East,
Saturday, 27 March, 1869.

SIR,

We complain that the Registrar General did not this day open the Office for the Registration of Deeds, &c., but closed the same, contrary to the express provision of the Act of Council establishing that office.

That Act, 7 Vict., No. 16, at section 3 provides as follows:—"And the said office shall be kept open for the transaction of the business thereof for not less than six hours, beginning at the hour of 10 in the forenoon on all days throughout the year (Sunday, Christmas Day, and Good Friday excepted)."

The Registrar General cannot plead ignorance of the law, because he has been in that office all his (official) life, and knows that his predecessor, Mr. Alfred Elyard, never closed the office except on the days allowed by the Act.

We have sustained injury by the office being closed. On Friday and this day we received deeds by the post from the country to be registered and returned this day. By same posts we also received instructions to search for incumbrances. Two gentlemen came from the country expressly to conclude a heavy mortgage,—but all business was illegally delayed by the closing of the Office for Registration of Deeds, &c.

You will be kind enough to consider this as a formal complaint, to be laid before the Executive Council, in order that, if the Honorable Members of the Council see fit, the Registrar General may be called upon to show cause why his infraction of the law should not be punished.

We have, &c.,
FITZHARDINGE & SON,
Attorneys of the Supreme Court.

No. 2.

THE REGISTRAR GENERAL to THE PRINCIPAL UNDER SECRETARY.

Registrar General's Office,
30 March, 1869.

SIR,

In reply to Mr. J. Stewart's question as to why the Registrar General's Office was closed on Saturday last, the day following Good Friday,—I have the honor to state, for the information of the Hon. the Principal Secretary, that seeing in last Tuesday's *Gazette* the notice that the Government Departments would be closed for the Easter holidays, from Friday the 26th to Monday the 29th, inclusively, and with a desire to enable the gentlemen to attend the laying of the foundation stone for the "Cook's Statue," I gave permission to close the department on those days. I might also observe, that for the past three years no business has been done in this office on the day following Good Friday. Proclaimed holidays, such for instance as the Queen's Birthday, have heretofore been observed as holidays in this department.

I have, &c.,
THEO. JAS. JAQUES,
Registrar General.

No. 3.

THE REGISTRAR GENERAL to THE PRINCIPAL UNDER SECRETARY.

Registrar General's Office,
Sydney, 28 April, 1869.

SIR,

Since my conversation with the Honorable the Colonial Secretary upon the subject of the closing of this department on other days than those mentioned in the Act 7 Victoria, No. 16, namely, Christmas Day and Good Friday, I have looked more carefully into the various Acts of Council regulating this office and for making provisions for the performance of the duties thereof, and would beg to submit for the consideration of the Chief Secretary whether since the passing of the Act 13 Victoria, No. 45, an Act to abolish the office of Registrar General and to make provision for Registration of Deeds, &c., this department as now constituted is not on the same footing as the other offices under the supervision and control of the Honorable the Colonial Secretary.

My reasons for arguing that the restrictions of the 3rd clause of the Act 7 Victoria, No. 16, are not now in operation, are on the following grounds:—In the year 1844 by Act 7 Victoria, No. 16, section 3, a public office to be called the Office of the Registrar General was established for the registration of deeds and for other duties, and the office was by the same section required to be kept open for the transaction of the business thereof for not less than six hours, beginning at the hour of 10 in the forenoon on all days throughout the year (Sundays, Christmas Day, and Good Friday excepted). In 1849 the

Act

Act 13 Victoria, No. 45, an Act to abolish the office of Registrar General and to make further provision for the registration of deeds and other instruments, was passed, and by the fourth section thereof the Registrar General was required on the 1st January, 1850, to deliver to certain officers of the Supreme Court all and singular the records, &c., which had been kept in the office of the Registrar General, and by the second section of the said Act certain officers of the Supreme Court were nominated to the duties of the office of Registrar General. The Act 19 Victoria, No. 34, passed in 1855, enacted by the second clause that the Governor may establish by notice in the *Gazette* an office in the City of Sydney for registering births, marriages, and deaths in the Colony, and to appoint a person to be called the Registrar General. This Act was passed and the office created while the registration of deeds was attached to the Supreme Court; and in 1857 (2 years after the passing of the above Act) by the Act 20 Victoria, No. 27, the duties of registering deeds, &c., were transferred to the Registrar General, and the instruments of all kinds and the indexes were delivered up to the Registrar General.

I submit that the office created under the Act 7 Victoria, No. 16, being abolished, and provisions being made for the performance of the duties by the officers of the Supreme Court (and which Court being established by Charter without restriction as to its being kept open on all days), the restriction in the Act 7 Victoria, No. 16, did not attach to those officers of the Court nominated to perform the duties of registering deeds, and that if those restrictions then ceased the transferring the duties to a new office, namely, the General Registry Office for Births, &c. (established 2 years before such transfer from the Supreme Court), did not revise the condition mentioned in the Act 7 Victoria, No. 16.

No doubt some inconvenience might arise by the constant closing of the office on proclaimed holidays; but on such days as the Queen's Birthday and the Anniversary of the Colony, solicitors would doubtless register urgent deeds on the days preceding; and as since the first closing of the office on Saturdays no inconvenience whatever has been felt, I would beg to submit, for the consideration of the Honorable the Colonial Secretary, whether the closing of the office on Saturdays at 1 o'clock might not still be continued.

I have the honor to request the favor of your laying this communication before the Hon. the Colonial Secretary, and if necessary that the opinion of the Law Officers of the Crown may be obtained as to the right of closing this office on other days than Sundays, Christmas Day, and Good Friday.

I have, &c.,

THEO. JAS. JAQUES,
Registrar General.

No. 4.

Crown Law Officers. JOHN R.—30th April, 1869.

The Under Secretary to the Law Department, B.C., 30th April, 1869.—H.H.

No. 5.

THE ATTORNEY GENERAL to THE PRINCIPAL UNDER SECRETARY.

The Registry of Deeds Office.

UPON examination of the Acts I am of opinion that the Registrar General is bound to keep the Office for the Registration of Deeds open, in accordance with the requirements of 7th Vict., No. 16.

The later Acts, though changing the officers and Office for the Registration of Deeds, makes no change in the duties of the former, or the regulation of the other, in respect of the days and hours for keeping the office open, but simply transfer all the duties from one officer and office to another.

W. M. MANNING,
Attorney General.

B.C., 11th May, 1869.—W.E.P.

Crown Law Offices, Sydney.

MEMO. relative to closing Registrar General's Department on Proclaimed Holidays.

WILL the Registrar General have the goodness to state, for the information of the Hon. the Attorney General, whether there are general provisions of transfer of duties, which include the keeping the office open for the original hours and days? See the Acts 13 Vict., No. 45, recital, sect. 1, "all the duties," secs. 2 and 5; also 20 Vict., No. 26, sec. 2, "all the duties." Papers herewith to be returned.

The Registrar General, B.C., 7th May, 1869.

W. E. PLUNKETT.

THE Registrar General is not aware of any Act in which the hours and days are enacted on which the Registrar General's Office is to be kept open, except the Act 7 Vict., No. 16.

The duties of the office are now performed under the Transfer Act 20 Vict., No. 27, sec. 2, by the Registrar General appointed under 19 Vict., No. 34, in which no hours or days are mentioned.

May 10, 1869.

T. J. JAQUES,
Registrar General.

SEE Memo. of dates on which office was closed while attached to Supreme Court. See paragraph 2 of Mr. Fitzhardinge's complaint.

B.C., Under Secretary to the Law Department. 10/5/69.—C.H.G.

Memorandum showing some of the Holidays on which the General Registry Office was closed while attached to Supreme Court.

1854.

November 4—Holiday.
December 23, 24, 25.

1855.

January 1 and 2.
January 7 and 8.
January 26—Anniversary Day.
January 27—Holiday.
April 6 and 8—Good Friday and Easter Monday.
May 24—Thursday; 25th—Friday.
June 20.
July 30.
December 12—Holiday.
December 22—Saturday.
December 25—Christmas Day.
December 26—No registration.

1856.

January 1 and 2.
January 14 and 15.
January 26, 27 (Sunday), 28.
March 13—Holiday, Polling day—New Constitution.
March 21.
March 24.
May 23, 24, 25 (Sunday), 26.
June 20.
July 7.
July 21 and 22.
August 1 and 2.
December 25, 26, 27, and 28 (Sunday).

1857.

January 1, 2, 3, and 4.

No. 6.

THE PRINCIPAL UNDER SECRETARY *to* THE REGISTRAR GENERAL.

Colonial Secretary's Office,
Sydney, 17 May, 1869.

SIR,

In reply to your letter of the 28th ultimo, I am directed by the Colonial Secretary to inform you that under an opinion which has been procured from the Attorney General it appears that you are bound to keep the Office for the Registration of Deeds open, in accordance with the requirements of the Act 7 Victoria, No. 16.

2. Sir William Manning observes, I am to add, that the later Acts, though changing the officers and Office for the Registration of Deeds, make no change in the duties of the former, or the regulation of the latter, in respect of the days and hours for keeping the office open, but simply transfer all the duties from one officer and office to another.

I have, &c.,
HENRY HALLORAN.

No. 7.

THE PRINCIPAL UNDER SECRETARY *to* MESSRS. FITZHARDINGE AND SON.

Colonial Secretary's Office,
Sydney, 17 May, 1869.

GENTLEMEN,

In reply to your letter of the 27th March last, complaining that the Office for the Registration of Deeds was closed on that date, I am directed by the Colonial Secretary to inform you that under an opinion which has been procured from the Attorney General the Registrar General has been instructed to keep the office in question open in accordance with the requirements of the Act 7 Vic., No. 16.

I have, &c.,
HENRY HALLORAN.