Sessional Papers

1899.

LEGISLATIVE ASSEMBLY.

NEW SOUTH WALES.

No. 1.

WEEKLY REPORT OF DIVISIONS

IN

COMMITTEE OF THE WHOLE.

(EXTRACTED FROM THE MINUTES.)

THURSDAY, 2 *MARCH*, 1899, A.M.

No. 1.

AUSTRALASIAN FEDERATION ENABLING BILL :—

Clauses 1 to 5 having been dealt with,—

Clause 6. Upon the taking of the vote of the electors as aforesaid, the majority of "votes" shall decide the question, and if the Constitution be thereby rejected no further action shall be taken pursuant to this Act. (*Read.*) Majority of votes to decide.

Motion made (*Mr. Fegan*), to leave out from line 1 the word "votes" and insert the word "electors" instead thereof.

Question put,—That the word proposed to be left out stand part of the clause.

Committee divided.

Ayes, 82.			Noes, 7.
Mr. Cook,	Mr. Dugald Thomson,	Mr. Archibald Campbell,	Dr. Ross,
Mr. Lee,	Mr. Watkins,	Mr. Bennett,	Mr. Morgan,
Mr. Carruthers,	Mr. Molesworth,	Mr. Dacey,	Mr. Spruson,
Mr. Young,	Mr. Cohen,	Mr. Hassall,	Mr. Fegan,
Mr. Byrne,	Mr. Barton,	Mr. Terry,	Mr. McLaughlin.
Mr. Hogue,	Mr. Piddington,	Mr. Levien,	*Tellers,*
Mr. Sutton,	Mr. Chanter,	Mr. Carroll,	Mr. E. M. Clark,
Mr. Reid,	Mr. Haynes,	Mr. Edden,	Mr. J. C. L. Fitzpatrick.
Mr. Thomas Fitzpatrick,	Mr. Perry,	Mr. Millard,	
Mr. W. W. Davis,	Mr. Dight,	Mr. Arthur Griffith,	
Mr. Meagher,	Mr. Hughes,	Mr. Ferguson,	
Mr. Ashton,	Mr. Hurley,	Mr. Cann,	
Mr. Waddell,	Mr. Pyers,	Mr. Whiddon,	
Mr. Brunker,	Mr. Archer,	Mr. McLean,	
Mr. Anderson,	Mr. Thomas Clarke,	Mr. Quinn,	
Mr. Hawthorne,	Mr. Law,	Mr. Willis,	
Mr. Mahony,	Mr. Cruickshank,	Mr. Phillips,	
Mr. Nelson,	Mr. Copeland,	Mr. Wood,	
Mr. Garland,	Mr. O'Sullivan,	Mr. Mackay,	
Mr. Affleck,	Mr. Dick,	Mr. Watson,	
Mr. Macdonald,	Mr. FitzGerald,	Mr. Ewing,	
Mr. Jessep,	Mr. Nicholson,	Mr. Alexander Campbell,	
Mr. Henry Chapman,	Mr. Rigg,	Mr. T. H. Griffith,	
Mr. Goodwin,	Mr. Gormly,	Mr. Richards.	
Mr. Moore,	Mr. Wilson,	*Tellers,*	
Mr. Thomas Brown,	Mr. McGowen,		
Mr. Thomas,	Mr. Smith,	Mr. Wilks,	
Mr. Spence,	Mr. Sawers,	Mr. Newman.	

Word stands.

Clause, as read, agreed to.

No. 2.

No. 2.

SAME BILL.

Addresses to the Queen.

Clause 7. If two "Colonies," in addition to New South Wales, accept the Constitution, both Houses of Parliament may adopt Addresses to the Queen, praying that the Constitution may be passed into law by the Imperial Parliament upon receipt of similar Addresses from the Parliaments of two such Colonies; and the Addresses so adopted shall be forthwith transmitted to the Queen, with a certified copy of the Constitution. (*Read.*)

Motion made (*Mr. Hughes*), to insert in line 1 after the word "Colonies," the words "including "Queensland,"

And the Committee continuing to sit after Midnight,—

FRIDAY, 3 *MARCH*, 1899, A.M.

Question put,—That the words proposed to be inserted be so inserted.

Committee divided.

Ayes 9.	Noes 75.		
Mr. Haynes,	Mr. Brunker,	Mr. Garland,	Mr. Mahony,
Mr. Hughes,	Dr. Ross,	Mr. Carruthers,	Mr. McLean,
Mr. Arthur Griffith,	Mr. W. W. Davis,	Mr. Anderson,	Mr. Dugald Thomson,
Mr. Fegan,	Mr. Perry,	Mr. Phillips,	Mr. Millard,
Mr. E. M. Clark,	Mr. Suttor,	Mr. Gormly,	Mr. Wood,
Mr. Dacey,	Mr. Archibald Campbell,	Mr. Lee,	Mr. Hurley,
Mr. Cotton.	Mr. Cruickshank,	Mr. Cohen,	Mr. Ferguson,
Tellers,	Mr. Hogue,	Mr. Reid,	Mr. Terry,
Mr. Edden,	Mr. Dight,	Mr. Mackay,	Mr. Newman,
Mr. Holman.	Mr. Gillies,	Mr. Wilks,	Mr. Jessep,
	Mr. Hawthorne,	Mr. Spence,	Mr. Piddington,
	Mr. FitzGerald,	Mr. Law,	Mr. Young,
	Mr. Waddell,	Mr. Copeland,	Mr. Thomas,
	Mr. Archer,	Mr. Willis,	Mr. Dick,
	Mr. Richards,	Mr. Thomas Clarke,	Mr. Watson,
	Mr. Bennett,	Mr. Rigg,	Mr. Ashton,
	Mr. Nelson,	Mr. Byrne,	Mr. Thomas Brown,
	Mr. Cook,	Mr. Sawers,	Mr. J. C. L. Fitzpatrick,
	Mr. Carroll,	Mr. McGowen,	Mr. Ewing,
	Mr. Goodwin,	Mr. Cann,	Mr. Nicholson,
	Mr. Moore,	Mr. Barton,	Mr. Henry Chapman.
	Mr. O'Sullivan,	Mr. Pyers,	*Tellers,*
	Mr. Smith,	Mr. T. H. Griffith,	Mr. Quinn,
	Mr. Wilson,	Mr. Chanter,	Mr. Molesworth.
	Mr. Macdonald,	Mr. Whiddon,	
	Mr. Affleck,	Mr. Meagher,	

Insertion of proposed words negatived.

Clause, as read, agreed to.

And clauses 8 and 9 having been dealt with,—

No. 3.

SAME BILL.

THE FIRST SCHEDULE.

AUSTRALASIAN FEDERAL CONSTITUTION.

"*Ballot Paper.*"

Are you in favour of the proposed Federal Constitution Bill, as amended?

"Yes."
"No."

If you are in favour of the Bill, as amended, strike out the above word "No."

If you are against the Bill, as amended, strike out the above word "Yes." (*Read.*)

Motion made (*Mr. Haynes*), after the words "Ballot Paper" in line 3, to leave out all the words to the end of the Schedule, and insert—

"(1.) Are you in favour of the proposed Federal Constitution Bill as amended at the Con-"ference of Premiers in Melbourne?"

"(2.) Are you in favour of the proposed Federal Constitution Bill as amended by the "Legislative Assembly of New South Wales?"

"No. 1.—Yes."
"No. 2.—Yes."

"Of these two proposals strike out only the one you are against."
instead thereof.

Question

Question put,—That the words proposed to be left out stand part of the Schedule

Committee divided.

Ayes 71.			Noes 9.
Mr. Brunker,	Mr. Wilks,	Mr. Ewing,	Mr. Fegan,
Mr. Hogue,	Mr. Quinn,	Mr. Carroll,	Mr. Holman,
Mr. Anderson,	Mr. Ferguson,	Mr. McLean,	Mr. Haynes,
Mr. Cook,	Mr. Moore,	Mr. Chanter,	Mr. Hughes,
Mr. Carruthers,	Mr. Wood,	Mr. Thomas Brown,	Mr. Cotton,
Mr. Reid,	Mr. Henry Chapman,	Mr. Terry,	Mr. E. M. Clark,
Mr. Gillies,	Mr. Barton,	Mr. Wilson,	Mr. Edden.
Mr. W. W. Davis,	Mr. Dight,	Mr. Jessep,	*Tellers,*
Mr. Affleck,	Mr. T. H. Griffith,	Mr. Whiddon,	
Mr. Willis,	Mr. Lee,	Mr. Cann,	Mr. Dacey,
Mr. Meagher,	Mr. Law,	Mr. Hurley,	Mr. Thomas.
Mr. Hawthorne,	Mr. Archer,	Mr. Watkins,	
Mr. Newman,	Mr. Rigg,	Mr. Pyers,	
Mr. Richards,	Mr. Thomas Clarke,	Mr. Sutton,	
Mr. Nelson,	Mr. Perry,	Mr. Young,	
Mr. Goodwin,	Mr. Cohen,	Mr. Watson,	
Mr. Mahony,	Mr. McGowen,	Mr. Smith,	
Mr. Sawers,	Mr. Spence,	Mr. Piddington,	
Mr. Macdonald,	Mr. Garland,	Mr. Bennett.	
Mr. Mackay,	Mr. Dick,	*Tellers,*	
Mr. Archibald Campbell,	Mr. Millard,		
Mr. Nicholson,	Mr. Dugald Thomson,	Mr. Ashton,	
Mr. Byrne,	Mr. Gormly,	Mr. FitzGerald.	
Mr. Waddell,	Mr. Phillips,		
Mr. Molesworth,	Mr. Copeland,		

Words stand.

Schedule, as read, agreed to.

And the remaining Schedules, postponed clause 3, and the preamble of the Bill having been dealt with,—

On motion of Mr. Reid, the Temporary Chairman, Mr. Lees, left the Chair to report the Bill without amendment to the House.

RICHD. A. ARNOLD,
Clerk Assistant.

Sydney: William Applegate Gullick, Government Printer.—1899.

[3d.]

1899.

LEGISLATIVE ASSEMBLY.

NEW SOUTH WALES.

No. 2.

WEEKLY REPORT OF DIVISIONS

IN

COMMITTEE OF THE WHOLE.

(EXTRACTED FROM THE MINUTES.)

WEDNESDAY, 8 *MARCH*, 1899.

No. 1.

ADVANCES TO SETTLERS BILL.

Clause 1 having been dealt with,—

Clause 2. Such stock shall be sold in amounts of ten pounds, or of some multiple of ten pounds, at such times, in such manner, and subject to such conditions as the Governor may from time to time appoint. The ownership of such stock shall be secured to the holders thereof by the inscription of their respective names, and the amounts of stock held by them respectively in books of record, which shall be prepared and kept for the purpose aforesaid at the Treasury. (*Read.*) Conditions under which stock may be sold.

Mr. Price rose to make a personal explanation in reply to certain statements made in the debate on the second reading of the Bill.

The Temporary Chairman, Mr. Fegan, ruled that it was not in order to make a personal explanation in Committee of any remarks which were made in the House.

Whereupon Mr. Price moved,—That the Temporary Chairman leave the Chair to report a Point of Order, and ask leave to sit again, so soon as the Point of Order has been decided by the House. The Point of Order is,—

That the Honorable Member for Gloucester, Mr. Price, was not in order in rising to a question of personal explanation in connection with a matter which occurred during the second reading of the Bill—and Question put—

Committee divided.

Ayes, 20.	Noes. 43.	
Mr. McLaughlin,	Mr. Ferris,	Mr. Wilks,
Mr. Wright,	Mr. Henry Chapman,	Mr. Arthur Griffith,
Mr. Price,	Mr. Young,	Mr. Moore,
Mr. Sawers,	Mr. Sutton,	Mr. Dick,
Mr. Copeland,	Mr. Bennett,	Mr. Cohen,
Mr. Waddell,	Mr. Carruthers,	Mr. Wilson,
Mr. Edden,	Mr. Brunker,	Mr. Ross,
Mr. Haynes,	Mr. Reid,	Mr. Law,
Mr. Spence,	Mr. Anderson,	Mr. Archibald Campbell,
Mr. Watson,	Mr. Affleck,	Mr. Holman,
Mr. O'Conor,	Mr. J. C. L. Fitzpatrick,	Mr. Nobbs,
Mr. Perry,	Dr. Ross,	Mr. Harris,
Mr. Ferguson,	Mr. Reymond,	Mr. Lees,
Mr. Watkins,	Mr. Pyers,	Mr. Newman,
Mr. Millard,	Mr. Miller,	Mr. Whiddon,
Mr. Dight,	Mr. Barnes,	Mr. Rigg,
Mr. Quinn,	Mr. Smith,	Mr. Stevenson,
Mr. Hurley.	Mr. Cook,	Mr. Hawthorne.
Tellers,	Mr. Lee,	*Tellers,*
	Mr. Phillips,	
Mr. Austin Chapman,	Mr. Garland,	Mr. Macdonald,
Mr. Cruickshank.	Mr. Jessep,	Mr. McLean.
	Mr. Thomas Fitzpatrick,	

Negatived.

Clause, as read, agreed to.

And clauses 3 to 8 having been dealt with, and clause 9 read and partly considered,—

On motion of Mr. Carruthers, the Temporary Chairman, Mr. Fegan, left the Chair to report progress, and ask leave to sit again to-morrow.

RICHD. A. ARNOLD,
Clerk Assistant.

1899.

LEGISLATIVE ASSEMBLY.

NEW SOUTH WALES.

No. 3.

WEEKLY REPORT OF DIVISIONS

IN

COMMITTEE OF THE WHOLE.

(EXTRACTED FROM THE MINUTES.)

TUESDAY, 14 *MARCH*, 1899.

No. 1.

ADVANCES TO SETTLERS BILL.

Clause 9. (1) Any money raised by the sale of stock in pursuance of this Act may be applied in making temporary advances by way of loan to holders of freehold land or of conditional purchases, conditional leases, homestead selections, homestead leases, ~~or~~ settlement leases **or other leases** made under any Acts dealing with "Crown" Lands in respect of such lands, but for no other purposes. **In this section the term "holders" shall not be limited to registered holders, but may include mortgagors.** Application of money raised by sale of stock.

(2) Such advances shall only be made subject to **such conditions as the board, as constituted by this Act, may prescribe and** the following conditions:—

(*a*) No such advance shall be made except on the recommendation of the board ~~constituted by this Act.~~

(*b*) Such board may, subject to the provisions of this Act, prescribe the conditions on which any such advance may be made, and the security to be given for the repayment of the advance. And no advance shall be made unless those conditions are fulfilled and that security is given to the satisfaction of the board. The board may also determine whether the advance is to be repaid by instalments, and may fix the time for the repayment of the advance and the times for the payment of the instalments, and of the interest on the money due in respect of the advance.

(b) Security for the repayment of the advance shall be given to the satisfaction of the board.

(c) The advance shall be repaid, and interest on the money due in respect thereof shall be paid, in such amounts and on such dates as the board may determine.

(c) **(d)** No advance to any of the holders above-mentioned shall exceed two hundred pounds.

(d) **(e)** The rate of interest payable in respect of every such advance shall be four per centum per annum.

(f) No such advance shall be made in respect of land subject to mortgage unless the consent of the mortgagee or mortgagees shall first have been lodged with the board.

(e) **(g)** Every such advance shall be repaid, and all interest thereon shall be paid, within ten years from the making of the advance.

(f) **(h)** Every such advance, with interest thereon, shall be a debt due to Her Majesty by the person to whom the advance was made, recoverable by the Secretary for Lands on behalf of Her Majesty in any court of competent jurisdiction, and shall, while due and unpaid, be a charge on the land in respect of which the advance was made in priority to any encumbrance, transfer, or dealing **subsequent to the advance and with the consent of the persons interested in priority to any encumbrance, transfer, or dealing made before the commencement of this Act.** But in the case of land held under any Acts dealing with Crown lands, such charge shall not attach after such land has been forfeited under the said Acts or this Act.

(g) (i) If any amount of principal or interest, due in respect of an advance made under this Act, is unpaid for a period of *three* months after the due date thereof, the Secretary for Lands may, on behalf of Her Majesty, sell or otherwise dispose of any freehold land in respect of which the advance was made, and in the name of the owner and any person interested therein execute an assurance which shall vest the land in the purchaser ~~and~~ **or person to whom the land has been disposed of, free from any charge under this Act.** In the case of an advance in respect of land held under any Acts dealing with Crown lands not being freehold land, **the Secretary for Lands** may forfeit the same and any moneys paid in respect thereof, and any improvements thereon, in like manner as land, moneys, and improvements may be forfeited under the provisions of those Acts, **and such forfeiture shall have the same effect and may be revoked as if made under those Acts.** (*Further considered.*)

And the clause having been amended as indicated;—

Motion made (*Mr. Price*), to insert in line 4, after the word "Crown" the words "or Church "and School"

Question put,—That the words proposed to be inserted be so inserted.

Committee divided.

Ayes, 8.	Noes, 46.		
Mr. Waddell,	Mr. W. W. Davis,	Mr. Sawers,	Mr. Watson,
Mr. James Thomson,	Dr. Ross,	Mr. Mackay,	Mr. Smith,
Mr. David Davis,	Mr. Wright,	Mr. Parkes,	Mr. Law,
Mr. Richards,	Mr. Kidd,	Mr. Alexander Campbell,	Mr. Cohen,
Mr. Moore,	Mr. Barton,	Mr. Archer,	Mr. Quinn,
Mr. Edden.	Mr. O'Sullivan,	Mr. Nobbs,	Mr. Terry,
Tellers,	Mr. Brunker,	Mr. Nicholson,	Mr. Lee,
Mr. Price,	Mr. Carruthers,	Mr. McFarlane,	Mr. Stevenson,
Mr. Meagher.	Mr. Sutter,	Mr. Thomas Clarke,	Mr. Reid,
	Mr. Byrne,	Mr. Phillips,	Mr. Ross,
	Mr. Hassall,	Mr. Millard,	Mr. Hughes,
	Mr. Hurley,	Mr. Cook,	Mr. Spence.
	Mr. Pyers,	Mr. Young,	*Tellers,*
	Mr. Barnes,	Mr. Ferguson,	
	Mr. Chanter,	Mr. Hawthorne,	Mr. Wood,
	Mr. Carroll,	Mr. Dacey,	Mr. Spruson.

Insertion of proposed words negatived.

And the clause having been further amended as indicated,—

No. 2.

SAME BILL.

Same Clause.

Motion made (*Mr. Watson*), to insert after sub-clause (d) (e) the following words to stand as sub-clause (*f*) :—

(*f*) No such advance shall be made in respect of land subject to mortgage unless the consent of the mortgagee or mortgagees shall first have been lodged with the board.

Question put,—That the words proposed to be inserted be so inserted.

Committee divided.

Ayes, 36.		Noes, 20.	
Mr. Reid,	Mr. Hughes,	Mr. Alexander Campbell,	*Tellers,*
Mr. Brunker,	Mr. Macdonald,	Mr. Kidd,	
Mr. Hogue,	Mr. Holman,	Mr. Barnes,	Mr. Hurley,
Mr. Lee,	Mr. Gillies,	Mr. O'Conor,	Mr. Pyers.
Mr. Carruthers,	Mr. Smith,	Mr. Carroll,	
Mr. Byrne,	Mr. Harris,	Mr. Lyne,	
Mr. Hawthorne,	Mr. McGowen,	Mr. David Davis,	
Mr. Waddell,	Mr. Dacey,	Mr. Austin Chapman,	
Mr. Cook,	Mr. Thomas Clarke,	Mr. Perry,	
Dr. Ross,	Mr. Law,	Mr. Mackay,	
Mr. Parkes,	Mr. Thomas,	Mr. Wood,	
Mr. Millard,	Mr. Stevenson,	Mr. Meagher,	
Mr. Arthur Griffith,	Mr. O'Sullivan,	Mr. Moore,	
Mr. Anderson,	Mr. Watson,	Mr. Miller,	
Mr. Archer,	Mr. Rose.	Mr. Cohen,	
Mr. Wright,	*Tellers,*	Mr. Wilks,	
Mr. Edden,		Mr. Haynes,	
Mr. Cann,	Mr. Levien,	Mr. McFarlane.	
Mr. Ross,	Mr. Newman.		

Words inserted.

And the clause having been further amended as indicated,—

Clause, as amended, agreed to.

And the remaining clauses and the preamble of the Bill having been dealt with,—

On motion of Mr. Carruthers, the Temporary Chairman, Mr. Fegan, left the Chair to report the Bill with amendments to the House.

RICHD. A. ARNOLD,
Clerk Assistant.

Sydney: William Applegate Gullick, Government Printer.—1899.

[3*d*.]

1899.

LEGISLATIVE ASSEMBLY.

NEW SOUTH WALES.

No. 4.

WEEKLY REPORT OF DIVISIONS

IN

COMMITTEE OF THE WHOLE.

(EXTRACTED FROM THE MINUTES.)

TUESDAY, 21 *MARCH*, 1899.

No. 1.

AUSTRALASIAN FEDERATION ENABLING BILL.

Legislative Council's amendments, as indicated in Schedule accompanying Message of 21*st March*, 1899.

Motion made (*Mr. Reid*),—That the Committee disagrees to the Legislative Council's amendments in the Bill.

And the Committee continuing to sit after Midnight,—

WEDNESDAY, 22 *MARCH*, 1899, A.M.

The Temporary Chairman, Mr. Lees, called upon the honorable member for Raleigh, Mr. McLaughlin, to discontinue his speech, on the ground of tedious repetition.

Whereupon Mr. Fegan moved,—That the honorable member for Raleigh be further heard,—

Question put,—That the honorable member for Raleigh (Mr. McLaughlin) be further heard.

Committee divided.

Ayes, 32.		Noes, 41.	
Mr. McFarlane,	Mr. Price,	Mr. Ferris,	Mr. Phillips,
Mr. McLaughlin,	Mr. Dick,	Mr. Waddell,	Mr. Smith,
Mr. Meagher,	Mr. Ferguson,	Mr. Lee,	Mr. Newman,
Mr. Wilks,	Mr. Stevenson,	Mr. Sawers,	Mr. Willis,
Mr. Fegan,	Mr. Hassall,	Mr. Sutter,	Mr. Millard,
Mr. Law,	Mr. Wood,	Mr. Hogue,	Mr. Thomas Clarke,
Mr. J. C. L. Fitzpatrick,	Mr. McGowen,	Mr. Byrne,	Mr. Spence,
Mr. Hughes,	Mr. Chanter.	Mr. Young,	Mr. Dugald Thomson,
Mr. Alexander Campbell,	*Tellers*,	Mr. Brunker,	Mr. Hawthorne,
Mr. O'Sullivan,		Mr. Reid,	Mr. Mackay,
Mr. Dacey,	Mr. Spruson,	Mr. W. W. Davis,	Mr. Rigg,
Mr. Gillies,	Mr. Miller.	Mr. See,	Mr. David Davis,
Mr. Cann,		Mr. Barton,	Mr. Henry Chapman,
Mr. Watkins,		Mr. Carruthers,	Mr. Watson,
Mr. Ross,		Mr. Archibald Campbell,	Mr. Terry,
Mr. Hurley,		Mr. Archer,	Mr. O'Conor,
Mr. Perry,		Mr. Anderson,	Mr. Cotton.
Mr. Bennett,		Mr. Cohen,	*Tellers*,
Mr. Edden,		Mr. McLean,	
Mr. Nobbs,		Dr. Graham,	Mr. Jessep,
Mr. Haynes,		Mr. Garland,	Mr. Moore.
Mr. Nicholson,		Mr. Cook,	

Negatived.

And the honorable member for Wagga Wagga, Mr. Gormly, having demanded that the Legislative Council's amendments be considered *seriatim*.

No. 2.

SAME BILL.

Preamble.

Whereas by the Act fifty-ninth Victoria number twenty-four, as amended by the Act No. 34 of 1897, provision was made enabling the Colony of New South Wales to take part in the framing of a Federal Constitution for Australasia: And whereas in pursuance of the said first-mentioned Act the Colony of New South Wales was represented at a Convention consisting of ten representatives of the said Colony and ten representatives of each of the Colonies of Victoria, South Australia, Tasmania, and Western Australia, which Convention prepared a Draft Bill intituled "*Draft of a Bill to constitute the Commonwealth of Australia:*" And whereas in further pursuance of the above-mentioned Acts the question of the acceptance or rejection of the said Draft Bill was duly submitted to the vote of all persons in New

South Wales qualified and entitled to vote for the election of Members of the Legislative Assembly, but the said Draft Bill was not approved by the number of votes required by law, and in consequence thereof no further action can be taken in respect of the said Draft Bill pursuant to the said Acts: And whereas ~~it is desirable~~ **the Legislature of New South Wales, without expressing any approval of the said Draft Bill or of the amendments hereinafter mentioned, is willing** that the said Draft Bill, amended in certain particulars set forth in the Second Schedule hereto, should ~~now~~ be submitted to a vote of the electors, in a form embodying the said amendments, and set out at length in the third Schedule hereto, ~~and that, in the event of its being accepted as hereinafter provided, further action should be taken to procure the passing of the same into law:~~ 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 NewSouth Wales in Parliament assembled, and by the authority of the same, as follows. (*Considered.*)

Question put,—That the Committee disagree to the Legislative Council's amendment, omitting the words "it is desirable" and inserting the words "the Legislature of New South Wales, without "out expressing any approval of the said Draft Bill or of the amendments hereinafter mentioned, "is willing"

Committee divided.

Ayes, 58.			Noes, 13.
Mr. Garland,	Mr. Smith,	Mr. Thomas Clarke,	Mr. Stevenson,
Mr. Cook,	Mr. Sutter,	Mr. Bennett,	Mr. McFarlane,
Mr. Hurley,	Mr. Henry Chapman,	Mr. David Davis,	Mr. Haynes,
Mr. Hawthorne,	Mr. Spence,	Mr. Dugald Thomson,	Mr. Fegan,
Mr. Wilks,	Mr. Law,	Mr. Perry,	Mr. Nicholson,
Mr. Brunker,	Mr. Wood,	Mr. Chanter,	Mr. Ross,
Mr. Reid,	Mr. Thomas Brown,	Mr. McGowen,	Mr. Morgan,
Mr. Willis,	Mr. Gillies,	Mr. Moore,	Mr. Cotton,
Mr. Byrne,	Mr. Nobbs,	Mr. Terry,	Mr. Howarth,
Mr. Jessep,	Mr. Rigg,	Mr. Millard,	Mr. Hughes,
Mr. Young,	Mr. Archer,	Mr. O'Sullivan,	Mr. Dacey.
Mr. Lee,	Mr. Hogue,	Mr. Watkins,	*Tellers,*
Mr. W. W. Davis,	Mr. Watson,	Mr. Dick,	Mr. Spruson,
Mr. Nelson,	Mr. Gormly,	Mr. Sawers,	Mr. J. C. L. Fitzpatrick.
Mr. Ewing,	Mr. Wright,	Mr. Carroll,	
Mr. Anderson,	Mr. Alexander Campbell,	Mr. Austin Chapman.	
Mr. Archibald Campbell,	Mr. Ferris,	*Tellers,*	
Mr. Carruthers,	Mr. Phillips,		
Mr. Mackay,	Mr. McLean,	Mr. Cohen,	
Mr. Edden,	Mr. Newman,	Mr. O'Conor.	

Amendment disagreed to.

And the remaining amendments in the Preamble having been dealt with,

No. 3.

SAME BILL.

Submission to electors.

Clause **3.** (1) At a time to be fixed by the Governor by Proclamation, **but not sooner than three months after the commencement of this Act,** the question of the acceptance or rejection of the Constitution shall be referred and submitted to the vote of the electors.

Voting.

The voting shall be taken throughout New South Wales as one Electoral District.

(2) Each voter shall vote by ballot "Yes" or "No" on the question, in accordance with the direction on the ballot-paper in the First Schedule hereto, and all votes shall be taken on the same day.

Penalty.

(3) No person shall vote more than once on the question, and if any person votes or attempts to vote more than once contrary to this provision he shall be liable to a penalty not exceeding fifty pounds, or, at the option of the Court, to imprisonment not exceeding six calendar months. (*Considered.*)

Question put,—That the Committee disagree to the Legislative Council's amendment in Clause 3.

Committee divided.

Ayes, 45.		Noes, 24.	
Mr. Garland,	Mr. Mackay,	Mr. Ferris,	*Tellers,*
Mr. Cook,	Mr. Smith,	Mr. Hurley,	Mr. Thomas Brown,
Mr. Chanter,	Mr. Rigg,	Mr. Austin Chapman,	Mr. Cotton.
Mr. Wilks,	Mr. Archer,	Mr. Spruson,	
Mr. Brunker,	Mr. Hogue,	Mr. Stevenson,	
Mr. Reid,	Mr. Gormly,	Mr. McFarlane,	
Mr. O'Conor,	Mr. Wright,	Mr. O'Sullivan,	
Mr. Jessep,	Mr. Alexander Campbell,	Mr. Haynes,	
Mr. Byrne,	Mr. McLean,	Mr. Fegan,	
Mr. Hawthorne,	Mr. Newman,	Mr. Hughes,	
Mr. Sutter,	Mr. Thomas Clarke,	Mr. Edden,	
Mr. Miller,	Mr. Bennett,	Mr. Nobbs,	
Mr. Spence,	Mr. David Davis,	Mr. Nicholson,	
Mr. Dick,	Mr. Dugald Thomson,	Mr. Ross,	
Mr. Wood,	Mr. Terry,	Mr. Law,	
Mr. Cohen,	Mr. Moore,	Mr. Dacey,	
Mr. Willis,	Mr. Millard,	Mr. J. C. L. Fitzpatrick,	
Mr. Gillies,	Mr. Sawers,	Mr. Morgan,	
Mr. W. W. Davis,	Mr. Carroll.	Mr. Henry Chapman,	
Mr. Nelson,	*Tellers,*	Mr. McGowen,	
Mr. Ewing,		Mr. Howarth,	
Mr. Anderson,	Mr. Phillips,	Mr. Watkins.	
Mr. Archibald Campbell,	Mr. Watson.		
Mr. Carruthers,			

Amendment disagreed to.

No. 4.

No. 4.

SAME BILL.

Clause 6. Upon the taking of the vote of the electors as aforesaid, the majority of votes shall decide the question, and if the Constitution be thereby rejected no further action shall be taken pursuant to this Act: **Provided that any number of votes in the affirmative less than one-fourth part of the total number of electors on the electoral rolls of the Colony shall be equivalent to the rejection of the Bill.** (*Considered.*) Majority of votes to decide.

Question put,—That the Committee disagree to the Legislative Council's amendment in Clause 6.
Committee divided.

Ayes, 56.			Noes, 10.
Mr. Hogue,	Mr. Miller,	Mr. Hurley,	Mr. Spruson,
Mr. Garland,	Mr. Spence,	Mr. Thomas Clarke,	Mr. Stevenson,
Mr. Cook,	Mr. Dick,	Mr. McLean,	Mr. McFarlane,
Mr. Chanter,	Mr. Wood,	Mr. Phillips,	Mr. J. C. L. Fitzpatrick,
Mr. Wilks,	Mr. Ferris,	Mr. Dugald Thomson,	Mr. Morgan,
Mr. Brunker,	Mr. Cohen,	Mr. Watson,	Mr. Nobbs,
Mr. Reid,	Mr. Wright,	Mr. McGowen,	Mr. Ross,
Mr. Jessep,	Mr. Gillies,	Mr. Willis,	Mr. Howarth.
Mr. Hawthorne,	Mr. Thomas Brown,	Mr. Terry,	*Tellers,*
Mr. Byrne,	Mr. O'Sullivan,	Mr. Millard,	
Mr. Young,	Mr. Newman,	Mr. Moore,	Mr. Fegan,
Mr. Edden,	Mr. O'Conor,	Mr. Gormly,	Mr. Haynes.
Mr. Mackay,	Mr. Bennett,	Mr. Sawers,	
Mr. W. W. Davis,	Mr. David Davis,	Mr. Carroll.	
Mr. Archibald Campbell,	Mr. Alexander Campbell,	*Tellers,*	
Mr. Anderson,	Mr. Henry Chapman,		
Mr. Nelson,	Mr. Copeland,	Mr. Law,	
Mr. Archer,	Mr. Austin Chapman,	Mr. Smith.	
Mr. Perry,	Mr. Ewing,		
Mr. Suttor,	Mr. Rigg,		

Amendment disagreed to.

No. 5.

SAME BILL.

Clause 7. If two Colonies, **of which Queensland shall be one,** in addition to New South Wales, accept the Constitution, both Houses of Parliament may adopt Addresses to the Queen, praying that the Constitution may be passed into law by the Imperial Parliament upon receipt of similar Addresses from the Parliaments of two such Colonies; and the Addresses so adopted shall be forthwith transmitted to the Queen, with a certified copy of the Constitution. (*Considered.*) Addresses to the Queen.

Question put,—That the Committee disagree to the Legislative Council's amendment in Clause 7.
Committee divided.

Ayes, 60.			Noes, 10.
Mr. Hogue,	Mr. Suttor,	Mr. McGowen,	Mr. Stevenson,
Mr. Garland,	Mr. Miller,	Mr. Watson,	Mr. Dacey,
Mr. Cook,	Mr. Spence,	Mr. Watkins,	Mr. Haynes,
Mr. Chanter,	Mr. Dick,	Mr. Dugald Thomson,	Mr. Fegan,
Mr. Wilks,	Mr. Wood,	Mr. Phillips,	Mr. Cotton,
Mr. Brunker,	Mr. Ferris,	Mr. McLean,	Mr. Edden,
Mr. Reid,	Mr. Cohen,	Mr. Thomas Clarke,	Mr. Ross,
Mr. Jessep,	Mr. Wright,	Mr. Gormly,	Mr. Howarth.
Mr. J. C. L. Fitzpatrick,	Mr. Hurley,	Mr. Moore,	*Tellers,*
Mr. Byrne,	Mr. Rigg,	Mr. Morgan,	
Mr. Young,	Mr. Ewing,	Mr. Millard,	Mr. Nicholson,
Mr. Hawthorne,	Mr. Copeland,	Mr. Terry,	Mr. Hughes.
Mr. Perry,	Mr. Nobbs,	Mr. McFarlane,	
Mr. Archer,	Mr. Austin Chapman,	Mr. Willis,	
Mr. Nelson,	Mr. Henry Chapman,	Mr. Sawers,	
Mr. Anderson,	Mr. Alexander Campbell,	Mr. Carroll.	
Mr. Archibald Campbell,	Mr. David Davis,	*Tellers,*	
Mr. W. W. Davis,	Mr. Bennett,		
Mr. Mackay,	Mr. O'Conor,	Mr. Thomas Brown,	
Mr. Smith,	Mr. Newman,	Mr. Gillies.	
Mr. Law,	Mr. O'Sullivan,		

Amendment disagreed to.

And the other amendment made by the Legislative Council, having been dealt with,—

On motion of Mr. Reid, the Temporary Chairman, Mr. Cann, left the Chair to report to the House that the Committee had agreed to some and disagreed to others of the Legislative Council's amendments.

RICHD. A. ARNOLD,
Clerk Assistant.

Sydney: William Applegate Gullick, Government Printer.—1899.

1899.

LEGISLATIVE ASSEMBLY.

NEW SOUTH WALES.

REGISTER OF PUBLIC BILLS ORIGINATED IN THE ASSEMBLY DURING THE SESSION OF 1899.

Short Titles.	By whom initiated.	Originated in Committee of the Whole.	Message from Governor, recommending provision for.	Ordered.	Presented and read 1°.	Read 2° and Committed.	Reported.	Report adopted.	Read 3°, passed, and sent to Council for concurrence.	Agreed to by Council with Amendments.	Council's Amendments agreed to and disagreed to.	Council's Amendments agreed to, disagreed to, and amended.	Council insists on Amendments disagreed to.	Assembly insists on disagreements, and Free Conference arranged.	Council does not insist on Amendments disagreed to, and proposes further Amendment, to which Assembly agrees.	Free Conference held, and Bill dropped.	Assent.	Number of Act.	Remarks.
																		1899.	
Advances to Settlers	Mr. Carruthers.	3 Mar. a.m.	3 Mar. a.m.	3 Mar. a.m.	3 Mar. a.m.	8 Mar.	14 Mar.	14 Mar.	21 Mar.	23 Mar.	....	29 Mar.	....	....	29 Mar.	....	*	1	Declared to be a matter of urgency, and Standing Orders suspended, 3rd March, a.m. Speaker called attention to nature of Council's amendments, and addendum made to Message to Council that agreement should not be drawn into a precedent.
Australasian Federation Enabling	Mr. Reid	23 Feb.	22 Feb.	23 Feb.	23 Feb.	2 Mar. a.m.	3 Mar. a.m.	3 Mar. a.m.	3 Mar. a.m.	21 Mar.	22 Mar. a.m.	....	23 Mar.	23 Mar.	....	28 Mar.	....	....	
Ordnance Lands Transfer	Mr. Reid	....	....	....	21 Feb.	....	....	....	....	....	....	....	....	....	....	....	....	....	*Pro formâ* Bill.

* Assent not reported.

RECAPITULATION.

	Public.	Private.	Total.	
Number of Public Bills originated in the LEGISLATIVE ASSEMBLY			3	3
Passed and assented to	1	....	1	
Pro formâ Bill	1	....	1	
Stopped by prorogation	1	....	1	
				3

Legislative Assembly Offices,
Sydney, 30th March, 1899.

F. W. WEBB,
Clerk of the Legislative Assembly.

1899.

LEGISLATIVE ASSEMBLY.

NEW SOUTH WALES.

ALPHABETICAL REGISTERS

OF

ADDRESSES AND ORDERS FOR PAPERS,

AND OF

ADDRESSES

(NOT BEING FOR PAPERS).

SESSION, 1899.

[3d.] 69—

1899.

LEGISLATIVE ASSEMBLY.

NEW SOUTH WALES.

REGISTER OF ADDRESSES AND ORDERS FOR PAPERS DURING THE SESSION OF 1899.

No. of Address or Order.	When Passed. Votes. No.	Date.	Entry.	On whose Motion.	Papers applied for. By Address.	By Order.	Return to Address or Order.	Register Number.	If to be Printed. Date of Order.	When given to Clerk of Printing Branch.
1	13	1899. 29 March	2	Mr. Fegan.....	.....	Dudley Colliery Explosion Inquiry	.....	.....	.....	.....

REGISTER OF ADDRESSES AND ORDERS FOR PAPERS DURING FORMER SESSIONS, SESSION, 1899.

No. of Address or Order.	When Passed. Votes. No.	Date.	Entry.	On whose Motion.	Papers applied for. By Address.	By Order.	Return to Address or Order.	Register Number.	If to be Printed. Date of Order.	When given to Clerk of Printing Branch.
		1898.					1899.			
16	16	21 Sept	10	Mr. Smith	.....	Monthly Returns of Accidents (in part)	22 Feb.	99/36	.....	Not printed.
16	16	21 "	10	"	.....	" "	22 "	99/37	.....	"
16	16	21 "	10	"	.....	" "	23 "	99/59	.....	"
16	16	21 "	10	"	.....	" "	23 "	99/60	.....	"
16	16	21 "	10	"	.....	" "	7 March ...	99/78	.....	"
16	16	21 "	10	"	.....	" "	7 " ...	99/79	.....	"
16	16	21 "	10	"	.....	" "	22 " ...	99/97	.....	"
39	44	30 Nov.	8	Dr. Graham	.....	State Children	22 Feb.	99/38	.....	"

REGISTER OF SEPARATE AND JOINT ADDRESSES (*NOT BEING FOR PAPERS*) TO THE GOVERNOR, DURING THE SESSION OF 1899.

Subject of Address.	Originated in the Assembly. Votes. No.	Date.	Entry.	On whose Motion.	When Passed or Agreed to. Votes. No.	Date.	Entry.	When and how Presented. Votes. No.	Date.	Entry.	By whom.	When and how Answered. Votes. No.	Date.	Entry.	By whom and how.	Remarks.
1. The Governor's Opening Speech	1	1899. 21 Feb. ...	15	Mr. Whiddon	2	1899. 22 Feb. ...	7	3	1899. 23 Feb. ...	1	Mr. Speaker, accompanied by House.	3	1899. 23 Feb. ...	1	His Excellency the Governor.	.....

Legislative Assembly Offices,
Sydney, 30th March, 1899.

F. W. WEBB,
Clerk of the Legislative Assembly.

Sydney: William Applegate Gullick, Government Printer.—1899.

1899.

LEGISLATIVE ASSEMBLY.

NEW SOUTH WALES.

STANDING AND SELECT COMMITTEES APPOINTED DURING THE SESSION OF 1899.

No. of Committee.	Designation of Committee.	When and how Appointed.	Members.	Chairman.	No. of Meetings. Called.	No. of Meetings. Held.	No. of Witnesses examined.	When Reported.
1	Standing Orders[1]	21 February, 1899. Votes No. 1. Entry 7 (*On motion of Mr. Reid.*)	Mr. Reid, Mr. Speaker, Mr. McCourt, Mr. Lyne, Mr. See, Mr. Lee, Mr. Molesworth, Mr. McGowen, Mr. Crick, Mr. Morgan.	.....	.....	.....	.....	1899. .....
2	Library[2]	21 February, 1899. Votes No. 1. Entry 8 (*On motion of Mr. Reid.*)	Mr. Reid, Mr. Speaker, Mr. Neild, Mr. O'Sullivan, Mr. Ashton, Mr. Perry, Mr. Arthur Griffith, Mr. Mackay, Mr. Fegan.	.....	.....	.....	.....	.....
3	Refreshment[3]	21 February, 1899. Votes No. 1. Entry 9 (*On motion of Mr. Reid.*)	Mr. Reid, Mr. Speaker, Mr. Neild, Mr. Hayes, Mr. Levien, Mr. Anderson, Mr. Austin Chapman, Mr Piddington, Mr. Cann.	Mr. Hayes	.....	.....	.....	.....
4	Printing[4]	21 February, 1899. Votes No. 1. Entry 10 (*On motion of Mr. Reid.*)	Mr. Gormly, Mr. Watson, Mr. Hayes, Mr. Dugald Thomson, Mr. Nobbs, Mr. Kidd, Mr. Price, Mr. Dick, Mr. Archd. Campbell, Mr. Reid.	Mr. Gormly	8	5	.....	23 Feb.; 14, 23, 28, and 29 Mar.
5	Elections and Qualifications	21 February, 1899. Votes No. 1. Entry 13 (*By Mr. Speaker's Warrant.*)	Mr. O'Sullivan, Mr. Crick, Mr. Moore, Mr. Haynes, Mr. Macdonald, Mr. Phillips, Mr. Sawers, Mr. Chanter, Mr. McLean,	.....	.....	.....	.....	.....

[1] Confers on subjects of mutual concernment with a similar Committee of the Legislative Council. [2] and [3] These Committees act in conjunction with similar Committees appointed by the Legislative Council.
[4] Leave given to sit during the sittings of the House, 23 March, 1899.

Legislative Assembly Office,
Sydney, 30th March, 1899.

F. W. WEBB,
Clerk of the Legislative Assembly.

1899.

LEGISLATIVE ASSEMBLY.
NEW SOUTH WALES.

No. 1.

REPORT FROM PRINTING COMMITTEE.

THE PRINTING COMMITTEE of the Legislative Assembly, appointed under the Sessional Order of 21st February, 1899, Votes No. 1, Entry 10, have agreed to report to your Honorable House, in relation to the Papers referred to them, as follows:—

Description of Paper.	Subject of Paper.	By whom Moved for.	By whom laid upon Table.	When laid upon Table.	Recommended by the Committee.	Remarks.
				1899.		
By-laws	of the Borough of Cowra		Mr. Brunker	22 February	Not to be printed.	
Do	do Parramatta		"	22 "	"	
Do	do Shellharbour		"	22 "	"	
Do	of the Municipal District of Glen Innes		"	22 "	"	
Do	do do Dubbo		"	22 "	"	
Do	do do South Grafton		"	22 "	"	
Additional By-laws	do do Taree		"	22 "	"	
By-laws	under the Public Vehicles Regulation Act of 1873, and Amendment Act of 1886.		"	22 "	"	
Regulations	of the Mudgee Fire Brigades Board		"	22 "	"	
Report	of the Goulburn Fire Brigades Board for the year 1898		"	22 "	"	
Do	of the Police Department for the year 1898		"	22 "	To be printed	Already in print.
Do	on Vaccination for the year 1897		"	22 "	"	
Do	do do 1898		"	22 "	"	
Return (*in part*) to Order	"Monthly Returns of Accidents"	Mr. Smith	"	22 "	Not to be printed.	
Do do	do do	"	"	22 "	"	
Return to Order	"State Children"	Dr. Graham	"	22 "	"	
Despatch	respecting Extradition Treaty with Bolivia		Mr. Lee	22 "	"	
Returns	under the several Acts of Parliament administered by the Registrar-General for the year 1898.		"	22 "	"	
Amended Regulations	Gaol, Nos. 8A, 21, and 22		"	22 "	"	
Regulations	as to the Uniform Clothing of Officers of Her Majesty's Prisons in New South Wales.		"	22 "	"	
Abstract	of Crown Lands reserved from sale for the preservation of Water Supply or other public purposes, in accordance with the 101st, 109th, and 112th sections of the Act 48 Vic. No. 18.		Mr. Carruthers	22 "	"	
Do	of alterations of Designs of Cities, Towns, and Villages, under the 107th section of the Act 48 Vic. No. 18.		"	22 "	"	
Do	of Sites for Cities, Towns, and Villages, declared under the 4th and 101st sections of the Act 48 Vic. No. 18.		"	22 "	"	
Gazette Notices	Copies of, setting forth the mode in which it is proposed to deal with the dedication of certain lands, in accordance with the provisions of the 105th section of the Act 48 Vic. No. 18, the 41st section of the Act 53 Vic. No. 21, and the 7th section of Public Trusts Act, 1897.		"	22 "	"	
Abstract	of Crown Lands authorised to be dedicated to Public Purposes, in accordance with 104th section of the Act 48 Vic. No. 18.		"	22 "	"	
Amended Regulations	Nos. 52, 151, and 324, under the Crown Lands Acts		"	22 "	"	

No. 3 Committee Room,
Legislative Assembly, 23rd February, 1899.

JAMES GORMLY,
Chairman.

1899.

LEGISLATIVE ASSEMBLY.

NEW SOUTH WALES.

No. 2.

REPORT FROM PRINTING COMMITTEE.

THE PRINTING COMMITTEE of the Legislative Assembly, appointed under the Sessional Order of 21st February, 1899, Votes No. 1, Entry 10, have agreed to report to your Honorable House, in relation to the Papers referred to them since their Report No. 1, dated 23rd February, 1899, as follows:—

Description of Paper.	Subject of Paper.	By whom Moved for.	By whom laid upon Table.	When laid upon Table.	Recommended by the Committee.	Remarks.
				1899.		
Notification	of resumption, under the Public Works Act of 1888, of land, for a bridge over Cockle Creek.	.....	Mr. Young	23 February	Not to be printed.	
Do	of resumption, under the Public Works Act of 1888, of land, for a way of access to water at Limestone Creek.	.....	"	23 "	"	
Do	of resumption, under the Public Works Act of 1888, of land, for certain drainage works for the western suburbs of Sydney.	.....	"	23 "	"	
Do	of resumption, under the Public Works Act of 1888, of land, for a wharf at Ranken's, near Casino.	.....	"	23 "	"	
Do	of resumption, under the Public Works Act of 1888, of land, for the construction of White's Creek Stormwater Channel between Booth and Piper Streets.	.....	"	23 "	"	
Do	of resumption, under the Lands for Public Purposes Acquisition Act, of land, for the supply of water to the town of Parkes.	.....	"	23 "	"	
Do	of resumption, under the Public Works Act of 1888, of land, for the erection of the Glebe Island Bridge.	.....	"	23 "	"	
Do	of resumption, under the Public Works Act of 1888, of land, for a pumping station in connection with the Darling Harbour Low-level Sewerage.	.....	"	23 "	"	
Do	of resumption, under the Public Works Act of 1888, of land, for a Post and Telegraph Office, at Merewether.	.....	"	23 "	"	
Return (*in part*) to Order	"Monthly Returns of Accidents"	Mr. Smith	"	23 "	"	
Do do	do do	"	"	23 "	"	
Report	of the completion of the main drain, Croydon, first section; main drain, Croydon, second section; Thomas-street branch; Smith-street, main trunk; and Carrington-street branch.	.....	"	23 "	"	
Do	on protective inoculation against tick fever, by Frank Tidswell, M.B. Ch. M. D.P.H., Principal Assistant Medical Officer to the Government.	.....	Mr. Cook	1 March	To be printed	Already in print.
Proclamation	under section 49 of the Diseases in Sheep Act of 1866	.....	"	1 "	Not to be printed.	
Regulation	under the Imported Stock Act of 1871 and the Imported Stock Act Amendment Act of 1884.	.....	"	1 "	"	

Description of Paper.	Subject of Paper.	By whom Moved for.	By whom laid upon Table.	When laid upon Table.	Recommended by the Committee.	Remarks.
				1899.		
Notification	of resumption, under the Public Works Act of 1888, of land, for Public School Purposes at Corridgery, Cranbury, Gleniffer, Hadley, Leichhardt West, Mount David, Snowy River, Trungley, Wilga, and Wowagin.		Mr. Hogue	1 March	Not to be printed.	
By-laws	of the Free Public Library, South Grafton		"	1 "	"	
Report	of the Trustees of the National Art Gallery of New South Wales for the year 1898.		"	1 "	To be printed.	
Notification	of resumption, under the Lands for Public Purposes Acquisition Act, of land, for a public park at South Singleton.		Mr. Carruthers	1 "	Not to be printed.	
Gazette Notices	Copies of, setting forth the mode in which it is proposed to deal with the dedication of certain lands in accordance with the provisions of the 105th section of the Act 48 Vic. No. 18, and the 7th section of the Public Trust Act, 1897.		"	1 "	"	
Abstract	of Crown Lands reserved from sale for the preservation of Water Supply or other Public Purposes in accordance with the 101st, 109th, and 112th sections of the Act 48th Vic. No. 18.		"	1 "	"	
Do	of alterations and cancellations of Designs of Cities, Towns, and Villages, under the 107th section of the Act 48 Vic. No. 18.		"	1 "	"	
Do	of sites for Cities, Towns, and Villages, declared under the 4th and 101st sections of the Act 48 Vic. No. 18.		"	1 "	"	
Fourteenth General Report	of the Parliamentary Standing Committee on Public Works		Mr. Brunker	7 "	To be printed	Already in print.
Return (*in part*) to Order	"Monthly Returns of Accidents"	Mr. Smith	"	7 "	Not to be printed.	
Do do	do do		"	7 "	"	
Notification	of resumption, under the Public Works Act of 1888, of land, for a Post and Telegraph Office at Pyrmont.		Mr. Young	7 "	"	
Report	of the Parliamentary Standing Committee on Public Works on proposed Water Supply Works for the Borough of Wollongong, together with Minutes of Evidence; Appendix, and Plan.		Mr. Perry	7 "	To be printed	Already in print.
Amended Rates and Regulation	under the Electric Telegraph Act		Mr. Parkes	8 "	Not to be printed.	
Universal Postal Convention	held at Washington, June, 1897, together with detailed Regulations for its execution.		"	8 "	"	
Regulations	International Telegraph Convention and Service, 1896 Revision		"	8 "	"	
Abstract	of Crown Lands authorised to be dedicated to Public Purposes in accordance with the 104th section of the Act 48 Vic. No. 18.		Mr. Carruthers	8 "	"	
Accounts	of the Commissioners of the South Head Roads Trust for the half-year ended 31st December, 1898.		Mr. Young	8 "	"	

No. 3 Committee Room,
Legislative Assembly, 14*th March*, 1899.

DUGALD THOMSON,
Chairman *pro. tem.*

Sydney: William Applegate Gullick, Government Printer.—1899.

1899.

LEGISLATIVE ASSEMBLY.

NEW SOUTH WALES.

No. 3.

REPORT FROM PRINTING COMMITTEE.

THE PRINTING COMMITTEE of the Legislative Assembly, appointed under the Sessional Order of 21st February, 1899, Votes No. 1, Entry 10, have agreed to report to your Honorable House, in relation to the Papers referred to them since their Report No. 2, dated 14th March, 1899, as follows:—

Description of Paper.	Subject of Paper.	By whom Moved for.	By whom laid upon Table.	When laid upon Table.	Recommended by the Committee.	Remarks.
				1899.		
Regulation	respecting payment for cablegrams, together with Press Rates, to the Straits Settlements.	.....	Mr. Parkes	14 March	Not to be printed.	
Report	of the Trustees of the Public Library of New South Wales for the year 1898.	.....	Mr. Brunker	14 "	To be printed	Already in print.
Additional By-laws	Metropolitan Drainage.—Homebush Creek Stormwater Drain (No. 2, Strathfield)—Euroka Creek Stormwater Drain, North Sydney.	.....	Mr. Young	14 "	Not to be printed.	
Minutes	Copies of, of His Excellency the Governor and the Executive Council,— (1) Authorising the transfer of an amount from the Vote, "Commission on Payments in England by Government Financial "Agents" to supplement the Vote "Insurance, &c., on English "Shipments." (2) Authorising the transfer of an amount from the Vote, "Mines Department—Contingencies" to supplement the Vote "Administration of the Act for the Regulation of Coal Mines and "Collieries."	.....	Mr. Speaker	22 "	"	
Statement	of Receipts and Expenditure of the Corporation of the City of Sydney for the year 1898.	.....	Mr. Brunker	22 "	To be printed.	
Return (*in part*) to Order	"Monthly Returns of Accidents"	Mr. Smith	Mr. Young	22 March	Not to be printed.	
Abstract	of Crown Lands reserved from sale for the preservation of Water Supply or other Public Purposes, in accordance with the 101st, 109th, and 112th sections of the Act 48 Vic. No. 18.	.....	Mr. Carruthers	22 "	"	
Do	of sites for Cities, Towns, and Villages, declared under the 4th and 101st sections of the Act 48 Vic. No. 18.	.....	"	22 "	"	
Do	of alterations of Designs of Cities, Towns, and Villages, under the 107th section of the Act 48 Vic. No. 18.	.....	"	22 "	"	
Gazette Notices	Copies of, setting forth the mode in which it is proposed to deal with the dedication of certain lands in accordance with the provisions of the 105th section of the Act 48 Vic. No. 18.	.....	"	22 "	"	
Notification	of withdrawal, under the Crown Lands Act of 1895, of certain lands from the Pastoral Lease of the Tuppal Leasehold Area for settlement by other holdings.	.....	"	22 "	"	

No. 3 Committee Room,
Legislative Assembly, 23rd March, 1899.

JAMES GORMLY,
Chairman.

1899.

LEGISLATIVE ASSEMBLY.

NEW SOUTH WALES.

No. 4.

REPORT FROM PRINTING COMMITTEE.

THE PRINTING COMMITTEE of the Legislative Assembly, appointed under the Sessional Order of 21st February, 1899, Votes No. 1, Entry 10, have agreed to report to your Honorable House, in relation to the Papers referred to them since their Report No. 3, dated 23rd March, 1899, as follows:—

Description of Paper.	Subject of Paper.	By whom Moved for.	By whom laid upon Table.	When laid upon Table.	Recommended by the Committee.	Remarks.
Statement	of the receipts and expenditure of the Hay Irrigation Trust for the year 1898.	.....	Mr. Brunker	1899. 28 March	To be printed	
Do	of accounts of the Government Savings Bank for the year 1898.	.....	Mr. Parkes	28 "	"	

JAMES GORMLY,
Chairman.

Legislative Assembly, 28*th March*, 1899.

1899.

LEGISLATIVE ASSEMBLY.

NEW SOUTH WALES.

No. 5.

REPORT FROM PRINTING COMMITTEE.

THE PRINTING COMMITTEE of the Legislative Assembly, appointed under the Sessional Order of 21st February, 1899, Votes No. 1, Entry 10, have agreed to report to your Honorable House in relation to the Papers referred to them since their Report No. 4, dated 28th March, 1899, as follows:—

Description of Paper.	Subject of Paper.	By whom Moved for.	By whom laid upon Table.	When laid upon Table.	Recommended by the Committee.	Remarks.
				1899.		
Report	from Parliamentary Standing Committee on Public Works on proposed Public Offices, Phillip and Hunter Streets, Sydney, together with Minutes of Evidence.	.....	Mr. Perry	29 March	To be printed	Already in print.
Notification	of resumption under Public Works Act of 1888 of land for improving the grades on the Great Northern Railway between Quirindi and Quipolly.	.....	Mr. Reid	29 "	Not to be printed.	
Do	of resumption under the Public Works Act of 1888 of land for improving the loco. Water Supply at Swan Ponds on the Blayney to Cowra Railway.	.....	"	29 "	"	
Report	of the Pharmacy Board for the year 1898	.....	"	29 "	To be printed.	
Do	of the Railway Commissioners on Railways and Tramways for quarter ended December, 1898.	.....	"	29 "	"	"
Regulations	under the Noxious Trades and Cattle Slaughtering Act of 1894 in substitution for those gazetted on 7th June and 22nd July, 1898.	.....	"	29 "	Not to be printed.	
Additional Regulation	under the Noxious Trades and Cattle Slaughtering Act of 1894	.....	"	29 "	"	
Amended do	under the Public Service Act of 1895	.....	"	29 "	"	
Regulation	do do	.....	"	29 "	"	
Amended Regulation	do do	.....	"	29 "	"	
Do do	do do	.....	"	29 "	"	
Regulation	No. 245, under the Public Service Act of 1895	.....	"	29 "	"	
Amended Regulation	under the Land and Income Tax Assessment Act of 1895	.....	"	29 "	"	
Amended By-law	No. 23, under the Silverton Tramway Act of 1886	.....	"	29 "	"	
By-laws	of the Borough of Bathurst, under the Nuisances Prevention Act of 1897.	.....	"	29 "	"	

Description of Paper.	Subject of Paper.	By whom Moved for.	By whom laid upon Table.	When laid upon Table.	Recommended by the Committee.	Remarks.
				1899.		
Certificate	of the Public Service Board respecting the proposed appointment of Chief Assessor in the Income Tax Branch of the Taxation Department.		Mr. Reid	29 March	To be printed.	
Statement	of payments from Treasurer's Advance Account during December, 1898.		"	29 "	"	
Do	of payments from Treasurer's Advance Account during January, 1899.		"	29 "	"	
Do	showing the average amounts of Bank Liabilities and Assets for quarter ended December, 1898.		"	29 "	Not to be printed.	
Do	showing the average Liabilities and Assets of Banks within the Colony for quarter ended December, 1898.		"	29 "	"	
Amended Regulation	No. 21, under the Land and Income Tax Assessment Act of 1895		"	29 "	"	
By-laws	of the Borough of Parramatta, under the Nuisances Prevention Act of 1897.		"	29 "	"	
Report	of the Board of Health for the year 1897		"	29 "	To be printed.	Already in print.
Do	of the Engineer-in-Chief for the Victorian Railways on the extension of the Railway system from Redfern to the Circular Quay		"	29 "	"	"
Notification	of resumption under the Lands for Public Purposes Acquisition Act of land for a Public Park at Kurnell, Botany Bay.		Mr. Carruthers	29 "	Not to be printed.	
Abstract	of Crown Lands authorised to be dedicated to Public Purposes, in accordance with the 104th section of the Act 48 Vic. No. 18.		"	29 "	"	

JAMES GORMLY,
Chairman.

Legislative Assembly, 29*th March*, 1899.

Sydney: William Applegate Gullick, Government Printer.—1899.

1899.

LEGISLATIVE ASSEMBLY.

NEW SOUTH WALES.

COMMONWEALTH OF AUSTRALIA CONSTITUTION BILL.

(PETITION FROM CERTAIN CITIZENS AND COLONISTS OF NEW SOUTH WALES, AGAINST.)

Received by the Legislative Assembly, 14 *March*, 1899.

To the Honorable the Speaker and Members of the Legislative Assembly of New South Wales, in Parliament assembled.

The humble Petition of the undersigned Citizens of Sydney and Colonists of New South Wales,—

HUMBLY SHOWETH:—

That the rights and privileges of the people of New South Wales will be vitally endangered should the Bill adopted at the last Federal Convention and altered at the recent Conference of Premiers held in Melbourne become law, for the following, amongst other reasons:—

1. Because the Conference of Premiers referred to was held in secret, and its deliberations were not open to public criticism, and the people are therefore in ignorance of the reasons which induced the Premiers to adopt the said alterations, and further, that since the Conference completed its labours sufficient time has not been given to the people to consider the nature and effect of the said alterations.

2. Because in the belief of your Petitioners no improvement has been made in the Convention Bill except by the alteration of the clause which required a three-fifths majority at a joint sitting of the two Houses, but where other alterations have been made therein the effect thereof will be distinctly detrimental to the interests of this Colony.

3. Because no provision has been made in the proposed alterations to the Convention Bill for securing to New South Wales proper control over its own rivers.

4. Because under the provisions relating to the establishment and powers of the Interstate Commission the railways of the Colony will undoubtedly be controlled in such a manner as to prejudicially affect its trade and commerce.

5. Because one of the provisions sought to be embodied in the Bill casts an undeserved stigma upon the city of Sydney, inasmuch as under no circumstances will the Federal Capital ever be permitted to be situated within a hundred miles of the mother city of Australia.

6. Because under the suggested arrangement the seat of Government will be fixed at Melbourne for an indefinite period, if not permanently, as there is nothing in the Bill to guarantee to New South Wales the location of the Capital within its borders in any definite time.

7. Because no serious attempt has been made to amend the financial provisions of the Bill, which will be as oppressive and harassing to the people of this Colony as would have been those contained in the original Convention Bill.

8. Because the Bill as altered by the Premiers is substantially the same in its objectionable features as that which was rejected by the Colony at the referendum in June last, and furthermore, does not contain the important amendments demanded by the people at the last General Election, and subsequently adopted by your Honorable House for submission to the Conference of Premiers previously referred to through the Honorable the Premier of this Colony.

9. And your Petitioners humbly pray that your Honorable House will conserve the just interests of the Colony of New South Wales by providing that the amendments demanded by the country at the last General Election shall form a portion of any Bill to be submitted to the electors by way of referendum.

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

[*Here follow* 24,512 *signatures.*]

1899.

LEGISLATIVE ASSEMBLY.

NEW SOUTH WALES.

COMMONWEALTH OF AUSTRALIA CONSTITUTION BILL.

(PETITION FROM CERTAIN CITIZENS AND COLONISTS OF NEW SOUTH WALES IN FAVOUR OF CERTAIN AMENDMENTS IN.)

Received by the Legislative Assembly, 21 *March*, 1899.

To the Honorable the Speaker and Members of the Legislative Assembly of New South Wales, in Parliament assembled.

The humble Petition of the undersigned Citizens of Sydney and Colonists of New South Wales,—

HUMBLY SHOWETH:—

That the rights and privileges of the people of New South Wales will be vitally endangered should the Bill adopted at the last Federal Convention and altered at the recent Conference of Premiers held in Melbourne become law, for the following, amongst other reasons:—

1. Because the Conference of Premiers referred to was held in secret, and its deliberations were not open to public criticism, and the people are therefore in ignorance of the reasons which induced the Premiers to adopt the said alterations; and further, that since the Conference completed its labours sufficient time has not been given to the people to consider the nature and effect of the said alterations.

2. Because, in the belief of your Petitioners, no improvement has been made in the Convention Bill except by the alteration of the clause which required a three-fifths majority at a joint sitting of the two Houses, but where other alterations have been made therein the effect thereof will be distinctly detrimental to the interests of this Colony.

3. Because no provision has been made in the proposed alterations to the Convention Bill for securing to New South Wales proper control over its own rivers.

4. Because under the provisions relating to the establishment and powers of the Inter-State Commission the railways of the Colony will undoubtedly be controlled in such a manner as to prejudicially affect its trade and commerce.

5. Because one of the provisions sought to be embodied in the Bill casts an undeserved stigma upon the City of Sydney, inasmuch as under no circumstances will the Federal Capital ever be permitted to be situated within a hundred miles of the mother city of Australia.

6. Because under the suggested arrangement the seat of Government will be fixed at Melbourne for an indefinite period, if not permanently, as there is nothing in the Bill to guarantee to New South Wales the location of the Capital within its Borders in any definite time.

7. Because no serious attempt has been made to amend the financial provisions of the Bill, which will be as oppressive and harassing to the people of this Colony as would have been those contained in the original Convention Bill.

8. Because the Bill as altered by the Premiers is substantially the same in its objectionable features as that which was rejected by the Colony at the referendum in June last, and, furthermore, does not contain the important amendments demanded by the people at the last General Election, and subsequently adopted by your Honorable House for submission to the Conference of Premiers previously referred to through the Honorable the Premier of this Colony.

9. And your Petitioners humbly pray that your Honorable House will conserve the just interests of the Colony of New South Wales by providing that the amendments demanded by the country at the last General Election shall form a portion of any Bill to be submitted to the electors by way of referendum.

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

[*Here follow* 11,540 *signatures.*]

1899.

LEGISLATIVE ASSEMBLY.

NEW SOUTH WALES.

TREASURER'S ADVANCE ACCOUNT.

(STATEMENT OF PAYMENTS MADE FROM, DURING DECEMBER, 1898.)

Printed under No. 5 Report from Printing Committee, 29 March, 1899.

STATEMENT of Payments from the Treasurer's Advance Account during the month of December, 1898, submitted for the approval of the Honorable the Treasurer.

Head of Service.	Amount. £	s.	d.
Advances on account of Mauritius Government	162	4	8
Do Hong Kong Government	16	7	11
Do Sierra Leone Government	4	16	8
Do British Guiana Government	16	12	10
Moruya River—Improvements (Loans)	488	17	5
Late Sir Henry Parkes Family Grant	41	13	4
Pensions to Inspectors of Stock	47	17	4
Police Superannuation Fund	48	6	0
Master in Lunacy—Salaries	9	6	8
Analytical Branch—Medical Adviser—Salaries	5	15	0
Government Asylums—Salaries	18	8	4
Department of Justice—Salaries	58	6	8
Petty Sessions—Salaries	55	19	5
Manly Sea-wall—Renewing	28	4	4
Police, General Establishment—Salaries	4	3	4
Registrar-General—Salaries	46	18	1
Painting Centennial Park Gates and Railings	1,676	16	9
Coast Hospital—Salaries	5	16	8
Parliamentary Buildings—Repairs	8	15	0
Wood-blocking King-street, Newtown (Loans)	14	10	4
Stores and Stationery	83	9	8
Refund of Civil Service Superannuation Deductions payable to Officers who have voluntarily resigned from the Service	139	18	8
Imported Stock	1,288	10	0
Macleay River—Improvements (Loans)	772	5	9
Department of Agriculture—Salaries	45	16	8
Western Suburbs Sewerage Reticulation (Loans)	5,633	19	1
Expenses of Royal Commission of Inquiry in connection with the Hastings and Macleay Election	101	12	4
Expenses in connection with the Greater Britain Exhibition	1,700	0	0
Prisons—Salaries	4	3	4
Fisheries Commission—Salaries	8	6	8
Lunacy—Salaries	4	3	4
Expenses—Royal Commission on Public Charities	109	11	0
Double Bay Low Level Sewerage (Loans)	539	3	5
Customs—Salaries	88	0	0
Military, Secretary—Salaries	12	7	3
Verdict and Costs in Waller *v.* Young	1,150	0	0
Painting Railing—Other Public Parks	5,614	15	8
Compensation for Resumption of Tank, Hiawatha Gold-field	100	0	0
Total £	20,155	19	7

The Treasury, New South Wales,
9th January, 1899.

J. VERNON,
Accountant.

Approved,—
G. H. REID,
Treasurer.

1899.

LEGISLATIVE ASSEMBLY.

NEW SOUTH WALES.

TREASURER'S ADVANCE ACCOUNT.

(STATEMENT OF PAYMENTS FROM, MADE DURING JANUARY, 1899.)

Printed under No. 5 Report from Printing Committee, 29 March, 1899.

STATEMENT of Payments from the Treasurer's Advance Account during the month of January, 1899, submitted for the approval of the Honorable the Treasurer.

Head of Service.	Amount.		
	£	s.	d.
Advances on account of Mauritius Government	53	4	2
Do Hong Kong Government	27	0	5
Do Sierra Leone Government	4	16	8
Do British Guiana Government	16	12	10
Do Straits Settlements Government	11	7	4
Moruya River Improvements (Loans)	405	19	6
Late Sir Henry Parkes Family Grant	41	13	4
Police Superannuation Fund	3,773	8	0
Pensions to Inspectors of Stock	73	9	1
Mercantile Marine Pensions...	1	2	0
Painting Centennial Park Gates and Railings	6	11	6
Refund of Civil Service Superannuation Deductions payable to Officers who have voluntarily resigned from the Service...	126	5	1
Macleay River Improvements (Loans)	81	14	1
Railway, Cootamundra to Gundagai (Loans)	23	15	2
Pacific Island Steam Service...	150	0	0
Board of Health—Salaries	4	12	9
To pay Interest on Special Deposits by the Savings Bank of New South Wales ...	2	8	1
Verdict and costs in T. F. Waller *versus* The Honorable J. H. Young	150	0	0
Old Age Pensions, Charities, and State Insurance	350	0	0
Hospital for the Insane, Callan Park	1	0	2
District Court—Salaries	3	12	7
James M. Conroy—Refund of part rent lodged with application for leases at Gundagai (Mining on Private Lands Act)	25	0	0
Compensation for Improvements on village and suburban lands at Gilgunnia, and for the withdrawal of 770 acres from the leasehold area of Wirchilliba Pastoral Holding	178	5	10
Payments Pending Warrant—			
Consolidated Revenue Fund Services	643	2	6
Total ... ... £	6,155	1	1

The Treasury, New South Wales,
10 February, 1899.

J. VERNON,
Accountant.

Approved,—
G. H. REID,
Treasurer.

1899.

LEGISLATIVE ASSEMBLY.

NEW SOUTH WALES.

GOVERNMENT SAVINGS BANK.

(STATEMENT OF ACCOUNTS FOR THE YEAR 1898.)

Presented to Parliament, pursuant to Act 34 Vic. No. 15.

Printed under No. 4 Report from Printing Committee, 28 March, 1899.

ACCOUNT of all Deposits received and paid from 1st January to 31st December, 1898, together with a Statement of the total amount due to all Depositors at the close of 1898.

	£	s.	d.		£	s.	d.
To Balance brought forward from 1897	4,691,833	13	4	By Amount of Repayments to Depositors during 1898	2,059,853	10	0
Cash received from Depositors during 1898	2,261,872	17	9				
Interest added to Depositors' Accounts	132,216	6	8	Balance	5,026,069	7	9
£	7,085,922	17	9	£	7,085,922	17	9

LIABILITIES AND ASSETS.

	£	s.	d.		£	s.	d.
To Balance due to all Depositors at the close of 1898	5,026,069	7	9	By New South Wales Government Debentures	169,200	0	0
				New South Wales Funded Stock, 56 Vic. No. 1	1,000,000	0	0
				New South Wales Funded Stock, 36 Vic. No. 21	316,466	13	11
				New South Wales Treasury Bills, 59 Vic. No. 22	1,024,700	0	0
				New South Wales Treasury Bills, 53 Vic. No. 9	527,600	0	0
				New South Wales 1924 Stock, 58 Vic. No. 14	20,000	0	0
				New South Wales 1925 Stock, 59 Vic. No. 6	150,000	0	0
				New South Wales Funded Stock, 59, Vic. No. 6	880,000	0	0
				Interest due and accrued on Investments	72,418	13	10
				Uninvested funds at credit of Trust Account	853,161	2	4
Balance (excess of assets)	18,668	8	6	Cash in hands of the Controller	31,191	6	2
£	5,044,737	16	3	£	5,044,737	16	3

PROFIT AND LOSS.

	£	s.	d.		£	s.	d.
To Departmental Expenses for 1898	8,500	0	0	By Balance from preceding Account	16,667	14	10
Premium on investments	8,081	0	0	Interest received on investments	86,260	0	1
Amount transferred to Consolidated Revenue	8,000	0	0	,, refunded on irregular Accounts	119	6	5
Interest added to Depositors' Accounts	132,216	6	8	,, accrued and due on uninvested Funds in the Treasury	72,418	13	10
Balance	18,668	8	6				
£	175,465	15	2	£	175,465	15	2

Total amount transferred to Consolidated Revenue to 31st December, 1898.....£32,759 1s. 4d.

A. J. DOAK, Controller.

VARNEY PARKES,
Postmaster-General.

Sydney, 20th February, 1899.

I CERTIFY that the foregoing statement of all deposits received and paid from the 1st January to 31st December, 1898, has been examined and found to correspond with the Books and Accounts of the Government Savings Bank.

E. A. RENNIE,
Auditor-General.

14th March, 1899.

1899.

LEGISLATIVE ASSEMBLY.

NEW SOUTH WALES.

PUBLIC SERVICE.

(CERTIFICATE OF BOARD RESPECTING THE PROPOSED APPOINTMENT OF CHIEF ASSESSOR IN LAND AND INCOME TAX DEPARTMENT.)

Printed under No. 5 Report from Printing Committee, 29 March, 1899.

Public Service Board, 50, Young-street, Sydney, 14 January, 1899.

LAND AND INCOME TAX DEPARTMENT.

Proposed appointment of Chief Assessor in the Income Tax Branch.

WITH reference to the accompanying minute from the First Commissioner of Taxation, recommending the appointment of a Chief Assessor in the Income Tax Branch of the Taxation Department, the Board desire to point out, for the information of the Right Honorable the Premier, that they recently invited officers in the various Departments of the Public Service, who considered themselves competent, to apply for this position. Applications were received from several officers, who, though otherwise excellent men, did not in the opinion of the Board have the requisite qualifications for the position, it being essential that the person appointed should have a thorough and up-to-date knowledge of commercial matters in all their various ramifications, and this requires an experience and training not usually to be had in the Public Service.

The Board do not think that the experiment of appointing an officer to the position on trial can with safety be tried, and they have, therefore, with some reluctance, come to the conclusion that the only course open to them is to report in terms of section 30 of the Public Service Act, that in their opinion there is no person in the Public Service capable of filling the position to which it is proposed that the appointment shall be made who can be said to be available therefor.

J. BARLING, GEO. A. WILSON, } Members of the Public Service Board.

The Right Honorable G. H. Reid, P.C., Q.C., M.P.,
Premier and Colonial Treasurer.

1899.

LEGISLATIVE ASSEMBLY.

NEW SOUTH WALES.

THE PUBLIC LIBRARY OF NEW SOUTH WALES.

(REPORT FROM TRUSTEES FOR 1898.)

Printed under No. 3 Report from Printing Committee, 23 March, 1899.

The Trustees of the Public Library of New South Wales to The Minister for Public Instruction.

Public Library of New South Wales,
Sydney, 8 February, 1899.

Sir,

The Trustees have the honor to submit their Report for the year 1898, being their twenty-eighth Annual Report.

1. The general collection of books has been increased by 7,174 volumes, but it has been found necessary to strike off 2,606 volumes from the Lending Branch stock as worn out or lost since its formation, leaving the total number now in the Library as 124,401. Details of the classification of the Library are given in Appendix A.

2. The Reference Library was open for 353 days, including 51 Sundays, and the attendance was 176,879, being an increase of 1,992 over that of the previous year. The Lending Branch was open for 345 days, including 50 Sundays, and the total number of borrowers' visits reached 85,436, showing an increase of 4,005. The attendance at the Newspaper Room for 357 days, including 51 Sundays, was 162,170, being 7,501 more than in 1897. The average daily attendance at the Library was, on weekdays, 1,338, and on Sundays (4 hours) 387. Details are given in Appendix B.

3. In the Lending Branch the borrowers numbered 6,348, being 393 more than in the previous year. Each borrower used, on an average, nearly 15 books during the year. In Appendix C will be found details of the classes of books used, showing for each class (*a*) the number of volumes available at the end of the year; (*b*) the number issued during the year; (*c*) the daily average of volumes issued; (*d*) the ratio between volumes and issues. These figures show that fiction forms 9·3 per cent. of the volumes in the Lending Branch, and 34·6 per cent. of the total issues; and that each volume of fiction was borrowed, on an average, 14 times during the year. The fiction of the Lending Branch has been very carefully selected, and comprises only the choicest works of the best authors in that department of literature.

4. The figures given in the Appendix D show to what extent and in what directions the public avail themselves of the contents of the Library on Sundays.

5. During the past year 25 new boxes of books were equipped for loan to country libraries and groups of students, making the total number now available 101; the number of volumes added to the stock was 1,094, making the total 7,539. These new boxes, holding from 40 to 50 books each, are not much more than half the size of the old ones, and this is found to be such an improvement that it is proposed to cut down the old boxes to the same size and increase the number so that there may be a box for every applicant. There were 231 boxes, containing 17,253 volumes, sent to 112 country centres, and these boxes travelled no less than 81,303 miles.

The

The Trustees are of opinion that this branch of their educational work is worthy of every encouragement, and that these boxes have been the means of extending knowledge, intellectual pleasure, and brightness to many homes, and of relieving the dreariness and monotony of the lives of many persons living in the remoter parts of the Colony; and they would be glad to see the number of boxes largely increased, so that even the remotest villages and groups of settlers and young people growing up on the soil may eventually be reached. Appendices E and F give further details.

6. The donations for the year numbered 3,098 volumes and pamphlets, of the value of £716 9s., besides 104 newspapers, comprising 12,374 individual issues, which were gratuitously supplied by the proprietors from Great Britain and the British Colonies for the use of the Newspaper Room. Appendix H contains the names of the principal donors, amongst which the most notable is the British Museum, which has generously presented copies of the whole of its very valuable publications. Under the Copyright Act 394 volumes and pamphlets, 21 photographs, and 7 maps, to the value of £42 16s. 9d., were received, as well as 273 newspapers, comprising 22,240 issues, published in New South Wales. Every effort has been made to impress publishers with their obligations to the Library under the Copyright Act of 1879, but many of them are still very remiss in complying with its provisions.

7. The Newspaper Room is now regularly supplied with 377 newspapers, numbering last year 34,614 single issues, from Great Britain, United States, Canada, South Africa, India, Fiji, Samoa, Japan, and all the Australasian Colonies. The average daily attendance has been 505, but this number will probably be doubled under the more favourable conditions in prospect for the coming year. Hitherto the copy of each provincial paper received in terms of the Copyright Act has been made available at once for daily use in the room, but only a few of the leading country newspapers have been filed and bound for future reference. The proprietors have been asked to supply two copies of their papers, so that one may be available for use in the room, and the other bound for future service in the Reference Library. The Trustees recognise the fact that complete files of all the newspapers published in New South Wales should be kept in the National Library, as they will be of great value in future years, and may be procurable nowhere else, not even in the proprietors' offices.

8. As far as the resources of the Library will allow, everything possible has been done to encourage students in country districts, and the scientific and rarer works in the Lending Branch, together with any duplicates in the Reference Library, have been as freely lent to country students as to those in the metropolitan district.

9. The work of cataloguing has gone on steadily. Typewritten lists of the more popular books were posted in the vestibule every month, and the quarterly lists containing all accessions were printed by our own staff and promptly made available in the Reading Rooms. These quarterly lists are now being incorporated with the existing two-years' supplement for 1896–7, the type of which has been kept standing, and thus a three-years' supplement for 1896–8 will shortly be available, of which a limited number of copies will be struck off and bound for the use of the public and the library staff. This process will be repeated for two more years, at the end of which time there will be a five-years' supplement, consisting of about 1,000 pages. It will then probably be expedient to print it off, and commence another. This current supplement contains a full catalogue of authors, with a copious Subject Index. The system here described is found to suit our conditions admirably, for it enables us to have printed catalogues of our books always up to date, available for the public and the Library Staff; and at the same time it obviates the serious difficulty of having a number of small supplements in use. Three senior members of the staff are still engaged for the greater part of their time in indexing the Library, and grouping the whole of the books in the Reference Library under about 6,000 appropriate subject-headings, so that students may be able to discover at once not only what books but what chapters of books, magazine articles, and scientific papers hidden in the proceedings of Australasian scientific societies, on any important subject of human thought and knowledge, are obtainable in this Library.

In

In order to ensure perfect uniformity of method and economy of labour the Principal Librarian has compiled and published a "Guide to the System of Cataloguing," which gives the rules for cataloguing and indexing adopted in this Library, and the list of subject headings now in use, showing very fully by cross-references how different sections are correlated, and what choice has been made between synonymous and variant headings. It is encouraging to know that the most favourable criticisms on the value of this work have been received from the principal libraries of Great Britain and the United States, and that it has already proved to be of great service in many other libraries besides our own, for the benefit of which it was primarily compiled.

10. On 17th October an intimation was received from Mr. David Scott Mitchell, M.A., Barrister-at-Law, of his determination to bequeath his magnificent Australasian collection of 30,000 books, pictures, maps, engravings, manuscripts, autographs, and photographs to the Library on condition that the Government would take early steps to erect a suitable building for a National Library, and make provision therein for keeping the collection by itself, and making it freely available for students of Australasian history. The Minister for Public Instruction (Hon. J. A. Hogue, M.P.) conveyed to Mr. Mitchell the Government's grateful acceptance of the gift, and as soon as a site has been definitely chosen it is hoped that steps will be taken for the erection of a building suited to the future requirements of the National Library of this growing Colony. In this connection it is worthy of note that the present Premier (Hon. G. H. Reid, M.P.), carried a motion in the Legislative Assembly in March, 1881, in opposition to the Ministry of the day, in favour of building a new library on the site of the old Immigration Barracks, now called Chancery Square. In 1879 the Parliament had voted the sum of £150,000 for a new library, and in August, 1880, the Trustees made a special report in favour of the site afterwards approved by the Legislative Assembly. On 20th June, 1883, the Hon. G. H. Reid, M.P., then Minister for Public Instruction, informed the Trustees that "the Government had determined to erect a Free Public Library on a block of Crown land at the top of King-street, where the Immigration Barracks, District Court, and the Colonial Architect's office now stand." The Trustees at once assured the Minister of their entire satisfaction "that the position of the site had been finally chosen, and that one so suitable in every respect had been found." The Board now, after a lapse of sixteen years, again express the opinion that no more suitable site can possibly be chosen for a National Library.

Mr. Mitchell has lately intimated his keen desire to see some adequate provision made for his collection at once, and that he is prepared to hand over 15,000 volumes as soon as practicable, in order to make room for the accessions which he is continually making.

The monetary value of this library cannot be estimated, though it has been valued at £100,000 by gentlemen entitled to express an opinion; but it is of peculiar interest to this country, for it contains many works and manuscripts of unique value, and the addition of it to our own very good Australasian collection will make this Library pre-eminently the Library of Australasia, and one of the large special libraries of the world.

Mr. Mitchell is daily enriching his collection with treasures gathered from all parts of Australasia, and from London, the great market for all kinds of bibliographical rarities, and as he has now become our ally instead of our rival, our limited resources are relieved from the heavy cost of supplementing our Australasian collection.

10. In consequence of the representations of the Trustees as to the condition of the old building used during the past fourteen years for the Lending Branch and the Newspaper Room, the Minister has made arrangements with the City Council for the lease of two large, convenient, and well-lighted rooms in the Queen Victoria Market Buildings for four years, from 1st January, 1899. It is believed that the sphere of usefulness of these branches will be thereby much enlarged, and we trust the Minister will see his way to make adequate provision for maintaining their operations in a manner worthy of the city of Sydney and of the best traditions of the large libraries of Great Britain and America. With an increased clientéle there will necessarily be a demand for more copies of all the most popular books, and heavier expenses for binding.

11. The question of binding has become a very pressing one, and demands special consideration. As the Library grows the expense for binding grows in a still greater ratio, for the new books must be bound and old ones re-bound. After much consideration, the Trustees have determined, so far as regards the Reference Library, to bind the most valuable books in half-morocco, the common ones in half-pegamoid, and to leave the new ones in their original bindings as long as possible; but, as many of them, especially donations from other countries, are sent in paper covers, it is necessary to bind them before they can be allowed to go into use. It has been found expedient to re-stitch and bind in half-pegamoid all new books intended for the Lending Branch and country boxes.

As the Government Printer cannot undertake to bind for the Library more than 1,800 volumes a year, the Trustees hope the Minister will make special provision in the next Estimates for the binding of all the circulating books by some private firm able to do the work well and promptly. The estimated requirements for the current year will be—

Reference Library	1,762	vols. (including newspapers).
Lending Branch...	1,620	,,
Country boxes	380	,,
Total...	3,762	

Assuming that the binding for the Reference Library is all done by the Government Printer, the extra cost of keeping the volumes in the Lending Branch and country boxes in a satisfactory condition will be £200 for the year.

12. The annual stock-taking in December showed that 503 volumes were missing from the original stock of the Reference Library, as compared with 481 at the close of 1897. It is evident that some persons are illegally removing books from the Library, for books which are found to be missing at the monthly checkings of the shelves are found replaced on the shelves some months later. Every effort is being made to detect and make an example of some of the offenders, in order to deter others from such disgraceful conduct.

During the year one man was caught in the act of stealing a Library book, and received three months' imprisonment. Another man was prosecuted for damaging a book issued to him from the Lending Branch, and had to pay the value of the book, £1 10s.

The stock-taking of the Lending Branch showed that 2,606 volumes had been lost, worn out, or damaged beyond repair since its opening fourteen years ago. These have been struck off stock, and our aim will be to keep the present collection complete and in good condition, rather than to attempt to largely increase it with our limited means.

13. It has been found expedient to make two special reserves in the Reference Library, and to provide that books included therein may be referred to only on written application, viz. :—

(*a*) Books of special value demanding exceptional care.
(*b*) Books which should not be indiscriminately issued to all classes of readers.

In the great reference libraries of the Old World no book whatever is issued except on written requisition; and this system has been found to be very useful in helping library authorities to trace damages and losses.

14. The experience of the past fourteen years has convinced the Trustees that it is necessary to initiate a system of fines, to be imposed on borrowers who keep books beyond the specified period, for this habit has grown to such an extent as to be an annoyance to the great body of borrowers, and a cause of much extra work to the staff.

A set of more stringent regulations was drawn up and approved by the Trustees for formal submission to the Attorney-General, but he reported that the Trustees, not being a corporate body, had no power to make or enforce such regulations. This emphasises the necessity of incorporating the Library, as has been done with every similar institution in the world, and the Trustees hope that the Minister will

will take an early opportunity of introducing the necessary Bill authorising the Trustees to hold this Library in trust and to receive bequests, and to administer all property entrusted to them.

15. A suggestion was received from the Public Works Department that some of the electric power generated in the Government Printing Office might be utilised for lighting the Library, and it was represented that the cost of installation (£230) would be saved in a year, as the extra annual cost incurred would be very small. The Trustees cordially approved, as the electric light is admittedly the ideal light for a library; but provision for this work has yet to be made in the Estimates.

16. The indicator now in use in the Lending Branch having become obsolete and useless for the latest methods of library economy, the Trustees determined to adopt the latest model obtainable from Great Britain, and asked for the purchase of Chiver's Indicator for 30,000 volumes, but regret to learn that the Public Service Tender Board cannot at present supply the necessary funds—£200. It is not possible to work a Lending Library, where open access to the shelves is not allowed, in the most efficient manner without a good indicator, which not only shows the public what books are at present available, but also greatly helps the Library Assistants in their routine work.

17. The Library Association of Australasia, which was formed in Melbourne in 1896, held its first general meeting in Sydney, in October 1898. The Trustees had pleasure in assisting the meeting by every means in their power, and are confident that much good to the Library movement in this country has resulted from the Association's operations. The best country libraries have been brought into closer touch with this the National Library and with each other, and the outcome must be generally beneficial.

18. On August 31st Mr. M. F. Cullen, the Librarian of the Lending Branch, was transferred by the Public Service Board to an important position in the Government Printing Office, and Mr. F. M. Bladen, who had already been attached to the Library Staff as Editor of the Historical Records, was appointed to the position.

19. *Expenditure for* 1898.

From the Parliamentary Votes for the year 1897–8 (£7,685) *and the current financial year ending June* 30*th*, 1899 (£7,545).

Salaries—Reference Library, Historical Records, Registry of Copyright, and Country Exchanges	£3,502
Salaries—Lending Branch	1,435
Salaries—Newspaper Room...	140
Books, periodicals, newspapers, binding	1,554
Conveyance of books to Country Libraries, insurance, freight, book-shelves, repairs, Library appliances, telephones, type-writers, boxes, &c.	502
	£7,133

JAMES NORTON,
President.

APPENDIX A.

NUMBER of VOLUMES in the PUBLIC LIBRARY OF NEW SOUTH WALES on the 31st December, 1898.

Synopsis of Classification.	Reference Department.		Lending Branch.		For Country Libraries.		Total.
	Added 1898.	Total.	Added 1898.	Total.	Added 1898.	Total.	
Natural Philosophy, Science and the Arts	949	14,080	148	4,175	117	1,531	19,786
History, Chronology, Antiquities, and Mythology	233	7,678	143	3,654	174	1,399	12,731
Biography and Correspondence	174	5,784	124	4,019	230	1,778	11,581
Geography, Topography, Voyages and Travels	202	7,333	72	3,703	169	1,330	12,366
Periodical and Serial Literature	1,662	29,447	.....	.....	19	78	29,525
Jurisprudence, Political and Social Economy	295	6,418	56	1,274	121	324	8,016
Theology, Moral and Mental Philosophy, and Education	329	6,165	47	1,580	43	210	7,955
Poetry and Drama	155	3,269	31	880	42	193	4,342
General Literature, Philology, and Collected Works	374	5,978	105	5,061*	175	688	11,727
Works of Reference	138	4,203	.....	.....	4	8	4,211
Duplicates	843	2,161	.....	.....	.....	.....	2,161
Total added during 1898	5,354	.....	726	.....	1,094	.....	.....
Total Number of Volumes	.....	92,516	.....	24,346	.....	7,539	124,401

Books worn out or lost during the past fourteen years, deducted from the stock :—Lending Branch, 2,606.

* Including 2,277 vols. of Prose Fiction.

APPENDIX B.

NUMBER and AVERAGE of VISITS of READERS to the LIBRARY, the NUMBER of DAYS on which the LIBRARY was OPEN to the PUBLIC, and the AVERAGE NUMBER of VOLUMES USED on SUNDAYS and on WEEK-DAYS from 1st January to 31st December, 1898.

Number of VISITS for the year—

To the Reference Library	176,879
To the Lending Branch	85,436
To the Newspaper Room	162,170
Total	424,485

Total Visits to the Reference Library on Week-days	168,784	On Sundays	8,095
Total Visits to the Lending Branch on Week-days	81,305	On Sundays	4,131
Total Visits to the Newspaper Room on Week-days	154,716	On Sundays	7,454
Daily average of Visits to the Reference Library on Week-days	559	On Sundays	159
Daily average of Visits to the Lending Branch on Week-days	274	On Sundays	82
Daily average of Visits to the Newspaper Room on Week-days	505	On Sundays	146

Total number of Days that the REFERENCE LIBRARY was open (including 51 Sundays)	353
Total number of Days that the LENDING BRANCH was open (including 50 Sundays)	345
Total number of Days that the NEWSPAPER ROOM was open (including 51 Sundays)	357

Average number of VOLUMES used on SUNDAYS—

Reference Library (from 2 to 6 o'clock p.m.)	214
Lending Branch (from 2 to 6 o'clock p.m.)	89
Total	303

Average number of VOLUMES used on WEEK-DAYS—

Reference Library (from 10 o'clock a.m. to 10 o'clock p.m.)	1,677
Lending Branch (from 10 o'clock a.m. to 9 o'clock p.m.)	299
Total	1,976

Summary of VISITS to the Library, 1869–1898 :—

1869 (three months—1 Oct. to 31 Dec.)	17,006	1884 (eleven months)	161,877
1870	59,786	1885	165,715
1871	60,165	1886	168,685
1872	48,817	1887 (closed three months for moving)	139,203
1873	76,659	1888	149,425
1874 (eleven months)	57,962	1889	132,983
1875	66,900	1890	155,822
1876	72,724	1891	173,205
1877 (Lending Branch first opened)	124,688	1892	197,255
1878	117,047	1893	216,089
1879 (Exhibition open)	152,036	1894 (Newspaper Room opened)	330,431
1880	134,462	1895	409,064
1881	136,272	1896	416,182
1882 (eleven months)	133,731	1897	410,987
1883	155,431	1898	424,485

APPENDIX C.

CLASSES of BOOKS BORROWED from the LENDING BRANCH of the PUBLIC LIBRARY OF NEW SOUTH WALES, from 1st January to 31st December, 1897.

No. of days open.	No. of Tickets issued to Borrowers.	No. of Borrowers' visits.	Synopsis of Classification of Reading.	No. of Vols. available.	No. of issues.	Daily average of Vols. issued, including Sundays.	Ratio of Vols. to issues.
345	6,348	85,436	Natural Philosophy, Science and the Arts	4,175	10,566	30·6	1:2·5
			History, Chronology, Antiquities, and Mythology	3,654	9,415	27·3	1:2·6
			Biography and Correspondence	4,019	8,246	23·9	1:2·0
			Geography, Topography, Voyages and Travels	3,703	11,616	33·7	1:3·1
			Jurisprudence, Political and Social Economy	1,274	1,802	5·2	1:1·3
			Mental and Moral Philosophy, and Education	1,580	3,293	9·5	1:2·1
			Poetry and Drama	880	2,600	7·5	1:3·0
			General Literature	2,784	13,069	37·9	1:4·7
			Prose Works of Fiction	2,277	32,078	92·9	1:14·1
			Total	24,346	92,685	268·5	1:3·8

APPENDIX D.

CLASSES of BOOKS READ, the NUMBER of VOLUMES USED, and the NUMBER of VISITS to the LIBRARIES on SUNDAYS during the year 1897.

No. of Sundays open.	No. of Visits.	Daily average of Visits.		No. of Volumes available.	No. of Volumes used.	Daily average of Vols. used on Sundays.
			REFERENCE LIBRARY.			
51	8,095	159	Natural Philosophy, Science, and the Arts	14,080	1,530	30·0
			History, Chronology, Antiquities, and Mythology	7,678	882	17·3
			Biography and Correspondence	5,784	1,012	19·8
			Geography, Topography, Voyages and Travels	7,333	845	16·6
			Periodical and Serial Literature	29,447	1,426	28·0
			Jurisprudence, Political and Social Economy	6,418	543	10·7
			Theology, Moral and Mental Philosophy, and Education	6,165	394	7·7
			Poetry and Drama	3,269	690	13·5
			General Literature, Philology, and Collected Works	5,978	2,586	50·7
			Works of Reference	4,203	1,032	20·2
			Total	90,355	10,940	214·5
			LENDING BRANCH.			
50	4,131	82	Natural Philosophy, Science, and the Arts	4,175	606	12·1
			History, Chronology, Antiquities, and Mythology	3,654	464	9·3
			Biography and Correspondence	4,019	418	8·3
			Geography, Topography, Voyages and Travels	3,703	630	12·6
			Jurisprudence, Political and Social Economy	1,274	142	2·8
			Mental and Moral Philosophy, and Education	1,580	169	3·4
			Poetry and Drama	880	140	2·8
			General Literature	2,784	411	8·2
			Prose Works of Fiction	2,277	1,487	29·7
			Total	24,346	4,467	89·2

APPENDIX E

NUMBER of BOXES of BOOKS BORROWED from the PUBLIC LIBRARY OF NEW SOUTH WALES, SYDNEY, by COUNTRY LIBRARIES, with NUMBER OF VOLS. ISSUED, during the year 1898.

Town.	Institution.	No. of Boxes borrowed.	No. of Vols. Issued.	Town.	Institution.	No. of Boxes borrowed.	No. of Vols. Issued.
Aberdeen	School of Arts	2	180	Kenthurst	School of Arts	3	263
Alstonville	School of Arts	2	167	Kiama	School of Arts	2	113
Armidale	School of Arts	3	213	Koppin Yarratt	School of Arts	2	85
Auburn	Literary Institute	1	47	Largs	School of Arts	1	41
Balgownie	School of Arts	3	250	Laurieton	School of Arts	2	162
Ballina	School of Arts	3	271	Lismore	School of Arts	3	239
Bellingen	School of Arts	2	179	Lithgow	School of Arts	3	227
Bermagui	Mechanics' Institute	2	160	Macksville	School of Arts	1	88
Berrima	School of Arts	2	185	Manilla	School of Arts	2	159
Berry	School of Arts	2	143	Menangle	School of Arts	1	88
Blayney	School of Arts	1	109	Merriwa	Mechanics' Institute	2	168
Bodangora	School of Arts	1	98	Metz	Mechanics' Institute	3	189
Bomen	Experimental Farm	1	80	Millthorpe	Mechanics' Institute	3	255
Bowral	School of Arts	2	165	Mittagong	Mechanics' Institute	3	205
Broadmeadow	School of Arts	2	85	Moree	Mechanics' Institute	2	128
Bullahdelah	School of Arts	2	156	Moss Vale	Mechanics' Institute	2	165
Bungendore	School of Arts	2	183	Mount Kembla	Reading Room	2	161
Burrawang	School of Arts	1	46	Nambucca Heads	School of Arts	3	277
Captain's Flat	School of Arts	1	86	Newcastle	School of Arts	2	116
Carcoar	School of Arts	2	155	North Ryde	School of Arts	3	289
Cobargo	School of Arts	1	90	Nowra	School of Arts	2	137
Collector	School of Arts	1	91	Parramatta	School of Arts	1	43
Cooma	School of Arts	1	67	Plattsburg	Mechanics' Institute	3	213
Copeland	School of Arts	2	138	Port Macquarie	School of Arts	2	131
Coraki	School of Arts	3	228	Queanbeyan	School of Arts	3	211
Cowra	School of Arts	3	252	Quirindi	School of Arts	3	184
Crookwell	School of Arts	2	162	Richmond	School of Arts	2	129
Cundletown	School of Arts	2	94	Rockdale	School of Arts	2	176
Dubbo	Mechanics' Institute	2	175	Ryde	School of Arts	1	59
Dudley	Mechanics' Institute	3	252	Sackville	School of Arts	2	177
Dungog	Mechanics' Institute	3	217	St. Albans	Literary Society	2	166
East Maitland	Mechanics' Institute	3	200	Seven Hills	Literary Society	2	158
Eden	School of Arts	2	195	Smedmore	School of Arts	2	138
Emmaville	Mining Institute	2	112	Smithtown	School of Arts	1	93
Forbes	Mechanics' Institute	3	184	Somersby	School of Arts	3	211
Galston	Mechanics' Institute	2	89	South Grafton	School of Arts	3	271
Glenhaven	Mechanics' Institute	2	147	Stockton	School of Arts	2	157
Glenreagh	School of Arts	3	264	Taree	School of Arts	2	178
Gosford	School of Arts	2	167	Thornleigh	School of Arts	1	85
Grafton	Mechanics' Institute	2	85	Toongabbie	School of Arts	3	215
Granville	School of Arts	2	145	Ulmarra	School of Arts	2	95
Greta	School of Arts	3	190	Walcha	School of Arts	2	109
Gulgong	Free Public Library	2	126	Waratah	School of Arts	3	261
Gundagai	Literary Institute	2	103	Wellington	Public Library	2	192
Gunnedah	School of Arts	2	178	West Kempsey	School of Arts	2	170
Gunning	School of Arts	1	88	West Wallsend	School of Arts	2	138
Harden	Mechanics' Institute	2	167	West Wyalong	School of Arts	1	56
Helensburgh	School of Arts	3	225	Wickham	School of Arts	3	198
Hillgrove	School of Arts	1	58	Wollongong	Town Hall	3	229
Hinton	School of Arts	1	66	Wolumla	School of Arts	1	86
Hornsby Junction	School of Arts	3	249	Woodburn	School of Arts	1	83
Jamberoo	School of Arts	2	129	Woonona	School of Arts	3	203
Jasper's Brush	School of Arts	2	101	Wyong	School of Arts	2	161
Jerilderie	School of Arts	2	179	Yass	Mechanics' Institute	2	140
Jindera	School of Arts	1	86	Young Wallsend	School of Arts	2	151
Kadina	Reading Room	1	88				
Kangaroo Valley	School of Arts	2	86		Total	231	17,253

APPENDIX F.

No. of MILES each BOX TRAVELLED during 1898.

Box.	No. of Miles.	Box.	No. of Miles.	Box.	No. of Miles.	Box.	No. of Miles.	Box.	No. of Miles.
1	278	22	1,362	43	716	64	332	85	760
2	1,888	23	850	44	700	65	442	86	792
3	428	24	314	45	592	66	798	87	882
4	366	25	526	46	316	67	696	88	862
5	688	26	1,442	47	1,226	68	170	89	974
6	1,614	27	698	48	368	69	1,054	90	918
7	1,424	28	336	49	1,656	70	682	91	926
8	956	29	800	50	742	71	1,384	92	522
9	590	30	1,352	51	1,094	72	808	93	218
10	628	31	578	52	746	73	1,066	94	848
11	126	32	1,350	53	1,334	74	266	95	676
12	948	33	798	54	564	75	462	96	862
13	556	34	1,170	55	1,352	76	996	97	604
14	1,102	35	1,184	56	636	77	938	98	1,246
15	904	36	216	57	578	78	510	99	950
16	1,090	37	1,170	58	662	79	294	100	24
17	1,156	38	156	59	2,106	80	988	101	192
18	942	39	416	60	80	81	402		
19	1,038	40	652	61	1,676	82	798	Total	81,303
20	496	41	248	62	1,668	83	552		
21	994	42	1,570	63	560	84	330		

APPENDIX G.

Trustees.

The Hon. James Norton, LL.D., M.L.C. (*President*).

The Hon. Edmund Barton, M.A., Q.C.
The Hon. J. F. Burns.
The Hon. Edward Greville, M.L.C.
The Hon. Philip Gidley King, M.L.C.
Professor M. W. MacCallum, M.A.
Alexander Oliver, Esq., M.A.

OFFICERS.

Principal Librarian and Secretary :—Henry C. L. Anderson, M.A.
First Assistant Librarian :—George H. Gifford.
Second Assistant Librarian :—Hugh Wright.
Cataloguers :—C. J. Brennan, M.A., and James Pierce.

Editor of the Historical Records of New South Wales :—Frank M. Bladen.

LENDING BRANCH.

Librarian :—Frank M. Bladen. *Assistant Librarian* :—Edward Hawley.
Senior Assistant :—John Gannon.

Agents :—Messrs. Angus and Robertson, 89 Castlereagh-street, Sydney.

APPENDIX H.

LIST of Donations received during 1898.

By whom Presented.	List of Donations received.	Vols.
Aberdeen Public Library	Catalogue of the Lending Department	1
Academy of Science, Chicago	Annual Report for 1896	1
	Lichen Flora of Chicago. By W. W. Calkins	1
Agent-General for New South Wales.	The Foreign Office List, 1898	1
	The Colonial Office List, 1898	1
American Agricultural Colleges and Experimental Stations. Reports and Bulletins.	Arizona, Arkansas, California, Colorado, Connecticut, Cornell University, Delaware, Illinois, Iowa, Kansas, Minnesota, Mississippi, Nebraska, Nevada, New Jersey, New York, North Carolina, Ohio, Oregon, Ottawa, Pennsylvania, Rhode Island, South Dakota, Storr's School, Utah, Vermont, Virginia, West Virginia, and Wisconsin.	140
Amos, Alex.	Transactions of the Institution of Engineers and Shipbuilders in Scotland. Vol. 41	1
Anderson, H. C. L.	Rules and List of Members of the Greenock Burns Club	1
	Evanelia, Luka. I. Teretercia (St. Luke's Gospel)	1
	Story of the First Baptisms in the New Guinea Mission	1
	Transactions, &c., of the Second International Library Conference, 1897	1
	"Rome Seen in a Week"	1
Auckland Institute	Annual Report, 1897–8	1
Australasian Institute of Mining Engineers.	Transactions. Vols. 1–5	5
Australasian Student Christian Union.	"The Australasian Intercollegian" for 1898	1
Australian Museum	Memoir 3. "Atoll of Funafuti"	1
	Records. Vol. 3, Nos. 3 and 4	2
	Catalogue of Australian Birds. Parts 1 and 2	2
Australian Mutual Provident Society.	49th Annual Report	1
Astronomer Royal	Greenwich Observations, 1894	1
	Cape of Good Hope Observatory Publications	5
Babbage, E. H.	Babbage's Calculating Engines	1
Bateman, W.	Australian Produce. By W. Bateman	1
	The Colonist. By W. Bateman	1
Bladen, F. M.	The N.S. Wales Government Printing Office, 1894	1
Board for International Exchanges.	British and Foreign Official and other Publications	1,304
Board of Trade, Chicago	40th Report, 1897	1
Boston Public Library	Catalogue of New Books for 1896–7	1
Bowdoin College (Maine)	General Catalogue, &c., 1794–1894	1
Boyce, Rev. F. B.	Augustine and the Evangelization of England	1
British and Foreign Bible Society.	Parts of the Bible in Polynesian Languages	23
	93rd Report of	1
British Columbia Government	Publications	4
British Museum	Publications	261
Butler, W. F.	Millennial Dawn. By C. T. Russell. Vols. 1–3	3
Canada, Geological Survey of	Publications	2
Canterbury College, New Zealand	Calendar for 1898	1
Cobden Club	Free Trade Pamphlets	6
Colenso, Rev. W. (F.R.S.)	A Maori-English Lexicon	1
Colombo Museum	Reports, 1897	1
Fawcett, J. W. R.	Life and Labours of Right Rev. Wm. Broughton	1
	The Australian Anthropologist. Vol. 1	1
	Narrative of a Cyclone	1
	Songs of the Australian Bush	1
Fiji Government	Blue Book for 1897	3
Grant, John (Edin.)	Curiosities of Olden Times	1
Gullick, W. A. (Government Printer).	Seneca, Works of	1
	Douglas Jerrold's Shilling Magazine	1
Guthrie, K. S.	The Soteriology of Jesus	1
	Faith and Reason	1
	Philosophy of Plotinos	1

List of Donations—*continued.*

By whom Presented.	List of Donations received.	Vols
Hennessy, J. D.	"An Australian Bush Track" (2 copies)	
	"The Dis-Honourable" (2 copies)	
	"A Lost Identity" (2 copies)	
	"Wyunum" (2 copies)	
	"The New-Chum Farmer" (2 copies)	
Jamaica, Institute of	Annual Report for 1897	1
Kernot, Prof. W. C.	On Some Common Errors	1
Lawrence, Rev. F.	Pamphlets on Burial, Funeral, &c., Reform	4
Leland Stanford Junior University.	Calendar, 1897–8	1
Library Bureau	"Public Libraries," Vol. 3, January and February, 1898	2
Library Reports	Ashton-under-Lyne, Auckland, Baillie's Institute, Battersea, Birmingham, Bolton, Boston, Brooklyn, Cardiff, Carnegie (Pittsburgh), Denver, Detroit, Dundee, Dunedin, Enoch Pratt, Hamilton, Hobart, Launceston, Leeds, Leyton, Lincoln, Liverpool, Los Angeles, Manchester, Maryborough, New York, Newberry, Newcastle, Newcastle (N.S.W.), Norwich, Peabody Institute, Philadelphia, Plymouth, Portsmouth, Reading, Richmond, St. George's, St. Helen's, St. Louis, Sheffield, South Australia, Stirling's (Glasgow), Victoria, Victoria (Perth), Wellington, West Bromwich.	47
Liversidge, Prof. A. (M.A.)	Miscellaneous Publications	9
Lloyd, L.	Miscellaneous Parliamentary Papers, &c.	389
McGill University	Publications	29
Madras Government	Official Publications	2
Manchester Free Library	Quarterly Record, Nos. 1 and 2	2
Maunder, E. W.	The Recent Eclipse and Note on the Zodiacal Light	2
Melbourne University	Calendar for 1899	1
"Metaphysician," Proprietors of	The "Metaphysician," Vol. 1	1
Millar, Thomas Lockhart	Collection of Australian Books and Pamphlets	24
Miller, W. Val.	Pamphlets on Co-operation	6
N.S. Wales Government	Publications	563
New Zealand Government	Official Publications	12
New Zealand Institute	Trans. and Proceedings of, for 1897. Vol. 30	1
Newark (N.J.) Public Library	Plans of Public Library, Newark, N.J.	1
Newspapers, Proprietors of	Yearly issue of *Advertiser* (Adelaide), *Age* (Melbourne), *Argus* (Melbourne), *Australian Pastoralists' Review* (Sydney), *Ballarat Courier*, *Bendigo Advertiser*, *Bible Echo* (Melbourne), *British Australasian* (London), *British Weekly* (Edinburgh), *Canterbury Times* (Christchurch), *Cape Argus* (Capetown), *Charleville Times*, *Charters Towers Herald*, *Chronicle* (Buluwayo), *Colonial Enterprise* (London), *Coolgardie Miner*, *Coolgardie Pioneer*, *Cork Examiner*, *Critic* (Adelaide), *Croydon Golden Age*, *Daily Telegraph* (Launceston), *Echo* (Camden, New Zealand), *Echuca and Moama Advertiser*, *Evening Post* (Wellington), *Evening Star* (Dunedin), *Fiji Colonist and Levuka Gazette*, *Freeman's Journal* (Dublin), *Geraldton-Murchison Telegraph*, *Gladstone Observer*, *Glasgow Weekly Mail*, *Guardian* (London), *Hamilton Advertiser*, *Hobart Mercury*, *Observer* (Hughenden), *Independent* (Cooktown), *Indian Daily News* (Calcutta), *Inquirer* (Perth), *Japan Weekly Mail* (Yokohama), *Kalgoorlie Miner*, *Launceston Examiner*, *Leader* (Bundaberg), *Leader* (Melbourne), *Ladies' Pictorial* (London), *Lloyd's Weekly* (London), *Mackay Chronicle*, *Mackay Mercury*, *Manchester Courier*, *Melbourne Punch*, *Mirror* (Geraldton), *Morning Post* (Cairns), *Morning Herald* (Perth), *Mt. Morgan Herald*, *Murchison Times* (Cue), *Natal Witness* (Pietermaritsburg), *New York Tribune*, *New Zealand Herald* (Auckland), *New Zealand Tablet* (Dunedin), *New Zealand Times* (Wellington), *Nhill Free Press*, *North British Agriculturist* (Edinburgh), *Northern Public Opinion* (Roeburne), *North Queensland Register* (Charters Towers), *Omaru Mail*, *Otago Witness* (Dunedin), *Patriot* (Bundaberg), *People's Journal* (Dundee), *Pioneer* (Allahabad), *Port Denison Times* (Bowen), *Reynolds' Newspapers* (London), *Rhodesia Herald* (Salisbury, S. Africa), *Riverine Herald* (Echuca), *Samoa Herald*, *Settler* (Toowoomba), *San Francisco Chronicle*, *Southern Cross* (Adelaide), *Standard* (London), *Standard and Diggers' News* (Johannesburg), *Weekly Scotsman* (Edinburgh), *Weekly Times* (Melbourne), *West Australian* (Perth), *West Australian Record* (Perth), *Western Argus* (Kalgoorlie), *Western Mail* (Perth), *Worker* (Brisbane), *World* (London), *World* (Vancouver), *World* (New York), *Yarrawonga Chronicle*, *Zeehan and Dundas Herald*.	
Ontario Government	Revised Statutes of Ontario, 1897	2
Padley, James	Pamphlets on Vegetarianism	26
	Pamphlets on Co-operation	20
	Paddington Public Library Catalogue	1
	Annual Circular Price List	1
	Manual of New Zealand History	1
	Homœopathic Vade Mecum. By Dr. Ruddock	1
	Squires' Companion to the British Pharmacopœia	1
	Wild Flowers of Gt. Britain	1
	Western Australia in 1896	1
	Bernardi, G. B. de. Trials and Triumphs of Labour	1
	Donnelly, I. The Golden Bottle	1
	Brown, J. Ednie. Report on Forests of Western Australia	1
	A.B.C. Year Book for 1897	1
Pennsylvania, University of	Publication	1
Phipson, E. A.	"View in Old South Wales." (Oil Painting)	1
	How to establish Australia's Prosperity	1
Pinschof, Carl	The "Credit Foncier" System	1
Plummer, J.	Pamphlets on Co-operation	74
	"The Avenue." Vol. 1	1
Queensland Government	Official Publications	22
Rae, John (M.A.)	Thirty-five Years on the New South Wales Railways	1
Rennie, Z. C.	The Roof of Australia	1
Royal Geographical Society of Australasia. (Victoria.)	Trans. Vol. 15	1
Royal Historical Society	Transactions. New Series. Vol. 12	
Royal Institute of British Architects.	Journal of. Vol. 5. 3rd Series	1
Royal Mint, Sydney	Elouis, C. Tables for Standarding Gold	1

List of Donations—*continued.*

By whom Presented.	List of Donations received.	Vols.
Royal Observatory, Greenwich	Official Publications	3
Royal Society of Queensland	Proceedings. Vol. 13. 1898	1
Royal Society of South Australia	Transactions. Vol. 22	2
Royal Society of Tasmania	Papers of. 1898	1
Royal Society of Victoria	Proceedings of. Vol. 10	1
Russell, S.	Some Astronomical Records in Ancient Chinese Books	1
Ruthning, H. L. E.	Pamphlets on Co-operation	8
Sadler, Ralph	The Apocalypse of St. John done into Modern English, &c.	1
	Malâkî, My Angel	1
	The Book of Ayub	1
St. Louis Mercantile Library	Reference Lists for 1898	1
Sharpe, Dr. W.	Humanity and the Man	1
	Niagara and Khandalla	1
Smithsonian Institution	Official Publications	3
South Australian Government	Official Publications	8
Sydney and Suburban Co-operative Society.	Publication	1
Sydney Chamber of Commerce	Annual Report for 1897-8	1
Sydney University	Manual of Public Examinations for 1899	1
	Catalogue of the Greek and Etruscan Vases	1
Tangye, Sir R. (F.R.G.S.)	Some Peculiar Beggars. By Sir R. Tangye	1
	The Cromwellian Collection. Vol. 1. By Sir R. Tangye	1
	English Notes for American Circulation. By Sir R. Tangye	1
	Tales of a Grandfather. By Sir R. Tangye	1
	Photograph of Sir R. Tangye	1
Tasmanian Government	Publications	5
Taylor, S. (M.A.)	A System of Sight-singing	1
Tebbutt, John	Report of Mr. Tebbutt's Observatory	1
	Results of Meteorological Observations, 1891–1897	1
Terry, W. H.	Spiritualism. By J. W. Edmonds and Dr. G. T. Dexter	2
Tepper, John G. O. (F.L.S.)	The Influence of Vegetation on Climate and the Rainfall	1
	On Leaves, Flowers, Fruit. By J. G. O. Tepper	1
Thompson, Dr. J. Ashburton	Leprosy in Hawaii, &c. By J. A. Thompson, &c.	1
United States Government	Publications	21
Velde, C. Van de	The Sugar-Beet Industry	1
Victoria Institute	Journal of the. Vol. 30. 1898	1
Victorian Government	Official Publications	65
Walch, C. E.	A Sermon by the Rev. G. Clarke	1
Walker, J. T.	Notes on Federal Finance	1
	Remarks on Federal Finance	1
	The Federation of British Australasia	1
West Australian Government	Official Publications	25
Windeyer, Lady M.	Progress in Women's Education in the British Empire	1
Wisconsin, Free Library	Handbook of 1897	1
	Pamphlet *re* Free Travelling Libraries	4

Sydney: William Applegate Gullick, Government Printer.—1899.

[9*d*.]

1899.

LEGISLATIVE ASSEMBLY.

NEW SOUTH WALES.

NATIONAL ART GALLERY OF NEW SOUTH WALES.

(REPORT OF THE TRUSTEES FOR THE YEAR 1898.)

Presented to Parliament by Command.

Printed under No. 2 Report from Printing Committee, 14 March, 1899.

Annual Report, 1898.

National Art Gallery of New South Wales, Outer Domain,
Sydney, 23 January, 1899.

IN presenting their Report for the year 1898, the Trustees again refer with satisfaction to the appreciation of the public, as evidenced by the sustained large attendance. Visitors recorded during the year numbered 247,339, the daily averages being 497 on week-days and 1,805 on Sundays. During the ten years ending 31st December ultimo, upwards of two and a-half millions of persons passed through the turnstiles, the yearly average during that period being 251,180.

The development of the architectural scheme for the permanent gallery has made good progress during the year. Four Courts of the South Wing are now completed. The system of lighting adopted is found to be admirable both as to the volume and distribution. The next proposed extension—the south façade—will complete that wing.

The "Country Loan Collections" selected by the Trustees in 1895, for Bathurst, Goulburn, and Newcastle, consist, in all, of 44 pictures, distributed between these centres, which may form the nuclei of future provincial Art Galleries. These country collections continue to attract much interest, and are of especial value to students.

LONDON EXHIBITION OF AUSTRALIAN ART.

This enterprise, undertaken by the Trustees in the interest of art in Australia, which was in course of projection at date of our last year's Report, has been carried through. Forty-nine pictures were sold in London, realising £1,131, but the unexpectedly small gate-money, amounting only to £141, has caused financial disappointment. The whole of the unsold works, which included contributions from our own and the Victorian National Galleries, were returned to Sydney, and distributed in October last, without accident or injury.

THE "WYNN BEQUEST."

Australian art is indebted to the late Richard Wynn for a bequest of £1,000, the interest on which sum is awarded as a prize by the Trustees each year, to the most meritorious work in painting or sculpture by an Australian artist. The prize for 1898 was awarded to Mr. W. Lister Lister's picture, "The Last Gleam"; in the previous year (1897)—the first award under the bequest—the prize fell to Mr. W. Wither's painting, "The Storm."

STUDENTS.

The number of students enrolled is 281, of whom 15 were admitted in 1898.

BOARD OF TRUSTEES.

During the past three years the Trustees have had to deplore the loss of three of their colleagues, namely, Hon. Edward Combes, Sir Patrick Jennings, and Sir George Innes; now only six Trustees survive to conduct the work of the Institution.

The Trustees feel very keenly the urgent necessity for additional strength, and so would very respectfully venture to importune the Hon. the Minister of Public Instruction to give effect to their suggestions, as already submitted, for adding to their number four or five gentlemen, qualified by their knowledge and appreciation of art, as well as by business capacity, to maintain the prestige of the Institution.

The Board held 26 meetings in 1898, the attendances being :—

Messrs. E. Du Faur, President	25 meetings.
Sir James Fairfax	13 „
J. Mullens	22 „
W. J. Trickett	1 „
B. R. Wise	5 „
J. R. Ashton	23 „

Particulars of presentations and purchases, &c., &c., during the year are annexed hereto.

E. DU FAUR,
President.

PRESENTATIONS IN 1898.

Portrait in oils (Gordon Coutts) of the Right Honorable G. H. Reid, P.C., D.C.L., Q.C., M.P., &c., &c., presented by himself.

Particulars of works purchased by the Trustees in 1898, at a cost of £3,411.

OIL PAINTINGS.

"Requiescat"	Briton Riviere.
"The Garden by the River"...	Yeend King.
"The Sea hath its Pearls"	W. H. Margetson.
"The Scoffers"	Frank Brangwyn.
"The Dying Salute You"	Miss Muskett.
"Thro' Sunny Meadows"	Howard Ashton.
"Darby and Joan"	H. G. Garlick.
"Pan"...	S. Long.
"Pacific Beaches"	A. J. Hanson.
"Disillusioned"	P. Van der Velden.
"Adelaide"	E. Phillips Fox.

WATER-COLOUR DRAWINGS.

"The Low Downs"	G. Fitzgerald.
"Snowdrop"	J. G. Batten.

PASTEL DRAWINGS.

"Reflections"	A. H. Fullwood.
"Leopards"	J. M. Swan, A.R.A.

BLACK AND WHITE.

18 Etchings.	2 Drawings.
1 Engraving.	2 Pencil Studies.

SCULPTURE AND MODELLING.

Marble Bust, Girl...	E. Onslow Ford, R.A.
Marble Bust, E. Du Faur...	Theo. Cowan.
19 Plaster Models, for Students	(Parisian.)
10 Plaster Studies in bas-relief	A. Hutchinson.

ADDENDA.

Five persons were permanently employed, with four extra attendants on Sundays and holidays. The Gallery was opened 363 days in the year.

The attendance of visitors was 247,339.

Year's Expenditure to 31st December, 1898.

For works of Art purchased	£3,411
Salaries and wages	1,399
Frames, freights, insurance, &c.	436
Repairs, fittings, &c.	166
	£5,412

GEO. E. LAYTON,
Secretary.

Sydney: William Applegate Gullick, Government Printer.—1899.

[3d.]

1899.

LEGISLATIVE ASSEMBLY.

NEW SOUTH WALES.

DEPARTMENT OF PUBLIC HEALTH.

REPORT

ON

PROTECTIVE INOCULATION AGAINST TICK FEVER.

An Account of an Experimental Inquiry into its Effect on Cattle, and on Meat and Milk; together with some Notes on Protective Measures other than Inoculation.

BY

FRANK TIDSWELL, M.B., CH.M., D.P.H.
PRINCIPAL ASSISTANT MEDICAL OFFICER OF THE GOVERNMENT.

SYDNEY, DECEMBER 29TH, 1898.

Printed under No. 2 Report from Printing Committee, 14 March, 1899.

SYDNEY: WILLIAM APPLEGATE GULLICK, GOVERNMENT PRINTER.
1899.

*40—a c 3— [1s. 3d.]

The Chief Medical Officer of the Government and President of the Board of Health to the Right Honourable The Premier and Colonial Treasurer.

Department of Public Health,
Sydney, 9 January, 1899.

Sir,

I have the honour to present herewith a report by the Principal Assistant Medical Officer of the Government, on the effects produced on the meat and milk of cattle protectively inoculated with the virus of Tick Fever, and to suggest that it might be communicated to the Honourable the Minister for Mines and Agriculture, at whose instance the inquiry was undertaken.

2. The conclusion reached is that inoculation by the method now in use causes no permanent alteration either in quantity or quality of the meat and milk of cattle submitted to it. The importance which this knowledge has at a date when invasion of the tick is probably imminent, and when, consequently, it is necessary in the common interest that every real or imaginary obstacle to the systematic practice of inoculation should be removed, scarcely needs to be pointed out.

3. The report is confined as nearly as possible to the matters of which elucidation was specially desired. There are others of great importance which have not yet been systematically examined; and therefore, at the same time that the experimental method followed by Dr. Frank Tidswell is pointed out as the only one which can give trustworthy results, it should be mentioned that the present plan of protective inoculation against natural Tick Fever, which was devised several years ago in the United States, and which has recently been practised in Queensland on an extensive scale, stands much in need of similar investigation. It may turn out that it is not susceptible of improvement; but in the meantime it is easily conceivable that it might be made more manageable in use, and perhaps rendered safer and still more effectual.

I have the honour to be,

Sir,

Your obedient Servant,

J. ASHBURTON THOMPSON.

SYNOPSIS.

INTRODUCTION.

1. NATURAL TICK FEVER.

A.—The role of the ticks in Tick Fever—

(a) Names and distribution of the disease.
(b) Ticks are the natural transmitters of the disease.
(c) The disease can be artificially produced by the inoculation of blood from a sick animal, owing to the presence of the real causal micro-organism.
(d) In nature the ticks carry and inoculate the micro-organism.
(e) Comment.

B.—Immunity after natural Tick Fever—

(a) Certain animals possess natural immunity.
(b) Cattle are naturally susceptible, but may come to possess acquired immunity after having suffered from the disease.
(c) American experiments on immunity.
(d) The immunity after a single attack is only partial, but it becomes perfect after repeated attacks.
(e) The duration of the immunity has not been finally determined.
(f) Comment.

2. PROTECTIVE INOCULATION.

A.—Value as a protective measure.

(a) American authorities advised a mild attack of Tick Fever by inoculation or exposure to ticks as a protective measure.
(b) In Queensland inoculation used, but distinction drawn between virulent and recovered blood.
(c) Queensland method and published results.
(d) Experiments performed in Sydney show that inoculation protects against reinoculation.
(e) In practice it is found that there may be some mortality amongst inoculated animals on exposure to ticks.
(f) The duration of the immunity conferred by inoculation has not been definitely ascertained.
(g) The immunity can be rapidly produced.
(h) Comment.

B.—Effects of the inoculation on cattle—

(a) Successful inoculation involves occasionally death, and invariably illness.
(b) The inoculation fatality is less than that of natural Tick Fever, is influenced by certain factors, and is irregularly distributed.
(c) The inoculation illness is really modified Tick Fever, all symptoms being milder.
(d) The inoculation illness does not last longer than a month or six weeks as a rule.
(e) The effect of inoculation on meat and milk.
(f) Comment.

3. NOTES ON PROTECTIVE MEASURES OTHER THAN INOCULATION.

(a) Quarantine.
(b) Dipping.
(c) Crush inspection.

CONCLUSION.

APPENDICES.

PROTECTIVE INOCULATION AGAINST TICK FEVER.

An Account of an Experimental Inquiry into its Effects on Cattle, and upon Meat and Milk; together with some Notes on Protective Measures other than Inoculation.

*** The experiments performed at the Maritime Quarantine Station, Sydney, and described in this report, were commenced on 15th July, 1898, and terminated on 25th November, 1898. They profess to deal only with the immediate effects of inoculation. The remote consequences, if there be any, can only be determined by a much greater lapse of time than the experiments covered. Some of the animals are being kept under observation, and any further effects of inoculation shown by them will be duly reported.

INTRODUCTION.

In the opinion of those competent to judge, the invasion of New South Wales by the Cattle Tick, and so by Tick Fever, is inevitable, and the steady southward progress made by the ticks in Queensland suggests that the time of their advent may be in the near future. Impressed with the calamitous consequences of tick infestation to the herds in the north, stockowners in this Colony have expressed the desire to supplement the measures already taken by the Government by the protective inoculation of their cattle.

At the present time this operation, which involves infection with living micro-organism, is prohibited by the Animals Infectious Diseases Act, 1888 (51 Vic., No. 30, section 4). In considering the advisability of permitting its practice, there cropped up the question of its effects on meat and milk. It was found that information on these aspects of inoculation was scanty, vague, and of the hearsay order. In view of the paramount importance of the interests involved, it was considered desirable to become possessed of more precise facts. With this object an experimental inquiry was undertaken by the Health Department, at the instance of the Hon. the Minister for Mines and Agriculture.

The experiments, of necessity, covered more than their particular objects. Their successful conduction demanded an acquaintance with inoculation in general. In order to make the additional information gleaned accessible to all interested, the scope of this report had to be enlarged beyond the original intention. It now includes data concerning all the more important issues of the question. In its compilation use has been made not only of the results of our own experiments but also of those obtained by other investigators. In every case where such importations have been made, the source is duly acknowledged by reference to the list of literature at the end of the report.

The details of our own work are given in the records of observations in Appendix 2, extracts from which are presented in the report itself as illustrations of the various points under discussion. Appendix 1 consists of charts upon which are shown in graphic form the relationships of the three principal features of the inoculation illness in dairy cows.

As protective measures other than inoculation must play their part in our plan of resistance to the invasion of ticks, some information concerning them, gathered principally during a recent visit to Queensland, has been incorporated into this report. It is hoped that this inclusion will not prove unacceptable. The writer's thanks are due to the Hon. J. V. Chataway, Minister for Agriculture, Mr. P. R. Gordon, Dr. J. Sydney Hunt, Mr. C. J. Pound, and other gentlemen, for the cordial reception, and unstinted help accorded to him during his visit to Queensland.

The valuable professional services and advice of Mr. J. D. Stewart, M.R.C.V.S., Veterinary Surgeon to the Stock Branch, and the untiring aid of the assistants in the Sydney experiments, Messrs. Grant, Crouch, and Brown, are also gratefully acknowledged.

PART 1.—NATURAL TICK FEVER.

A.—The Rôle of the Ticks in Natural Tick Fever.

(a) *Names and Distribution of Natural Tick Fever.*

The disease with which this report is concerned was called Texas or Southern Cattle Fever by the American observers who first described it (1).* In Australia it is more generally known as Tick Fever or Cattle Tick Fever. It is said to occur also in Jamaica (2), the Argentine Republic (3), South Africa (1), Roumania (1), and Java (3). The identity of the disease in these various places is now regarded as established. The Australian name of Tick Fever has become attached to it owing to the part played in its dissemination by the cattle tick.

(b) *Ticks are the Natural Transmitters of the Disease.*

The exact relationship of the tick to Tick Fever was definitely demonstrated by the masterly researches of Smith and Kilbourne, an account of which was published in 1893 (1). These observers showed that Texas Fever is not communicated directly from animal to animal, but that the cattle tick is necessary to its transmission. Healthy animals can be safely associated with sick ones provided all ticks be removed from the latter beforehand. If the ticks be not so removed, the healthy animals become infected and suffer from tick fever. Pastures previously "clean" became infected when occupied by the ticks, either as a natural event, or by the artificial scattering of ticks over them.

(c)

* The numbers refer to the list of literature at the end of the repor

(c) *The Disease can be artificially produced by the Inoculation of Blood from a Sick Animal.*

The observations just mentioned apply to the disease as it occurs in the ordinary course of nature. It was shown, however, that the disease can be set up artificially by injecting blood taken from a sick animal under the skin, or into the veins, of a healthy one. The disease could be thus transmitted through a series of any number of animals. The blood was found to retain its infective properties after the apparently perfect recovery of the animal from tick fever.

It was therefore made clear that the tick is not the essential cause of the fever, and further investigations showed that the real agent is a micro-organism which lives in and upon the blood of affected animals. To this micro-organism Smith and Kilbourne gave the name of *Pyrosoma bigeminum*, on account of its microscopical appearances. Its constant presence in the blood of animals suffering or recovered from tick fever furnished the explanation of the infectivity of the blood when artificially injected.

(d) *In nature Ticks carry and Inoculate the Micro-organism.*

Numerous experiments indicated that in nature the disease can only be conveyed by the cattle ticks,* which it is presumed, inoculate the micro-organism in much the same way as can be done with the injection syringe. It was found that the micro-organisms are transmitted from the old ticks through the eggs and young to any cattle to which these particular young ticks happen to attach themselves. Adult female ticks taken direct from sick cattle laid their eggs in glass boxes kept in the laboratory. In due course the young ticks hatched out, and they produced the disease on being placed on healthy cattle in stables away from all infected ground. Hence it appears that the adult tick in withdrawing the blood of infected cattle takes with it the micro-organisms, and that these are transferred through the eggs to the next generation of ticks. The fact that each female usually lays over 2,000 eggs explains the way in which the disease becomes widely disseminated.

The micro-organism, though discoverable in the blood of all infected animals, has not been detected in the bodies of the ticks, possibly on account of its assuming a different, and as yet unknown, form in the tick. When, where, and how the micro-organism first became associated with the tick is unknown. The association is accidental, for there are ticks which do not produce tick fever.

(e) *Comment.*

The American researches established the *rôle* of the tick in tick fever. The tick is the means by which the real causal micro-organisms gets into the blood of cattle, and also the means by which it eventually gets out again. The researches of Dr. J. Sidney Hunt, Government Pathologist, and Mr. C. J. Pound, Director of the Stock Institute, Brisbane, have shown that the American results apply also to the disease as it occurs in Queensland.

The intervention of two different parasites, the tick and the micro-organism, in the causation of tick fever, though marvellous, is not without parallel in the realm of disease. Similar symbiotic *rôles* are played by the Tse-tse fly and the micro-organism of the African cattle disease, "Nagana"; by the mosquito and the micro-organism of malaria; and, it is said, by the common flea and the micro-organism of plague. In all four cases the production of the disease is not an essential attribute of the insect concerned, but a fortuitous circumstance due to their capability of acting as conveyors of the real pathogenic microbe. There are cattle ticks which do not communicate tick fever, just as there are mosquitoes which do not communicate malaria.

B.—Immunity after Natural Tick Fever.

(a) *Certain animals possess natural immunity.*

Tick fever is not known to attack animals other than bovines. Ticks attach themselves to horses, sheep, marsupials, birds, snakes, &c., and may even mature upon them (7), but they do not set up tick fever in these animals. The animals appear to be, by nature, insusceptible to the disease, and hence are said to possess natural immunity.

It must be admitted that some doubt exists in the case of sheep. The American observers came to the conclusion that sheep were not susceptible, but they only report one experiment in which blood was injected into a lamb (1, page 83). By similar experiments on two sheep in Queensland, Dr. Hunt set up a fever in both. One recovered, and one was killed in a dying state. *Post-mortem* examination did not reveal the characteristic lesions of tick fever, and the examination for micro-organisms was indefinite. The blood from one of the sheep injected into a bullock "produced no well-marked disease" (7, page 28). The evidence is, perhaps, no more than suspicious, but it is possible that tick fever, like tuberculosis, occasionally occurs in sheep. As Dr. Hunt remarks, the subject merits further study.

(b) *Cattle are naturally susceptible, but come to possess an acquired immunity after having suffered from the disease.*

Cattle are by nature susceptible to tick fever; but, after having suffered from it, they exhibit more or less resistance to a second attack. They come to possess an acquired immunity.

In America the permanent distribution of ticks is limited to the States south of a boundary known as Salmon's line. Although the cattle south of this line are always more or less tick infested, they show no visible signs of having tick fever. But immediately northern cattle are taken to the south the ticks invade them and set up tick fever. The absence of fever in the south is not due to lack of virulence on the part of the ticks, but to the immunity of the southern cattle.

(c) *American Experiments on Immunity.*

The American observers furnished the proof that this immunity of Southern cattle was not natural, but due to previous attacks. Their experiments were performed by the exposure of Southern cattle to the ticks at the Experimental Station, near Washington. A steer, aged 2 years; 3 heifers, aged 1½, 3, and 3 years; and 5 cows, aged 5, 5, 5, 4, and 6 years, from North Carolina and Texas, were exposed, with negative results in all cases, whilst northern cattle exposed at the same time all took the disease. Two of the southern cows had calved after their arrival at the station, and the calves were exposed with the mothers. Both calves took the fever. Although descended from immune parents, the calves were not themselves immune. The experiments thus show that the immunity of the southern cattle is not natural, but acquired.

Another

* Nothing is known as to the possibility of other suctional insects spreading the disease.

Another series of experiments showed that northern cattle, originally very susceptible, became more or less immune after having passed through an attack of the disease. In these the method was to re-expose the animals to ticks one or two years after the first attack. The results of the first and subsequent exposures are summarised in the following table, compiled from the account (1, pp. 132–4). The kind of attack is stated in the author's own words under the column referring to the year in which it occurred :—

TABLE I.—Showing results of Exposure and Re-exposure to Ticks (Smith and Kilbourne).

Kind.	Age.	1889.	1890.	1891.	1892.
	Yrs.				
Heifer	$1\frac{4}{12}$	Prolonged	Probably not affected.	.....	.....
Do	2	.....	Prolonged, acute	Negative	Fairly severe.
Do	2	.....	.....	Short, acute	Negative.
Do	2	.....	.....	Acute	do
Cow	$2\frac{1}{2}$	Fairly severe	Probably not affected.	.....	.....
Heifer	$2\frac{1}{2}$	.....	Doubtful	Acute.	.....
Do	$2\frac{1}{2}$	.....	Acute	.....	Fairly severe.
Steer	3	Mild	Prolonged, mild.	.....	.....
Cow	$3\frac{1}{2}$	do	*Mild.	.....	.....
Heifer	$3\frac{1}{2}$	.....	.....	Acute	Slight ?
Do	$3\frac{1}{2}$	.....	.....	† do	Mild, short.
Cow	4	Mild	Acute.	.....	.....
Steer	4	.....	Prolonged, mild	Short, acute	Slight ?
Cow	$4\frac{1}{2}$	Severe	Acute, died.	.....	.....
Do	6	.....	Severe	Acute, died.	.....
Do	7	.....	Acute	?	.....
Do	7	.....	.....	‡Acute	Negative.

* Died some time after. † Intravenous injection of blood. ‡ Inoculation of blood under skin.

Of the 17 animals experimented upon 10 took the fever, and 3 died; the other 7 "remained practically unaffected."

(*d*) *Immunity after a Single Attack is only Partial, but it becomes Perfect after Repeated Attacks.*

In the two sets of experiments to which attention has just been directed, there was exhibited an important difference in degree between the immunity of the southern animals, in which it was perfect, and that of the northern animals in which it was only partial. The greater immunity of the southern animals is regarded by the authors as being due to frequently repeated infection by ticks, commencing when the animals are very young. The insufficiency of the immunity resulting from a single attack is commented upon in the following terms:—"It is not to be denied that in the case of animals not more than $2\frac{1}{2}$ or 3 years old a first mild attack may prevent a second fatal attack in many cases, and a first acute attack may be followed by a very mild infection, but it may be laid down as a general proposition that a single attack is not sufficient to produce complete immunity."

(*e*) *The duration of the immunity has not been finally determined.*

The time the immunity lasts after removal from all possibility of reinfection presumably differs in accordance with the number of previous attacks, but there are no definite statements to this effect. The American observers note that southern cattle are said to become "liable to be attacked, after having been away from the permanently infested territory for a year or longer." (1. p. 130.) In their own experiments they found the animals retained their immunity for two years. From the results stated in the table given above it appears that after a single attack the immunity was sometimes retained for a year at least, although there is also evidence of its failure in the second year. But even then it seemed sufficient to avert a fatal attack, in the younger animals at all events. There are no available data for the settlement of this point, but it is probable that the protection extends over a year or two.

(*f*) *Comment.*

The American researches definitely showed that cattle can acquire immunity against tick fever, but that the immunity only becomes perfect after repeated attacks. Nevertheless the immunity conferred by a single attack, although not always preventing fever, may prevent death from a second attack. The extensive observations recently made in Queensland have led to similar conclusions.

PART 2.—PROTECTIVE INOCULATION.

A.—VALUE AS A PROTECTIVE MEASURE.

(*a*) *American authorities advised a mild attack of Tick Fever as a protective measure.*

The desirability of possessing even the partial immunity which a single attack confers has led to the introduction of inoculation as a protective measure. Smith and Kilbourne, whilst not greatly favouring the procedure, recognised its worth as a means of protecting valuable animals from a fatal attack. They remark that calves are much less susceptible than older animals, and would probably survive without treatment, but "in the case of animals more than 12 to 18 months old the first attack might be fatal, and if a preliminary mild attack could be induced by artificial means the fatal effect of a second attack might be averted." The means they advised, were that the animals be exposed to an attack in the autumn, when the disease will probably be mild and not likely to cause permanent injury. They recommend that the disease be set up either by exposure to ticks, or by inoculation. (1 p. 136.) They incline to favour the former process as being simpler and not involving operation.

(b) In Queensland the method of inoculation is used, but a distinction is drawn between "virulent" and "recovered" blood.

In Queensland the climatic conditions favourable to mild attacks by ticks are wanting, and inoculation becomes the only method possible. In Table I it is noted that two of the animals experimented upon in America, on exposure to ticks after inoculation, showed in one case complete, and in the other, partial immunity. Both were inoculated with blood taken from animals actually sick, but it is noted that the blood of southern animals remained infective for three years after the illness. It is now known that the infectivity may persist for even longer. Although the American observers thus appear to have used blood from sick animals and blood from animals restored to apparently perfect health, and to have produced the disease with both kinds, they do not seem to have been impressed with any difference in virulence between the two. Such a distinction is made in Queensland, where it has been found that blood taken during the fever ("virulent" blood) produces much more serious effects than blood taken after the fever has passed off ("recovered" blood). In our own experiments at North Head we have used both kinds, and the results indicate that recovered blood was slightly less violent in its action. However, the experiments were not designed for the settlement of this question, and our opportunities for observation were so few that no great weight attaches to them. It is believed in Queensland that the difference is a real one, but only becomes apparent when observations are made on a large number of animals.

It is not known whether there is any difference between the two kinds as to the degree and duration of the immunity conferred.

(c) Queensland method and published results.

The practice of protective inoculation in Queensland is based on the above mentioned views, and consists of injecting recovered blood in the hope of obtaining immunity at the expense of a mild attack of Tick Fever. A method of performing the operation on a large scale has been elaborated by Mr. C. J. Pound. (8.)

Some results are given in a report recently issued by the Queensland Government (4). Mention is made of the inoculation of some 35,000 head of cattle with a fatality due to the operation which is mostly stated to have been "very trifling," "very small," "practically nil," and "nil." It would appear also that most of these animals were unaffected on subsequent exposure to ticks. An effort to extract exact figures from this rather complicated document gave the following results :—

17,960 cattle were inoculated, with a loss of 679 head ; a fatality equal to about 3·6 per cent.
171 bulls were inoculated, with a loss of 7 head ; a fatality equal to about 4 per cent.
95 inoculated cattle remained unaffected on exposure to ticks, whilst 30 uninoculated cattle all suffered from Tick Fever.

These results must be regarded as furnishing very satisfactory testimony of the efficiency of protective inoculation.

(d) Experiments performed in Sydney show that inoculation protects against reinoculation.

Amongst the items mentioned in the Queensland report there is the inoculation of 45 bulls which withstood reinoculation without ill effect, although the blood used produced severe fever in 10 control animals Our own experiments at North Head furnish information on this point. A general statement concerning the inoculations and their results is given in Table II. The blood used in each case is designated by a symbol indicative of its source, thus :—

Blood A.—Recovered blood obtained from Queensland.
Blood B.—Virulent blood obtained from Queensland.
Blood C.—Recovered blood from Cow II of our series.
Blood D.—Virulent blood from Cow VII.
Blood E.—Virulent blood from Cow IX.
Blood F.—Virulent blood from Cow V.
Blood G.—Virulent blood from Cow XII.
Blood H.—Normal blood obtained from Glebe Island Abattoir.

The terms "virulent" and "recovered" applied to the blood are used in the sense already explained. The term "reaction" connotes that the inoculation was followed by the usual symptoms of (inoculated) Tick Fever.

TABLE II.—General Statement concerning Inoculations and results. Doses in cubic centimetres.

Cow.	First Injection.			Second Injection.			Third Injection.		
	Material.	Dose.	Result.	Material.	Dose.	Result.	Material.	Dose.	Result.
I	Blood G	50 c.c.	Reaction	.....	.....	.....	.....	.....	.....
II	Blood A	10 c.c.	Reaction	Blood B	10 c.c.	No reaction	Blood G	100 c.c.	No reaction
III	Blood A	10 c.c.	Reaction	Blood B	15 c.c.	No reaction	.....	.....	.....
IV	P.C. filtrate of blood A (1).	10 c.c.	No reaction	Blood B	10 c.c.	Reaction	Blood G	210 c.c.	No reaction
V	Blood H	10 c.c.	No reaction	Blood B	15 c.c.	Reaction	Blood G	50 c.c.	No reaction
VI	P.C. filtrate of blood H (1).	10 c.c.	No reaction	Blood B	10 c.c.	Reaction	Blood G	100 c.c.	No reaction
VII	Blood C	10 c.c.	Reaction	Blood F	15 c.c.	No reaction	Blood G	100 c.c.	No reaction
VIII	Centrifugalised blood C (2).	20 c.c.	No reaction	Blood E	10 c.c.	Reaction	Blood G	100 c.c.	No reaction
IX	Blood D	10 c.c.	Reaction	.....	.....	.....	.....	.....	.....
X	Blood E	10 c.c.	Reaction	Blood G	50 c.c.	No reaction	.....	.....	.....
XI	Blood E (3)	10 c.c.	Reaction	Blood G	50 c.c.	No reaction	.....	.....	.....
XII	Blood F	10 c.c.	Reaction	.....	.....	.....	.....	.....	.....
XIII	Blood E (4)	10 c.c.	Reaction	Blood G	50 c.c.	No reaction	.....	.....	.....

The symbols A, H indicate source of blood (*vide* text). (1) Obtained by passing blood through a Pasteur-Chamberland filter. (2) Supernatent liquid after centrifugalising blood for 20 minutes at rate of 4,000 revolutions per minute. (3) Injected in 10 divided doses of 1 c.c. each. (4) Injected into jugular vein ; all other injections subcutaneous.

In

In the column headed First Injection it will be seen that certain animals, Nos. IV, V, VI, VIII, received injections of blood modified in various ways. These injections were made to elucidate some special points which will be dealt with in a later communication. In the meantime it is to be noted that they cause no reaction, and conferred no protection. On subsequent injection with unmodified blood all the animals reacted. The observations therefore furnish confirmation of the statement made by Mr. Pound in his report for 1897, namely, "that it is absolutely necessary for the animal to have had the fever in some form, in order to protect it from a subsequent more fatal attack."

The results recorded in the table show that the first inoculation with either recovered or virulent blood was followed by reaction with deadly certainty. Consequently they are in accord with the opinion that animals in this latitude will take tick fever.

The table also shows that when once a reaction had been obtained, no further reaction followed subsequent injections.

Cow II gave a reaction with blood A, but afterwards gave no reaction with blood B, which produced reaction in cows IV, V, VI, nor with blood G, which produced a reaction in cow I.

Cow III gave a reaction with blood A, but afterwards gave no reaction with blood B, which produced reaction in cows IV, V, and VI.

Cows IV, V, and VI gave a reaction with blood B, but afterwards gave no reaction with blood G, which produced a reaction in cow I.

Cow VII gave a reaction with blood C, but afterwards gave no reaction with blood F, which produced reaction in cow XII, nor with blood G, which produced reaction in cow I.

Cows VIII, X, XI, and XII gave a reaction with blood E, but afterwards gave no reaction with blood G, which produced a reaction in cow I.

The remaining animals, Nos. I, IX, and XII were used as controls.

It will be seen that in all cases after one reaction had been obtained subsequent injections failed to produce another. The first reaction had completely immunised the animals against reinoculation, even with the very larger doses which represent the severest trial we could apply in this Colony. The ultimate test of exposure to ticks is to be carried out by sending some of the animals to Queensland.

(*e*) *In practice there may be some mortality amongst inoculated animals on exposure to ticks.*

It was ascertained during a recent visit to Queensland that as a matter of practice it has been found that a certain mortality occurs amongst inoculated animals when they become tick infested. Most of them remain well, but some fall sick, and a few die. This is in accord with the American opinion that complete immunity is not conferred by a single attack of the disease.

It is questionable whether this mortality is to be altogether ascribed to failure of the inoculation method. There are at least three other influences which may be operative in its production, viz.:—

(1.) The use of unsuitable blood.
(2.) Unsatisfactory performance of the operation.
(3.) The effects of the ticks *per se*.

(1.) That the blood of every recovered animal is not suitable, has been an outcome of practical experience in Queensland. It has been found that some animals though immune themselves will not furnish blood capable of setting up the disease in other animals. No doubt the unsuspected use of such blood has contributed to the mortality amongst inoculated (?) animals on exposure to ticks.

(2) The performance of inoculation necessitates, if not operative skill, at least a clear knowledge on the part of the operator of what is required to be done. It must be systematically and thoroughly accomplished, and the actual injection of the blood must be assured. When performed on quiet animals it is not likely to fail, but the case is very different when wild, plunging cattle have to be inoculated in a crush. The operation has then to be conducted under difficulties, and here and there an animal may escape satisfactory treatment. It is possible that some of the mortality to ticks arises from this cause.

(3.) The effects of the ticks *per se*.—The greater virulence of infection by ticks over infection by inoculation induces the suspicion that the ticks themselves may have some injurious effect other than causing tick fever. It is generally stated that they have not, but this view is mainly urged on the grounds that they do not cause anæmia. The truth of this assertion may be admitted at once, since cattle will bear the sudden removal of more blood than a complete investment of ticks could deprive them of. But the argument does not appear to apply; it is not a question of anæmia, but of some other effect. The removal of blood by the ticks is so slow a process that the blood regenerative tissues have ample time to keep pace with the loss. The well-known effect of ticks upon dogs is not due to anæmia. They are often caused by a single tick, and the symptoms suggest the injection of some poison ("Tick poison"). It is true that the cattle tick belongs to a different species, and may not elaborate a poison, but the subject surely merits more consideration than it appears to have received.

Again, it has been already mentioned that tick infestment may occur without Tick Fever. This has occurred apparently at Boolburra and Mount Cornish (5). At the former place the cattle fell out of condition, and many died. Yet Dr. Hunt has found that blood from these animals did not produce Tick Fever when injected into healthy cattle, and that the survivors were not immune to Tick Fever when exposed to the fever-producing ticks at Gracemere (6). The inference is that these cattle have not suffered from Tick Fever, and that their illness was due to some other effects of the ticks. Dr. Hunt refers to such cases as "tick irritation."

Boolburra was visited by us during our inquiry. When the cattle were shaved preparatory to taking samples of their blood for microscopical examination, the skin was found to be densely covered by small areas of subacute inflammation. Similar evidence is furnished by the markings to be seen on dressed hides. It is difficult to believe that this inflammation of the skin is without influence on the cattle. Certainly in course of time cattle become "tick proof," and bear infestment without trouble, but this may be a matter of habit. It is to be regretted that more definite information is not forthcoming on this important question.

The above considerations suggest that other factors besides failure to secure immunity may play their part in the mortality of inoculated animals on exposure to ticks. Whether this be so or not, it is necessary to recognise the existence of the practical defect, and make allowance for it in considering the value of inoculation.

(*f*) *The duration of the immunity conferred by inoculation has not been definitely ascertained.*

There do not appear to be any facts recorded which enable one to judge of the duration of the immunity after a single inoculation. In the Queensland reports it is stated that inoculated animals were doing well in tick-infested pastures a year after inoculation, but in this case repeated infection by the ticks comes into play. Our own experiments only tell us that the immunity was not lost in a few weeks. Presumably what has been said about the duration of immunity after single attacks of the natural disease will apply more or less, and it may be assumed that the immunity will last for a year or two at least, but that it will vary in different animals.

(*g*) *Immunity can be rapidly produced.*

Nothing appears to have been said by previous observers as to the time required to produce immunity by inoculation. Attention was paid to this point in our experiments, with the result that it was found that the animals were immune to reinoculation as early as six days after the subsidence of the fever. Whether the immunity exists still earlier could not be determined owing to the small number of animals at our disposal.

(*h*) *Comment.*

In view of all the evidence just reviewed it must be concluded that inoculation is capable of affording a decided amount of protection against tick fever. It may be that it is not absolutely certain, but this defect is of little economic importance since it depends on the advent of ticks, which, in default of inoculation, would mean losses of far greater extent.

The need for careful attention to the details of the operation, the use of suitable blood, and the necessity of obtaining a reaction, are obviously matters of great importance in the practical application of the measure. The rapid production of the immunity in our experiments is an interesting result in that it demonstates the possibility of securing the protection at very short notice. In three, and possibly in all, of our animals in was produced in three weeks from the date of inoculation.

The question of the effects of the ticks themselves has been raised advisedly and dwelt upon at some length. It is an effect against which inoculation will not protect, and we may have to deal with it separately. Unfortunately the lack of definite information makes its discussion futile.

B.—The Effects of Inoculation on Cattle.

(*a*) *Successful Inoculation involves occasionally Death and invariably Illness.*

The value of inoculation is not to be decided in view of its protective influence only. The procedure involves the setting up of a disease, and it is necessary to take into account the effects of this disease upon the cattle. The performance of the operation is attended by a certain number of deaths and involves a period of illness.

(*b*) *The Inoculation Fatality is very much less than that of natural Tick Fever, is influenced by certain factors, and is irregularly distributed.*

The fatality from natural tick fever is between 60 per cent. and 70 per cent. The fatality after inoculation is usually between 3 per cent. and 5 per cent.

The result of the operation is influenced by certain factors, the most important of which are age, sex, condition, season, nourishment, and management of the cattle. The statements concerning these influences are briefly as follow:—

Age.—Smith and Kilbourne state that young animals are largely proof against fatal natural infection (lp. 148), so that it is not surprising to learn that calves stand the inoculation well, and may generally be safely treated. The fatality after inoculation is mostly amongst the older animals.

Sex.—For some unexplained reason bulls are extremely susceptible, and apt to succumb to inoculation unless very carefully looked after.

Condition.—Very fat and very thin animals are more affected than those in medium condition.

Season.—The effect of season does not appear to play such an evident part in Queensland as it is said to do in America, but it is generally considered that the reaction is liable to be more severe during hot weather.

Nourishment.—Good food and water are regarded as most important in diminishing the fatality.

Management of the Cattle.—The cattle fare best when inoculated on their own pastures. When taken to new ones time should be given for them to settle down before commencing the treatment. The operation should be carried on methodically and quietly, avoiding excitement and rush as much as possible. After the operation the cattle should not be driven or worried, but allowed to return quietly to their pastures and remain there undisturbed for at least a month.

When these conditions are fulfilled the fatality may be nil. This was the case in several instances recorded in the Queensland report (4), and in our own experiments at North Head. Under other circumstances the result may be very different. Inquiries made in Queensland indicated that in individual lots of cattle the fatality was sometimes much above the average, reaching 25 per cent. or more, and this without any specially unfavourable conditions. The result is variable notwithstanding every precaution. It would appear, therefore, that although taken as a whole the fatality is slight, it is irregularly distributed, falling heavily upon some and lightly upon others.

(*c*) *The inoculation illness is really modified Tick Fever, all symptoms being milder.*

In order to secure protection it is essential that a "reaction" be obtained, that is, that the animal must have an attack of Tick Fever. The symptoms exhibited during this inoculation illness are the same in kind as in natural Tick Fever, but milder in degree. Their nature may be illustrated by the observations made in our own experiments. Only the more important of them will be considered here, those more deeply interested will find full details in the Records of Observations in Appendix 2.

The three principal features of the inoculation illness are,—

(1.) Fever and its accompaniments.
(2.) Bloodlessness or anæmia.
(3.) Changes in the urine ("redwater.")

(1.) The degree and progress of the fever in our cases may be judged from the statements in Table III which shows the effect of the inoculation on the temperature.

TABLE III.—Showing effect of Inoculation on the Temperature. Quantities in degrees Fahrenheit.

Cow.	I Blood G.		II Blood A.		III Blood A.		IV Blood B.		V Blood B.		VI Blood B.		VII Blood C		VIII Blood E.		IX Blood D.		X Blood E.		XI Blood E.		XII Blood F.		XIII Blood E.	
	M	E	M	E	M	E	M	E	M	E	M	E	M	E	M	E	M	E	M	E	M	E	M	E	M	E
Extremes before Inoculation	101·2	100·5	101·4	101·6	101·7	101·7	101·2	101·2	101·3	101·4	101·3	101·4	101·0	102·0	101·1	101·3	100·7	101·7	102·1	102·1	102·1	102·1	101·7	101·5	101·7	101·8
	102·9	102·9	102·1	102·3	102·1	102·4	102·2	102·3	102·5	102·3	103·2	102·9	102·0	102·6	102·1	102·7	101·8	102·7	102·4	102·2	102·4	102·5	102·3	102·3	101·8	102·0
Temperatures after Inoculation—																										
Day 1	102·4	102·0	101·4	101·3	101·8	101·8	102·4	102·9	102·9	101·9	102·4	102·1	101·4	101·6	102·0	101·5	101·5	102·1	101·9	102·2	102·1	102·5	102·3	101·7	101·9	101·8
2	102·6	102·8	101·5	102·5	101·8	103·4*	101·7	102·0	101·9	101·6	104·4*	102·0	101·7	102·0	102·0	101·5	101·3	101·8	102·2	102·4	102·2	102·8	101·9	101·6	101·9	102·2
3	102·4	102·2	101·6	101·4	101·7	101·5	101·8	102·2	101·8	101·7	102·3	102·0	102·2	102·6	101·9	101·9	101·6	102·2	102·3	102·3	102·3	102·5	101·8	101·8	101·7	101·8
4	102·5	102·7	101·7	101·6	101·6	102·1	101·8	102·3	101·8	102·0	102·0	101·9	102·3	102·3	102·8	103·2	101·1	101·6	102·0	102·3	102·4	102·5	102·4	101·8	101·7	102·0
5	102·6	102·8	101·7	101·4	101·8	101·9	101·8	102·4	102·0	102·0	102·4	102·0	102·0	102·1	102·0	103·4	100·6	102·5	102·2	102·1	102·2	102·3	101·7	101·8	101·7	102·1
6	103·5	104·8	101·6	101·5	101·5	102·1	102·3	102·1	102·3	101·9	101·9	102·2	102·0	102·2	103·4	102·8	1	104·4	102·4	102·2	102·0	102·2	102·0	102·1	101·8	102·0
7	105·9	105·2	101·6	101·5	101·5	101·5	102·3	104·7	102·0	101·8	102·4	102·0	102·0	102·2	105·1	106·1	104·1	106·0	104·7	106·2	102·4	103·4	102·8	102·7	102·5	103·5
8	105·5	104·7	102·1	101·6	101·7	101·9	103·7	104·2	102·8	104·6	102·3	102·1	102·0	102·1	104·2	105·8	105·4	106·4	105·0	104·0	105·9	106·2	102·5	103·7	102·9	104·6
9	104·6	104·6	102·5	102·2	102·5	103·1	103·6	104·5	102·9	102·0	102·5	101·8	102·3	102·5	104·8	105·6	104·2	105·0	104·8	104·8	105·6	105·5	103·5	105·7	103·7	105·7
10	105·3	105·6	103·0	102·1	102·8	102·2	104·8	104·8	104·7	102·0	102·3	102·4	103·0	103·4	103·7	103·6	104·5	106·6	105·5	104·5	104·7	104·9	105·5	105·5	102·4	104·9
11	105·0	104·8	102·5	103·1	102·5	102·5	105·1	104·8	104·8	107·0	103·2	103·7	102·7	103·2	105·6	105·0	103·7	105·0	105·0	105·6	104·6	105·1	105·5	106·3	101·8	103·0
12	104·4	103·4	103·1	105·2	102·9	103·1	104·5	105·4	104·0	105·6	103·6	103·6	103·5	105·8	105·3	105·9	102·8	104·9	104·0	105·4	104·4	105·6	104·6	102·9	101·6	101·4
13	104·4	103·6	103·5	102·7	104·7	101·6	103·6	104·8	105·6	106·3	103·2	103·6	106·1	106·0	104·5	102·9	102·0	102·7	103·7	104·2	103·7	104·6	105·4	103·4	...	...
14	103·6	103·2	101·9	101·5	102·1	101·4	101·9	102·4	104·1	106·1	105·2	106·2	105·1	105·1	101·8	102·1	102·0	102·8	102·8	102·8	103·8	102·8	102·5	102·9	...	...
15	102·7	103·1	...	...	101·5	102·3	101·6	102·2	104·6	105·7	106·3	104·7	104·1	105·5	101·2	101·3	...	...	102·2	102·4	101·8	102·2	100·3	100·7	...	...
16	102·3	102·5	...	...	101·4	101·4	...	...	104·9	104·3	104·3	104·0	103·7	104·0	...	...	...	...	102·2	102·0	...	...	...	...	...	...
17	...	...	...	...	...	...	...	...	102·4	101·6	102·8	102·6	102·4	102·8	...	...	...	...	...	...	...	...	...	...	...	...
18	...	...	...	...	...	...	..	...	101·8	101·7	102·6	102·0	102·1	101·8	...	...	...	...	...	...	...	...	...	...	...	...

* Excited.

It will be seen that the febrile reaction appeared after an incubation period of between four and eleven days, the average being seven days. The maximal fever temperatures varied between 104·7° F. and 107° F., the average being 106° F. The highest points were reached between one and six days after the onset, as a rule on the third or fourth day. The fever lasted from four to ten days, the average duration being seven days.

These results agree with the observations of Smith and Kilbourne on natural Tick Fever, which showed that the fever appeared after an incubation period of a few days (1, p. 15), reached 105° F. to 108° F. (p. 16), and rarely lasted longer than eight or ten days (p. 22). The inoculation fever has the advantage of being milder.

With the rise of temperature other symptoms appeared, such as usually accompany fever from any cause. The animals were quiet, dull, and inclined to mope. They generally lost appetite, and often refused food altogether during the height of the fever. At this time rumination was suspended for a day or two. The bowels became irregular; as a rule there was constipation followed by diarrhœa. Occasionally the passage of blood-stained mucus was noticed. Little loss of condition was observed, or indeed possible, in the animals experimented upon, but the improvement which they nearly all began to show seemed to be delayed by the operation in some cases. In two of the cows, however, there was an obvious falling off for a week or two, but the animals picked up again subsequently.

2. Bloodlessness or anæmia.—This is a symptom less obvious, but more important than fever. It was pointed out by Smith and Kilbourne (1., p. 35) that the blood becomes thin and watery during the progress of natural Tick Fever, and that this change is due to destruction of the red corpuscles of the blood by the micro-organism. The number of corpuscles became much diminished, the extent being in proportion to the acuteness and severity of the attack. This effect is constant, and they regard it as "the essential phenomenon of Texas-Fever from which all the various pathological processes take their origin." (1, p. 39.)

The observations made on our cattle have demonstrated the occurrence of this anæmia in every animal experimented upon. Its degree and progress may be judged from Table, which shows the effect of the inoculation on the red corpuscles of the blood. The enumerations were made by means of a Gower's hæmacytometer.

TABLE IV.—Showing effect of inoculation on red corpuscles of theblood. Quantities in millions per cubic millimetre.

Cow.	I.	II.	III.	IV.	V.	VI.	VII.	VIII.	IX.	X.	XI.	XII.	XIII.
Number before inoculation	6·3	6·6	5·8	5·5	5·8	5·5	5·3	5·6	5·4	5·4	4·8	5·2	5·6
Number after inoculation—													
Day 1.....	6·3	6·7	5·8	5·7	5·7	5·6	5·1	6·0	5·5	5·7	4·9	5·4	5·8
2.....	6·4	6·4	5·6	5·4	5·8	5·7	5·8	5·9	5·4	5·8	5·1	5·4	5·9
3.....	6·3	6·1	5·3	5·5	5·8	5·6	5·8	5·9	5·5	5·6	5·1	5·4	5·6
4.....	6·3	6·7	5·4	5·6	5·6	5·3	5·8	5·9	5·5	5·3	4·8	5·4	5·5
5.....	6·1	6·4	5·6	5·7	5·6	5·5	5·4	5·9	5·4	5·6	4·7	5·5	5·6
6.....	6·0	6·4	6·3	5·8	5·5	5·5	5·7	5·8	5·3	5·1	4·4	5·6	5·7
7.....	5·8	6·3	5·6	5·8	5·4	5·7	5·3	5·7	5·5	4·8	4·7	5·6	5·8
8.....	5·7	6·6	5·5	5·6	5·6	5·6	5·3	5·6	5·0	4·5	5·0	5·5	4·9
9.....	5·6	6·1	5·3	5·7	5·6	5·7	5·3	5·2	5·7	4·3	4·7	5·5	4·9
10.....	5·4	6·1	5·9	4·9	5·2	5·5	5·4	4·5	5·4	4·1	4·5	5·3	4·8
11.....	5·0	5·6	5·6	4·7	5·0	5·8	5·7	4·1	4·5	3·9	4·2	5·1	4·7
12.....	4·9	5·5	5·1	4·2	4·4	5·8	5·5	3·8	4·2	3·7	3·8	4·6	4·5
13.....	4·7	5·4	4·9	4·9	4·1	5·4	4·9	3·7	3·9	3·8	3·9	4·1	4·6
14.....	4·5	5·6	5·4	4·9	4·1	5·1	4·6	3·9	3·6	3·7	3·7	4·2	4·4
15.....	4·6	5·7	4·9	4·9	3·4	4·6	4·5	4·1	...	3·8	3·7	4·2	4·5
16.....	5·0	5·4	4·4	4·8	3·8	4·2	4·5	4·3	..	3·9	3·5	4·1	4·5
17.....	5·1	5·5	4·0	4·8	3·8	4·4	4·5	4·1	...	4·0	3·4	4·5	4·6
18.....	5·3	5·4	4·4	4·6	3·9	4·3	4·3	4·7	...	3·9	3·6	4·4	4·8
19.....	5·4	5·3	5·1	4·4	4·4	4·2	4·2	4·9	...	4·1	4·0	4·8	4·7
20.....	...	5·0	4·7	4·5	4·6	4·5	4·2	4·6	...	4·6	3·9	4·7	5·1
21.....	...	5·3	4·8	4·4	4·5	5·1	4·8	4·9	...	4·8	4·2	4·8	4·9
22.....	...	5·2	5·2	4·4	4·7	5·1	4·6	5·2	...	5·2	4·4	5·1	4·9
23.....	5·8	4·6	5·0	4·7	4·9	5·6	4·2	4·9	...	5·3	4·3	5·2	5·8
24.....	...	4·2	5·0	4·6	5·0	5·4	4·9	4·8	...	5·2	4·5	...	...
25.....	...	4·5	5·1	4·5	5·1	5·3	4·9	4·9	...	5·1	4·6	...	...
26.....	5·8	4·3	5·1	4·6	5·2	5·2	4·9	5·1	...	5·2	4·4	...	...
27.....	...	4·8	5·0	4·7	5·3	5·1	4·8	5·2	...	5·2	4·8	...	...
28.....	...	5·0	5·1	4·8	5·6	5·1	5·0	5·1	...	5·3	...	...	...
29.....	...	5·0	5·0	4·6	4·9	5·2	5·2	5·1	...	5·2	...	...	...
30.....	6·1	5·0	4·5	4·4	4·6	5·3	5·3	5·1	...	5·3	...	...	...
31.....	...	4·8	5·1	4·5	4·9	5·4	5·0	5·1	...	5·3	...	...	...
32.....	...	5·1	5·0	4·6	5·0	5·5	5·4	5·1	...	5·4	...	...	...
33.....	5·9	5·3	5·0	4·8	4·9	...	...	5·5	...	...	...	...	...
34.....	...	5·2	5·0	4·6	5·2	...	...	4·8	...	...	...	...	...
35.....	...	5·1	5·0	4·9	5·1	...	...	4·9	..	...	...	...	...
36.....	...	5·3	5·0	4·7	4·7	...	...	4·5	...	...	...	...	..
37.....	...	5·4	4·9	4·7	4·9	..	...	4·9	...	...	...	...	...
38.....	...	5·4	5·0	4·6	5·1	...	...	5·2	...	...	...	...	...
39.....	...	5·3	5·0	4·5	5·2	...	...	...	...	...	...	...	...
40.....	...	4·9	4·9	4·8	5·4	...	...	...	...	...	...	...	...
50.....	...	5·0	5·3	5·2	6·0	...	...	...	...	...	...	...	...
60.....	...	4·4	5·6	...	...	...	...	...	...	...	...	...	...
70.....	...	4·8	5·5	...	...	...	...	...	...	...	...	...	...
80.....	...	4·6	...	...	...	...	...	...	...	...	...	...	...
90.....	...	6·0	...	...	...	...	...	...	...	...	...	...	...
100.....	...	5·8	...	...	...	...	...	...	...	...	...	...	...

The number of corpuscles per cubic millemetre of blood was ascertained before inoculation. The average for each cow is given in the top line of the table. By comparing these with the enumerations made after inoculation it will be seen that a diminution occurred in every case. Taking

Taking the first decided drop in the number as a guide, the decrease commenced between 7 and 14 days after inoculation, as a rule on the 10th or 11th day. Its full extent was reached between 12 and 23 days, usually by the 17th day. From this onward, recovery ensued, and the numbers became normal again at various times between the 23rd and 90th days. In the majority (10 of the 12 animals), the numbers were practically normal in a month after inoculation, but in the other two the time taken was 10 and 13 weeks respectively. These results are in accord with the statements of Smith and Kilbourne, who found that in Texas Fever the anemia did not last longer than 3 or 4 months, and was usually recovered from in a much shorter time. (1, p. 42.) The loss amounted to between ¼ and ½ the normal number of corpuscles, and was therefore milder than in natural tick fever, in which it amounted to between ½ and ¾ of the normal. (1, p. 39.)

Other effects in the blood, such as changes of the form of the red corpuscles and leucocytes, and the presence of the micro-organisms, were observed by us; but as their description would unduly burden this report without serving any useful purpose, their consideration is held over for future separate communication.

3. Changes in the urine, especially "redwater" hæmoglobinuria, form the third important feature of Tick Fever. Redwater is not of constant occurrence in natural Tick Fever. It has been observed after inoculation, but was not found in any of our animals, although the urine was subjected to spectroscopic scrutiny in order to detect the faintest indications of it.

Chemical analyses of the urine showed the presence of an abnormal constituent (albumin) in 7 of the 11 cases in which it was examined. It was not great in amount, and soon disappeared as a rule, although in one case it persisted for 52 days. Its appearance indicates interference with the function of the kidneys, but this did not seem to amount to actual disease, since the variations in quantity, specific gravity, urea, &c., were not not greater than in healthy animals.

Neither jaundice, nor any other symptom indicative of liver disturbance, was observed by us.

(*e*) *The inoculation illness does not last longer than a month or six weeks as a rule.*

The duration of the inoculation illness is shown by the statements in the following table as made up of the three periods of incubation, reaction, and convalescence.

TABLE V.—Showing duration of inoculation illness.

Cow.	Blood.	Incubation.	Reaction.	Convalescence.	Total duration of illness.
		days.	days.	days.	days.
I	G	6	10	14	30
II	A	10	4	86	100
III	A	9	4	47	60
IV	B	7	7	36	50
V	B	8	9	31	50
VI	B	11	6	15	32
VII	C	10	10	12	32
VIII	E	4	10	19	33
IX	D	9	7	killed.	.....
X	E	7	7	18	32
XI	E*	7	8	12	27
XII	F	8	6	9	23
XIII	E†	7	5	11	23

* Injected in divided doses (10) of 1 cc. each. † Injected intravenously.

The periods of incubation, during which the animal is becoming sick, and reaction, during which it is more or less acutely sick, have already been sufficiently commented upon. The two together extend up to the time of subsidence of the fever. But recovery did not immediately follow on this stage. Certain disease processes still went on, and were revealed by the conditions observed in the blood and urine. Nevertheless the general tendency was towards recovery, and this after-period was one of convalescence, ending with a return to the normal. It will be seen that the period of convalescence varied from 9 to 86 days, but it was completed in the majority of the animals (8 of the 12*) in less than 3 weeks.

The total duration of the illness, as reckoned from the time of inoculation to the end of convalescence, varied from 23 to 100 days, but was usually not longer than about a month (33 days or less in 8 of the 12).

We did not observe relapses, debility, nor any of the other sequelæ mentioned by Smith and Kilbourne as following on natural Tick Fever (1 p. 22). Convalescence was not more interrupted than in other diseases, and the normal when reached appeared to be well maintained. It is obvious, however, that remote effects, if there be any such, have not yet had time to appear. In view of the well-known healthy appearance of the southern animals in America, and the statements of authors that recovery from Tick Fever is usually complete, it is not expected that any further consequences of inoculation will be observed in the animals kept under observation.

(*e*) *The Effect of Inoculation on Meat and Milk.*

(1.) Meat.—No direct experiments were performed to ascertain the effect of inoculation on meat. The satisfactory determination of the nutritive value of a food-stuff necessitates prolonged and intricate physiological observations. No results important enough to justify the time and labour involved could have been obtained in the period covered by the experiments. Consequently, reliance was placed on the indirect method of determining the effect on the meat by inference from the effect on the general health and condition of the animal. This method is the one usually adopted in such cases, and is sufficiently accurate for practical purposes. It should be mentioned that we had an opportunity of examining the meat of the animal slaughtered during the period of reaction.

We

* One animal, No. IX, was slaughtered during the period of reaction

We have to consider whether any of the disturbances of health following inoculation are such as would injuriously affect the meat. The influence of fever in producing unwholesomeness, and in hastening putrefaction, are too well known to need discussion. The bloodlessness in itself would do no more than spoil the appearance and impair the quality of the meat, which would be less nutritious, but not injurious. The amount of interference with the kidneys was not sufficient to damage the meat by retention of urinary substances. The loss of condition observed in two of the animals would interfere with the appearance and quality of the meat. In the slaughtered animal the meat was pale, rather flabby, and soft, lacking in fat and the prime appearance of good meat. But it did not show any sign of being diseased.

These deteriorating influences would all be operative only during the period of illness. When this had passed off, and the animals recovered, the meat would regain its usual qualities. Some of our animals became quite fat within a few weeks after recovery. The presence of the micro-organism in the blood of the meat would not deteriorate it, and, moreover, they are "quite rare in the blood of skeletal muscles" (meat). (I., p. 64.) There is no likelihood of the disease being communicated to man by ingestion of the micro-organisms, nor in any other way.

These considerations indicate that, at the most, inoculation will render meat less nutritious during the period of illness, but that no permanent injury is produced. As it is unlikely that the operation would be performed on animals intended for almost immediate slaughter, the temporary deterioration is of no practical importance.

(2.) Milk.—The animals experimented upon by us were all dairy cows, and were milked twice a day in the usual manner. As will be seen by reference to the Appendix, the milk was examined as to both quantity and quality.

(i.) Quantity.—The amounts given daily are stated in Table VI, which shows the effect of inoculation on the yield of milk. They were estimated by weighing with a spring balance, as being simpler and more accurate than measuring.

Table VI.—Showing effect of inoculation on the yield of milk. Quantities in lb. Avoirdupois.

Cow.	I.	II.	III.	IV.	V.	VI.	VII.	VIII.	IX.	X.	XI.	XII.	XIII.
Yield before inoculation.	12 to 14	15 to 16	17 to 18	14 to 17	11 to 13	14 to 17	17 to 20	15 to 17	9 to 11	18 to 19	13 to 14	13 to 14	10 to 11
Yield after inoculation—													
Day 1	13·0	16·0	18·25	16·5	13·25	17·5	18·0	15·0	11·5	18·5	14·0	14·75	11·75
2	11·25	15·75	17·5	17·0	13·75	17·5	19·0	15·0	10·0	18·0	13·25	16·25	10·25
3	12·75	15·75	18·0	16·75	13·0	16·0	19·25	15·0	15·0	17·25	14·0	16·5	11·0
4	12·5	16·0	18·75	16·5	13·5	17·5	18·5	15·0	11·25	18·75	13·75	16·75	11·0
5	11·75	15·0	18·0	16·75	13·5	17·0	20·0	14·5	10·25	18·75	13·75	17·0	11·75
6	12·5	17·0	20·25	16·5	13·0	16·75	19·0	14·75	14·0	18·0	13·75	17·0	12·0
7	9·0	15·75	19·5	16·0	12·5	15·0	19·75	13·5	7·75	17·75	13·0	16·5	11·25
8	7·0	15·5	19·0	14·0	12·25	15·5	19·25	12·75	1·25	17·75	13·5	14·75	11·5
9	7·25	14·5	18·25	13·25	11·25	16·0	20·75	11·5	·5	17·75	9·0	15·0	7·75
10	6·5	15·0	17·75	11·5	10·0	15·75	18·5	11·25	·25	15·5	8·5	13·5	4·75
11	6·25	15·0	17·75	8·5	10·0	15·0	18·5	10·75	1·5	12·75	9·0	7·5	4·75
12	8·0	13·75	17·25	8·5	8·5	14·5	17·5	10·5	1·75	11·75	8·5	3·75	5·0
13	9·0	13·75	17·25	9·0	4·75	13·0	13·25	11·0	2·25	14·25	8·75	3·0	7·25
14	9·75	13·0	17·25	11·25	3·5	14·0	8·5	11·5	2·5	14·25	11·75	5·25	8·0
15	10·25	15·0	17·0	12·0	4·5	6·5	9·25	11·75	2·0	14·25	10·5	5·75	9·5
16	11·25	14·0	18·75	12·25	5·5	8·0	13·0	12·25	...	14·5	11·0	7·5	9·0
17	11·75	14·0	17·5	11·25	6·5	11·25	13·25	13·25	...	16·25	12·25	8·75	9·75
18	11·25	14·0	18·0	11·25	6·75	12·0	13·75	13·0	...	17·0	13·25	9·5	9·75
19	11·5	13·25	18·5	12·5	8·0	13·0	15·0	14·75	...	17·5	12·75	10·0	11·0
20	12·25	13·0	17·5	12·25	8·5	12·75	15·0	14·75	...	18·75	13·75	10·25	10·75
21	13·0	13·75	17·25	13·25	9·5	14·25	15·5	13·25	...	18·75	14·25	11·25	10·5
22	...	13·0	18·0	13·25	10·5	14·25	15·75	14·25	...	19·0	15·0	11·75	10·0
23	...	13·25	17·75	14·0	10·5	14·25	16·0	14·5	...	...	...	12·5	10·25
24	...	13·5	19·75	14·0	10·25	14·25	16·5	14·75	...	...	...	12·5	11·25
25	...	14·0	20·0	13·5	10·0	15·25	16·75	14·75	...	...	...	13·5	...
26	...	14·75	...	12·73	9·75	...	17·0	15·0	...	...	...	...	...
27	...	14·25	...	12·75	10·75	...	...	16·0	...	...	...	...	...
28	...	15·5	...	14·25	12·25	...	...	...	...	...	...	...	...
29	...	16·0	...	14·75	...	...	...	...	...	...	...	...	...
30	...	...	...	...	...	...	...	...	...	...	...	...	...

As the yield varies slightly from day to day, we have taken the usual limits of the yield before inoculation as a guide in determining the effect of inoculation. These limits are given at the top of the table. By comparing them with the amounts ascertained after inoculation it will be seen that a diminution occurred in all cases.* The decrease commenced between five to thirteen days after inoculation, but usually before the 10th day. It continued for two to eight days longer, and the full extent was reached between ten and fifteen days after inoculation. The yield then increased again, and the lower limit of the normal was regained between eighteen and twenty-eight days after inoculation. In five of the cows the improvement continued, and the former high limit was exceeded, but in the other seven the yield remained between the previous extremes.

Estimates, based on the figures obtained, showed that the total loss of milk in our whole herd of 11 cows † amounted to about 50 gallons. Reckoning milk as worth 6d. a gallon to the producer, the money value of the loss would be 25s. on the herd, or 2s. 3d. per cow. But apart from the fact that our cows were poor milkers at the best, the estimates are based on the assumption that the milk would be used throughout. Although, as will be seen, this would not be of serious consequences, most dairymen would probably elect to avoid all risks and discard the milk during the febrile period at least. This would mean the loss of a week's milk, as a rule. Taking 20 lb. a day as a fair yield, the loss would amount to 140 lb., or 14 gallons per week, equivalent to a money value of 7s. per cow. It

* No. III is an apparent exception. This cow was improving in her yield daily at the time she was inoculated, and the amount increased during the incubation period to 20·25 lb. This fact is taken into consideration, and her normal yield regarded as 18 lb. per day.

† No. IX, which was killed, and No. III, in which effects were exceptionally slight, have been excluded from the estimate.

It would obviously be best to inoculate the cows one by one as they became dry, and so avoid all loss of milk. The danger of abortion resulting during the fever should be remembered, and the operation performed well before the expected time of calving.

(ii.) Quality.—Estimations of the specific gravity, total solids, fat, and solids not fat, were used as the basis for the determination of the effect of inoculation on the quality of the milk. This part of the work was carried out in the chemical laboratory of the Health Department by the Government Analyst. The results of the analyses before and after inoculation are given in the records in Appendix 2. Their examination will show that no appreciable change in quality occurred after inoculation. The milk remained up to the standard composition in all respects throughout. The total solids and fat show a proportionate increase during the fever, but this merely means that they did not diminish to the same extent as the quantity. The specific gravity was lowered owing to the relatively greater amount of fat present. On recovery from the fever the quantities soon became readjusted to their former proportions.

No alteration in taste, appearance, or keeping qualities was noticed, and throughout the whole time of the experiments, except during actual fever, the milk was used for drinking and domestic purposes by several persons without ill effects.

Smith and Kilbourne state that some observers have recorded the sudden and partial cessation of the milk secretion during natural Tick Fever, but that they had no opportunity of observing this symptom (1 p. 20). Our results are in accord with this statement, but they show that after inoculation the decrease in the yield is temporary only, and that no serious effect on the dairying industry need be anticipated. The changes were not in any way special, but such as might occur in any febrile disease.

(*f*) *Comment.*

The facts above recorded show that the effects of inoculation on cattle are the same as those of natural Tick Fever, but very much milder as regards both fatality and the severity of the illness.

It is to be noted that there is a double mortality to be reckoned with, the primary fatality of inoculation and the secondary fatality on exposure of the inoculated animals to ticks. Both are slight, and together amount to less than would be caused by the ticks in uninoculated cattle.

Apart from the fatality, the inoculation illness does not entail serious consequences. The animals usually recover in a month or six weeks, although occasionally an individual beast may remain an invalid for two or even three months. The observations on milk and meat have had the satisfactory issue of showing that the effect on these products is slight and practically unimportant. In Appendix 1 will be found graphic records showing the relationships between the fever, blood destruction, and milk-yield during the periods of reaction. The charts need no special explanation, their purpose being merely to give a sort of bird's eye view of what happens during the acute stage of the illness.

The possibility of inoculation introducing diseases other than Tick Fever has been suggested more than once. Although the risk is probably not great, its existence must be admitted if the operation be performed by unlearned persons. It is essential to have the foreknowledge that the animal whose blood is to be used is free from communicable disease. The only safeguard is careful preliminary examination by a skilled individual. It would, perhaps, be advantageous to establish in each district a stud of specially selected healthy animals for inoculation purposes.

It is not to be denied that inoculation has its defects. The existing method is crude and uncontrollable in its results, but it is the only one at our service at present. It remains for the future to decide whether or not it can be improved upon. In any case the defects are not such as to contraindicate its practice; in the mass the balance turns in its favour. Its advantages are a clear gain; its defects such as would be many times magnified by the incidence of Tick Fever upon uninoculated animals. But the fact that inoculation is not an unmixed blessing must be recognised. It has its limitations, and a clear understanding of them is necessary in order to avoid the disappointments which would result from false impressions of the security it offers. The method must not be relied upon for more protection than it can possibly furnish. With this object alone have the defects been given prominence in this report. They are not to be regarded as prohibitive of the method, but indicative of its cost. In view of all the evidence it must be concluded that, in the face of threatening tick invasion, protective inoculation is a perfectly justifiable procedure.

PART 3.—NOTES ON PROTECTIVE MEASURES OTHER THAN INOCULATION.

However valuable as a protective measure against Tick Fever, inoculation will not prevent tick infestment. The two things are distinct and separate, and have to be contended against on different principles. Sufficient evidence has been submitted in the foregoing pages to show the need for strenuous opposition to the ingress of the cattle ticks into this Colony. With a view of ascertaining how far the measures at present in vogue are capable of imposing a barrier in the path of the parasites, special inquiries were made concerning them during our Queensland visit. The opinions expressed were so numerous and varied that the task of sifting the chaff from the grain is by no means an easy one. The following notes must be regarded merely as tentative efforts in that direction.

The principal measures directed against the dispersal of ticks are three in number, viz.:—

(*a*) Quarantine.
(*b*) Dipping and kindred measures.
(*c*) Crush inspection.

(*a*) The value of quarantine depends on the conditions under which it is applied. It may be directed against agencies coming from without, in which case it is a method of exclusion, or it may be directed against agencies which have already gained an entrance, in which case it is a method of isolation. As applied to restrict the dispersal of cattle ticks there are important differences between the two methods.

The method of exclusion, which prohibits the importation of stock from areas known to be associated with tick infestation is already in operation in this Colony. Of its advisability there can be no doubt, the question is whether it can accomplish its object of preventing the ingress of the ticks. Ticks do not wander far on their own account, their dissemination over long distances depends on their being transported by travelling stock. It may be considered, therefore, that the exclusion of such stock will be effective so long as there is a sufficiently wide "buffer" area between the tick-infested country and our Borders.

The

The method of isolation, or internal quarantine, consists of the shutting up of tick-infested cattle within their own pastures. The need for this measure in this Colony has not yet arisen, but it has been used in Queensland. As its application has caused considerable dissatisfaction amongst stockowners, its discussion in this report may not be deemed superfluous in view of possible contingencies.

The value afforded to the method of exclusion, by the distance required to be traversed by the ticks, is lacking in the case of isolation. Transport over short distances can be effected by agencies which do not exist when the journeys are long. It is said, for instance, that the ticks can be carried by marsupials, birds, snakes, &c., on the clothing and blankets of human beings, or even blown for some distance attached to grass seeds. They have at times "broken quarantine" in a quite unaccountable manner. Under the circumstances, it is not surprising to find that isolation ultimately fails.

The various modes of transport make it extremely difficult to establish and maintain a satisfactory quarantine. A single fence has usually been of little service. A double fence—as along a railway line—has been passed through. A natural barrier such as a river or range of mountains has sometimes been effective, sometimes not. It is therefore probable that any isolation that it would be possible to impose under ordinary circumstances furnishes a but imperfect protection. Indeed, the history of the ticks in Queensland teaches that sooner or later these parasites will become disseminated in spite of the isolation of the infested cattle.

It does not follow that isolation is altogether useless. Cattle furnish the usual and readiest mode by which ticks are transported, carriage in other ways being more or less accidental and uncertain. So that isolation of the cattle, though not absolutely preventing the dispersal of the ticks, does impede their progress to some extent. The delay effected will generally be long enough to permit of the taking of other measures, *e.g.*, inoculation. These considerations suggest that isolation should only be used as a temporary measure. The more or less permanent closing up of cattle in their own pastures, perhaps ultimately to die of starvation, is of questionable expediency. The hardship inflicted upon the owner of the cattle does not seem warranted by the indefinite amount of protection gained. Moreover, it becomes very expensive to maintain. On the other hand, a temporary isolation, for a few weeks at most, whilst not greatly embarrassing to stockowners, nor unduly expensive, will serve every purpose that can be expected of the measure.

(*b*) Dipping.—The value of dipping is a disputed point. Some of the dips in use undoubtedly kill ticks, but the dipping can rarely be so conducted as to ensure the destruction of every tick on a beast. The extensive multiplication of the ticks escaping destruction is only a matter of time, and the plague soon becomes as bad as ever. The repeated dipping advocated by some is said by others to seriously damage the cattle. The principle is deeply rooted that cattle subject to Tick Fever should be left undisturbed as much as possible.

Dipping, therefore, does not furnish any security against dispersal of ticks; but it has its uses. It has been mentioned above that, apart from conveying Tick Fever, the ticks may cause injury by their mere parasitism; that some animals suffer more from ticks than Tick Fever. The removal of the bulk of the ticks from such animals would afford the relief, albeit temporary, necessary to enable them to regain sufficient vigour to make an ultimate recovery. In such cases dipping would find a legitimate and useful application.

What has been said of dipping applies also to kindred measures, such as smearing with unguents and parasiticides.

(*c*) Crush Inspection.—Concerning the inspection of animals in a crush, it may be said that if the ticks be more or less mature, they will probably be detected, if they be in the larval stage, no bigger than pins heads, they will probably not be detected. The chances are that any infested herd will show ticks in all stages, and so the inspection will be of service. But it is conceivable that in some particular herd the ticks may have been recently acquired (within a week), and by their small size escape observation. Then the inspection will fail, and the ticks gain an entrance. The general testimony is to the effect that failure may occur even with an experienced inspector, and that nothing less than casting and minute examination offers any security.

Crush inspection, therefore, offers only a partial protection against the ingress of the ticks. It may have some value in limiting the number of entrances, and in that way enabling other measures to be concentrated upon particular places instead of being scattered all along the line. It may have an additional moral value, for whilst inspection is insisted upon, unscrupulous individuals will not try to import grossly tick-infested cattle.

CONCLUSION.

In the preceding pages the endeavour has been made to present and analyse the evidence concerning the measures upon which reliance will have to be placed in defending the herds of this Colony against ticks and tick fever. Care has been taken to submit both sides of each question; our armament has been examined as to its weaknesses as well as its strength. There remains for consideration the practical question of how to make the best use of the forces at our disposal.

There is no doubt that exclusion, dipping, and crush inspection should continue to form the first line of defence. The information gleaned concerning these measures is to the effect that they will not render our position impregnable. They appear to have been individually and collectively futile in preventing the ultimate progress of the ticks. But they have the merit of imposing a temporary check. The comparative importance of the method of exclusion depends upon its being a long range measure, and it will disappear when the ticks come to close quarters. No system of quarantine can withstand the repeated multiple attacks which may then be expected. Nevertheless, in spite of the deficiencies of this and the other two measures, they may in combination suffice to resist the invasion of ticks for a considerable time to come. Their observance, therefore, should be subjected to rigid and continuous vigilance. It will be time enough to abandon them when the guard they form has been broken through.

The probability that this will happen sooner or later makes it important to attend to our internal resources. The inadequacy of isolation and dipping, except as temporary expedients, throws us back on inoculation as our principal protective weapon. It has been pointed out that whilst inoculation is capable of affording very decided aid in combating tick fever, this benefit is not to be gained without sacrifice. It is worth while to reflect upon the means by which the loss may be reduced to a minimum.

We

We have seen that immunity against tick fever only becomes complete and lasting as the result of repeated infection. As satisfactory and durable immunity is not secured by a single attack of the natural disease, so the protection of cattle is not finally effected by a single inoculation. The condition of acquired immunity is an artificial one, and the tendency in all such cases is reversion to the natural state. In animals immunised against anthrax, diphtheria, snake poison, &c., it is necessary, in order to keep up the immunity, to occasionally inject virus, toxin, or venom. In vaccination against small-pox, the protection afforded by the infancy vaccination becomes diminished during growth, and requires to be supplemented by revaccination after puberty. By analogy, it is to be expected that the acquired immunity of cattle against tick fever, in the absence of reinfection, will gradually become lessened as time goes on.

This reasoning induces the suspicion that we may prepare for tick infestment too long beforehand. If we inoculate now, the immunity may be lost again before the ticks come. But on the other hand it is necessary to be ready, for the ticks may come at any time. There are two courses open to us. We can either reinoculate annually until the ticks arrive, or we can attempt to secure an enduring immunity by inoculating and reinoculating several times in succession, with, say, a month or six weeks interval between each operation. The first suggestion is based on the view that inoculation is probably most valuable when performed shortly before exposure to ticks, and the interval of a year is chosen as being the time during which the immunity conferred by a single attack has been shown to last, in some cases at least. The second suggestion is based on the view that the immunity becomes intensified by repeated attacks, and is therefore likely to last longer. It has the advantage of picking up the animals that escape satisfactory treatment on the first occasion. It is impossible to be more precise about these suggestions, because they have never been put to the test. But there is little room for doubt that in this Colony, where the exact time of the advent of the ticks is a matter of uncertainty, reinoculation in some form or other is the wisest plan. The choice of a method must be governed by practicability, but all direct and indirect evidence indicates that the immunity, once obtained, must be maintained by repeating the infection within a limited interval of time. This advice has the recommendation of being an imitation of the natural course of events consequent on tick infestation. If the ticks come, they may be relied upon to perform the reinoculation on their own account.

It may be questioned, however, whether it is advisable to inoculate all animals until the closer approach of the ticks. In view of the rapidity with which the immunity can be produced, the inoculation of the older cattle might be advantageously deferred until actually necessary, the operation being restricted in the meantime to the young stock. In this way there will be avoided the fatality attendant on inoculation, which mostly occurs in adult cattle. The present generation of old cattle might never need to be inoculated, but we should see to it that our future herds consist of highly-protected animals. By commencing as soon as possible, we shall gain the time necessary to properly immunise the cattle, and the advantage of being able to conduct our operations with a calmness and deliberation which will be impossible after the actual warfare begins.

The total outcome of the above considerations, as to the manner in which we should bring our forces to bear to restrict the consequences of tick invasion, is to the following effect :—We should energetically maintain our border defences, and we should set about rendering our internal position as secure as possible by inoculation and reinoculation of our cattle. The young stock should be inoculated at once, and the old stock later on if necessary. The immunity conferred by the first inoculation should be supplemented by systematic reinoculation according to some definite plan, until the arrival of the ticks makes it no longer necessary. This, or something like this, must be our plan if we are to avoid the disaster which has befallen our Queensland neighbours.

Sydney, December 29th, 1898. (Signed) FRANK TIDSWELL.

LIST OF THE LITERATURE REFERRED TO IN THE REPORT.

1. Smith and Kilbourne. Investigations into the Nature, Cause, and Prevention of Texas or Southern Cattle Fever. Bulletin No. 1. Bureau of Animal Industry, Department of Agriculture. Washington, 1893.

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3. J. Sidney Hunt, M.R.C.S. On the Reproductive Forms of the Micro-organism of Tick Fever. Queensland Ag. Jnl., V. II, Pt. 3.

4. Some of the Ascertained Results up to date of Inoculation as a Preventive of Tick Fever. Brisbane, May 27th, 1898.

5. Report of the Chief Inspector of Stock and Registrar of Brands. Brisbane, 1897.

6. Queensland Agricultural Journal, V. III, Pt. 3, Sept., 1888, p. 235.

7. Dr. J. Sidney Hunt and Mr. William Collins. Report on Tick Fever. Brisbane, 1896.

8. C. J. Pound. Technique of the Method of Preventive Inoculation; also, Preventive Inoculation for Tick Fever Pamphlets issued by the Queensland Government.

NOTE.

It has not been thought necessary to publish the lengthy appendices *in extenso*, but the following brief description, together with the extracts quoted in the report, will serve to show that the investigation has been conducted with thoroughness and scrupulous attention to scientific detail.

The experiments were performed on thirteen dairy cows supplied from the Hawkesbury Agricultural College, and accommodated at the Maritime Quarantine Station, North Head, in buildings specially erected for the purpose. The general management of the cows was such as would have existed in an ordinary dairy. After allowing as much time for the animals to settle down in their new quarters as the urgency of the matter permitted, they were subjected to a series of preliminary observations, in order to ascertain their exact state of health before commencing operations. When this had been done the general plan was to inject the animals with either recovered or virulent blood, note the effects, and later on inject with virulent blood to test the immunity. During the whole time there was kept going the series of observations to be mentioned below, and in all cases care was taken to make check observations on untreated animals.

The inoculations were made with a previously sterilised syringe, the needle being usually inserted under the skin just behind the shoulder. The operation was always performed with strict surgical cleanliness, the part being shaved, washed with soap and water, and then with carbolic acid lotion, before injection. The injection produced a swelling which passed off within twenty-four hours, and, beyond slight inflammation occasionally, no local ill effects were observed.

Both recovered and virulent blood were in the first instance obtained from Queensland, the Government of that Colony kindly complying with our request for a supply. When the disease had been set up we were able to obtain further supplies of blood from our own cows.

A detailed record was kept containing the complete data concerning the treatment and progress of events in each of the animals experimented upon. The particulars included observations on the pulse, temperature, blood, milk, urine, bowel discharges, etc. The pulse was taken twice daily between 3 o'clock and 5 o'clock in the morning and 3 o'clock and 5 o'clock in the evening. The temperature was taken twice daily immediately after milking. The blood was examined every day during the period of illness, and after that every few days till the experiment terminated. The examinations comprised estimation of the hæmoglobin by Gower's hæmoglobinometer, with occasional check readings with Fleishl's hæmometer, and enumerations of the corpuscles by means of Gower's hæmocytometer. The milk yielded was weighed on a spring-balance immediately after milking. Chemical analyses of milk were made three times a week. The samples were taken from the milking-pail into sterilised flasks, the milk being well mixed. They were conveyed to the Chemical Laboratory of the Health Department within a few hours afterwards, where their analysis was at once put in train by the Government Analyst. Samples of urine were obtained as often as was considered necessary, and were analysed in the Biological Laboratory of the Health Department. The records further contained information upon matters ascertained by ordinary physical examination, such as general health, appetite, condition, habits, etc.

Report on the initiation of protective inoculation against Tick Fever in the North Coast Districts.

Being aware that Dr. F. Tidswell, Principal Assistant Medical Officer to the Government, is about to furnish a report dealing fully with the nature and effects of protective inoculation against Cattle Tick Fever, it is proposed to confine this report to the principles underlying the application of this procedure as now being initiated in the North Coast District.

The method adopted has been formulated upon the results of experiments carried out in Sydney and information gathered during the recent visit to Queensland in association with Dr. Tidswell.

Protective Inoculation consists of the subcutaneous injection of five cubic centimetres (5 c.c.) of defibrinated blood taken from an immunized or "salted" animal. That is one that has suffered from a severe attack of Tick Fever naturally or artificially acquired. Repeated experiments have proved that the blood from an animal salted by artificial inoculation possesses the same protective properties as that from one whose immunity has been naturally acquired.

The Establishment of Salted Stock.

The primary and most important step in initiating inoculation is the establishment of a stock of thoroughly "salted" but otherwise healthy cattle for the sale of blood.

Healthy young cattle (calves and yearlings) are best adapted for this purpose as they are easier handled and operated on. Moreover they are naturally less susceptible to the virulence of the fever, and are generally constitutionally healthier than adults. Still as tuberculosis affects cattle of all ages, it is sound practice to subject all intended for this purpose to the tuberculin test. The animals must indisputably withstand the test.

In order to thoroughly "salt" these "stock cattle" it is recommended that they receive three inoculations as follows, viz.:—

(*a*) A first inoculation of 5 c.c. of recovered blood. This should produce a reaction within four to twelve days, after which a period of four to eight weeks is allowed to elapse for complete recovery to take place. When they are subjected to,—

(*b*) A second inoculation of 10 c.c. of recovered blood. This inoculation is not considered indispensible in cases where the temperature records of animals taken after the first inoculation indicate that a severe reaction has taken place. It is however, recommended to be practised when large numbers are operated on at the one time. After this inoculation the cattle are kept under observation for fourteen days, and if no reaction follows,—

(*c*) A final inoculation of 10 c.c. of virulent blood; the strength of which should be demonstrated by inoculating an unprotected beast.

Should the final inoculation of proved virulent blood fail to produce a reaction, and in no way inconvenience the animals so treated, the blood of these animals may be regarded as well adapted for the purpose of conferring immunity to others by inoculation. In recommending this process the object is to produce an immunity of *high degree* and *lasting influence.*

The extent to which Inoculation is recommended to be carried out at present.

Owing to the quarantine measures adopted Tick Fever is at the present time unknown in this Colony. The opinion that ticks must eventually invade our herds along the coast districts seems to be fairly unanimous. The ticks might appear suddenly in the near future or may be not for a considerable time. Consequently inoculation of all cattle is not thought advisable at present, as unnecessary loss may be thereby involved.

To at once commence inoculating young cattle (calves and yearlings) and thus gradually prepare to minimise the loss entailed by a sudden outbreak of Tick Fever is considered a justifiable precautionary measure, and is therefore strongly recommended. The dry cows should be inoculated when conditions are favourable, and the remainder of the herds when circumstances warrant such procedure.

Conditions to be observed with regard to Inoculation.

Experience has taught that in order to minimise the loss resulting from inoculation the following conditions must be observed, viz.:—

(1.) The cattle must not be travelled long distances either before or after inoculation.

(2.) That cattle in moderate condition withstand the effects of inoculation better than those in prime or low condition.

(3.) The operation must be conducted with as little noise and bustle as practicable.

(4.) The cattle under treatment must be placed in paddocks containing a good supply of grass and water, and there allowed to remain undisturbed.

There should be little or no difficulty in conforming with these conditions when inoculation is being carried out on large stations.

In treating the small herds of various owners some difficulty may be met with. This, however, may be overcome by having properly salted animals distributed to various centres. The inspector of stock for the district, or a licensed operator, could then deal with the small lots individually or collectively; in the latter case the various owners could conjointly arrange for the accommodation of their cattle at a convenient and suitable place, where the inoculation could be carried out.

Faulty Treatment and its Prevention.

Many cases are heard of in Queensland, in which inoculation has not conferred upon the animal so treated the desired protection.

Owing to the satisfactory results derived from inoculation, when carried out either experimentally by scientists or on a large scale by reliable persons, one is inclined to the belief that faulty treatment is the cause of failure in many instances.

This

This faulty treatment which creates a deluded idea of security, may originate from (*a*) *the use of improper blood*, or (*b*) *a sufficient dose of blood not being administered.*

(*a*) As previously stated, all blood used for inoculating should be taken from animals that have been thoroughly salted. It is further recommended that two or more susceptible animals, that have been previously well handled, be set apart and inoculated with the blood used on each occasion. The temperatures of these animals should be taken daily while under treatment. A complete record of temperatures is thus obtained, which is of great value in ascertaining the efficacy of the blood used.

(*b*) Failing to inject a standard dose (5 c.c.) of blood may be due to the following causes:—(1st.) The apparatus not being in proper working order. This, however, is avoided by testing the apparatus immediately before operating, for leakage. The system of using a syringe of 10 c.c. capacity, while the dose injected is but 5 c.c., is good practice, as it admits of the presence of a certain quantity of air or froth within the syringe without influencing the dose injected, so long as the syringe is worked in a vertical position. (2nd.) Inoculation being performed too hurriedly:- To check this the operator is advised to allow an interval of about ten seconds duration from the time of actual injection until the withdrawal of the needle from the beast under treatment. If the pressure exerted in ejecting the blood from the syringe is great and the flow from the needle obstructed, a damming back of a certain quantity of blood within the rubber tubing of the apparatus occurs. On withdrawing the needle this quantity of blood is lost, the loss being at the expense of the dose. This mishap is, however, obviated by raising the skin slightly, so as to form a space subcutaneously for the reception of the dose and by observing the interval just mentioned, which allows time for the pressure originating from the distended walls of the rubber tubing to complete the injection.

Re-inoculation Recommended.

Experience has taught that, when inoculating large herds, a certain small percentage of the animals treated do not react, and others exhibit symptoms of doubtful value. Consequently it is recommended that all cattle treated should be subjected to a second inoculation within four to eight weeks' time from the first. In this manner it is hoped to bring about a reaction in those that previously escaped, and it is only with such animals that extra risk is involved. The second inoculation will not affect those that reacted to the first, while a greater degree of protection may be conferred. The security offered by such procedure adequately repays the trouble involved.

After Treatment.

It is necessary to place the cattle immediately after inoculation in paddocks containing a good supply of grass and water, under the care of a reliable man, where they should be left undisturbed. It is not advisable to remove them until after the expiration of six weeks from the date of inoculation.

JAS. DOUGLAS STEWART, M.R.C.V.S.,
Veterinary Surgeon to Stock Branch.

6th January, 1899.

Sydney: William Applegate Gullick, Government Printer.—1899.

1899.

LEGISLATIVE ASSEMBLY.

NEW SOUTH WALES.

DUTY ON CEREALS.

(PETITION FROM CERTAIN RESIDENTS AT WALLA WALLA, IN FAVOUR OF A DUTY ON FLOUR, WHEAT, HAY, CHAFF, AND OTHER CEREALS.)

Received by the Legislative Assembly, 8 *March*, 1899.

To the Honorable the Speaker and Members of the Legislative Assembly of New South Wales.

The humble Petition from Residents in Walla Walla, in meeting assembled,—

HUMBLY SHOWETH:—

That the following resolution was passed:—

That in the opinion of this meeting of producers, seeing that the Government have retained duties on sugar, it is desirable in the interest of the producers of cereals that a duty should be placed on flour, wheat, hay, chaff, and other cereals, in order to prevent the farmers' own market from being flooded by the surplus of other Colonies.

We, your humble Petitioners, do most humbly pray that your Honorable House, after reading the above resolution, unanimously passed at a public meeting held here to-day, may grant the prayer we ask.

And your Petitioners do ever pray.

[*Here follow* 56 *signatures.*]

1899.

LEGISLATIVE ASSEMBLY.

NEW SOUTH WALES.

POLICE DEPARTMENT.

(REPORT FOR YEAR 1898.)

Printed under No. 1 *Report from Printing Committee,* 23 *February,* 1899.

The Inspector-General of Police to The Principal Under Secretary.

Sir, Police Department, Inspector-General's Office, Sydney, 11 January, 1899.

In compliance with instructions, and as required by the Police Regulations, I have the honor to submit, for the Chief Secretary's information, the following Report of the operations during the year 1898 of the Department under my control, accompanied by a statement, as usually furnished, of the strength and distribution of the establishment on the 31st December, and certain other figures and information.

During the year new stations have been established at the undermentioned places :—

Eastern District...	Beecroft. Merrylands.
Western District	Gallymont. Wattle Flat.
Bourke District	Come-by-Chance. Ford's Bridge.

Stations have been reformed at Tooma (Murray District) and Currabubula (North-Western District). Police camps have also been formed at the Harden-Demondrille-Jindalee, Wyong-Morisset-Waratah, Werris Creek-Boggabri, and Ravensworth-Liddell railway deviation works.

The strength of the Force in the Metropolitan District has been increased by 25 men; additional police have also been sent to Granville and Helensburgh in the Eastern District; Lithgow, Mount McDonald, Narromine, and Wellington in the Western District; Waratah in the North-eastern District; Girilambone in the Bourke District; Broken Hill in the South-western District; Finley and Wagga Wagga in the Murray District; and Lismore in the Northern District.

To provide for the increase shown, and to fill vacancies occasioned as under, 156 appointments (100 foot, 56 mounted) have been made during the year :—

Resignations	46
Discharges	33
Dismissals	1
Superannuations	12
Deaths	11

Nine Police pensioners died in 1898 who had been in receipt of pensions amounting in the aggregate to £1,337 19s. 7d. per annum.

Twelve members of the Force were superannuated during the year, 8 receiving pensions at rates varying from £68 8s. 9d. to £191 12s. 6d. per annum, amounting in all to £1,108 13s. 9d. per annum, and 4 being granted gratuities upon their discharge, which entailed a further total charge of £523 10s. upon the Fund.

Seven widows of members of the Force were awarded gratuities from the Police Reward Fund, amounting in all to £1,227 15s., and one was granted a pension of £40 per annum.

The sum expended during the year in the payment of pensions and gratuities reached a total of £29,175 7s. 5d. The income of the Police Reward and Superannuation Funds being insufficient to meet the claims, it was necessary to make provision from the Consolidated Revenue for a sum of £12,866 0s. 6d., all the invested funds having become exhausted.

 The

[785 copies—Approximate Cost of Printing (S.L.) (labour and material), £7 8s. 9d.]

The advance figures taken out as usual from the station watch-house records in the Metropolitan District show a large decrease of 984 in the total number of apprehensions within that district during 1898 as compared with the previous year:—

Total number of arrests during 1897	21,943
Do do 1898	20,959

There was a very satisfactory decrease of 1,140 in the number of apprehensions for drunkenness, simple or accompanied by disorderly conduct, as compared with the previous year. There were, however, 71 more prosecutions for breaches of the "Betting Houses Suppression Act" and gambling; and the increase of 28 in the number of arrests for desertion of wives and families recorded, is also an unsatisfactory feature.

As regards crime in the Colony generally, there have been increases of 12 in the number of murders, 3 attempted murders, 3 manslaughter, and 2 infanticide. The numbers are, however, about the same as recorded during 1896. Burglaries and cases of theft from dwellings also show an increase of 202 as compared with 1897. There have, however, been decreases of 26 in cases of criminal assaults on girls and women, 56 uttering spurious coin, 62 horse and cattle stealing, and 14 children found abandoned. Other serious offences reported all maintain the usual average.

The following statement will serve to show the extent of the licensing business transacted in the Metropolitan District during the year:—

Applications.	Granted.	Refused.	Withdrawn.	No Parties.	Total.
For new publicans' licenses	2	.....	.....	.....	2
For Colonial wine licenses	36	22	12	14	84
For conditional licenses	6	7	4	.....	17
For publicans' transfers	471	2	20	19	512
For Colonial wine transfers	50	.....	.....	1	51
Music permits	614	.....	.....	.....	614
For booth licenses	546	.....	.....	.....	546
For packet licenses	10	.....	.....	.....	10

At the close of the year the publicans' licenses in existence totalled 790, an increase of 1 as compared with 1897; Colonial wine licenses 308, an increase of 16; spirit merchants licenses 106, an increase of 2; billiard licenses 89, a decrease of 33; and packet licenses 10, a decrease of 11.

There has been an increase of 48 in the number of prosecutions for breaches of the Licensing Act during the year. The difficulties in enforcing the provisions of the Act, particularly as regards Sunday trading, appear to increase, and also the tendency to evade the law.

There were 1,197 inquests held during the year on the bodies of deceased persons, an increase of 46 as compared with the previous year. In 69 cases death was attributable either directly or indirectly to intemperance.

162 inquests were held on fires, a decrease of 31 on the year 1897. 55 were returned as "wilful," 67 as "accidental," and 40 not specified.

There have been 554 inquiries for missing friends during the year, 265 of which have resulted successfully. These figures include 77 cases reported from Great Britain and elsewhere beyond Australasia. There has been a slight increase in the total as compared with the previous year.

The amount of work devolving upon the Police, outside the range of their ordinary duties, is still increasing considerably, and so materially interferes with the latter as to give rise to public complaint of the inattention of the Police to their legitimate work. Some increase has been provided to the Establishment—about 60 men—but when allowing for the absence from duty under the General Leave Regulation for 14 days annually, there will not be more than 30 additional constables at disposal, a wholly inadequate number to provide for new stations and other requirements, without taking into consideration the demand referred to above on account of extra duties to be performed.

I may refer particularly to the work undertaken for the Board of Health under the Health Act, Dairies Supervision Act, and Diseased Animals and Meat Act.

At the same time I am free to admit that I cannot suggest any means whereby effective machinery could be substituted for the present system without an enormously increased expenditure; and I am happy to be able to add that testimony is borne by the Departments interested, to the promptitude and efficiency exhibited by the Police in carrying out the duties entrusted to them.

Proceedings have been taken by the Police on behalf of the Public Instruction Department in 1,506 cases under the compulsory clauses of the Education Act, for neglect to send children to school, and recovery of fees, &c., and cautions issued by them in 83 cases.

Inquiries have also been conducted in 1,032 cases for the Master-in-Lunacy, 1,914 for the State Children's Relief Department and Government Asylums, 248 for the Mercantile Explosives Department, and 209 cases on behalf of the Superintendent of the N.S.S. "Sobraon." 114 notices were also served on behalf of the Land Board, and a number of inquiries made for the Fisheries Commissioners, Government Labour Bureau, Taxation Commissioners, Pharmacy Board, Randwick Asylum Committee, &c.

I append hereto a list of works in connection with buildings which have been completed during the year on behalf of the Department. [*Appendix* B.]

Pending the erection of a central headquarters' station for offices, &c., and for which plans have been prepared, I was forced (with the Chief Secretary's sanction) to rent a building adjacent to my offices for occupation by the detectives and for other purposes, the accommodation in the old building occupied being wholly inadequate. This enabled me to make better arrangements for police attendance continuously, day and night, to receive and circulate reports and to attend to the telephones now connected and worked on an improved system.

Ambulance instruction continues to be imparted to members of the Force, classes being constantly formed under the direction of Doctor R. Vandeleur Kelly of the St. John's Ambulance Association. The attendance is in all cases voluntary, and the certificates awarded are entered on the record of each member of the Force qualifying.

The Police Band has made good progress during the year, and now ranks as one of the best equipped bands in the Colony. Public performances are given periodically and apparently much appreciated. The services of the band have also been in much request for public charitable objects in the city and suburbs, and where the exigencies of police duty allowed of their attendance assistance has always been given.

The Police Rifle Club continues to make fair progress. In addition to the quarterly competitions held by the members, which are well attended, matches are occasionally arranged with other similar clubs. Thirteen members were successful in obtaining prizes at the meeting of the National Rifle Association. There is also a Police Swimming Club.

Owing, to a great extent no doubt, to the scarcity of employment during the past few years, a very large number of candidates for the Police have presented themselves (about a thousand), most of whom are apparently eligible for the Service. A far different state of affairs existed some years ago, when it was difficult to get men to fill vacancies, consequently having now a wider range for selection, a higher standard is practicable for recruits, both physically and educationally.

Candidates are required to have a fair elementary education, and the minimum height for the Foot Police is now 5 ft. 10 in., and for the Mounted 5 ft. 8 in. The medical examination is also more exacting as regards muscular development, and general soundness with bodily activity. The average height of those appointed to the Foot Police in 1898 was 5 ft. 11½ in.

The training and instruction at the Depôt have also been considerably improved and extended. A small gymnasium has been established for calisthenic exercises, all the Police are required to be proficient swimmers, and most of them are capable of riding a bicycle.

Experimentally, I have also instituted instruction by way of simple lectures regarding the powers and duties of constables. Inspector Stephen Cotter undertook the preparation and delivery of a series of six lectures, and devoted considerable attention to the same in his spare time, and I am sanguine that the result will be beneficial. I append hereto a synopsis of the same. [*See Appendix* A.]

For many years past the desirability of providing oversight for female prisoners in the metropolitan lock-ups has been a subject for consideration, but many difficulties interposed, chiefly want of accommodation at the watch-houses and the considerable expenditure entailed. However, during the past few months a trial has been made experimentally of collecting female prisoners, as far as practicable, in one separate portion of the lock-up at the Central Police Station, and placing a matron in charge. It is premature at present to give any opinion as to the efficacy of the system.

During the year the extension of the franchise to members of the Police Force has come into operation, but I cannot say that it has had a beneficial effect upon the Service generally as a disciplined force. As, however, I was always opposed to the measure, the result has not taken me by surprise.

The conduct of the Police generally has been exceptionally good, only one man having been dismissed from the Service during the year.

I have, &c.,
EDMUND FOSBERY,
Inspector-General of Police.

APPENDIX A.

APPENDIX A.

SYNOPSIS of a series of six lectures delivered at the Police Depôt by Inspector Stephen Cotter, to recruits and other Constables.

1. Office of constable; his influence on the community; personal bearing; demeanour towards the public; personal habits; improvement in education; study of the law; advice to parents neglecting children; muscular training; temperance; self-respect; civility and courtesy; thrift; coarse language, swearing; neatness and tidiness in uniform; the Magistracy; religious duties.

2. Apprehensions; duty in effecting arrests; legal power and authority; charge without warrant; when arrest lawful without warrant; arrest upon suspicion; use of unnecessary force unlawful; repelling violence; handcuffs and restraint in custody; escorts; drunken persons; cautions; females; lunatics; persons suffering from illness.

3. Identification; features and peculiarities; marks to be noted when observing; prisoners accused as suspicious characters; clothing; photographs; disputed or doubtful identity; telegraph, telephone, and other lists; charging "suspected person" within meaning of Vagrant Act; descriptions of accused persons; of property; care that no one is positively sworn to on insufficient grounds; attention to persons and things when on duty; note books; persons and places in division or district; use of firearms by police.

4. Duties on beat or patrol; what to observe, day and night, and what to note; how to judge of suspicious characters, and of criminal intent; night duty; examination of doors, shutters, gates, locks, and fastenings; wanderers by night; persons removing furniture or carrying goods; brands of horses; numbers of cabs and vans, when they should be noted, also description of vehicles and drivers; unusual occurrences; tracks and footprints.

5. Sudden emergencies; riot, disturbances, murder, accidental personal injury, sudden illness; fires; presence of mind; prompt report when assistance required; first aid ambulance; extinguishing fires when breaking out; names and addresses of witnesses of an occurrence or accident should be taken; prompt reports to superior officer.

6. Evidence; careful study of the law of evidence; clear and concise relation of all the facts, whether favourable or unfavourable to the accused; voice should be clear and distinct; notes to refresh memory should be made at the time; admissions or statements by the accused; no inducement, promise, or threat; law on subject should be clearly understood and written down; statement should be carefully written out in very words of accused; dying depositions; advisable in case of any importance to take statement of witness in writing, which he should sign.

APPENDIX B.

LIST of additions and repairs effected to Police Buildings during the year 1898.

Barraba	Additions to Court and Watch-house.
Bemboka	,, and repairs to Court and Watch-house.
Bingera	,, to Police Station.
,,	,, to Lock-up Gaol.
Bourke	,, &c., to Gaol.
Buckley's Crossing	,, to Police Station.
Byrock	,, and repairs to Court and Watch-house.
Casino	Repairs, &c., to Lock-up Gaol.
Cobar	Additions to Lock-up Gaol.
Cooma	,, to Police Station.
Coonamble	,, to Lock-up Gaol.
Cooranbong	,, to Court-house and Lock-up.
Cootamundra	,, to Lock-up Gaol.
Copeland	Repairs, &c., to Police Station.
Delegate	Additions to Court and Watch-house.
Deniliquin South	,, and repairs to Lock-up.
Dungog	Repairs, &c., to Court and Watch-house.
Goodooga	Additions, &c., to Court and Watch-house.
Gresford	,, to Court-house and Police Station.
Inverell	Repairs, &c., to Police Barracks.
Lambton	Additions to Court and Watch-house.
Menindie	Repairs, &c., to Police Staion.
Milparinka	Additions to Police Station (nearly completed).
Molong	,, and repairs to Court and Watch-house.
Morpeth	,, to Police Station.
Mudgee	,, to Police Barracks.
Murrurundi	,, to Lock-up Gaol.
Narrabri	,, ,,
,,	,, to Police Buildings.
Narramine	,, to Court-house and Police Station.
Oberon	,, ,, ,,
Pambula	,, ,, ,,
Rockley	,, to Police Station and Lock-up.
Scone	,, to Police Station.
Sofala	,, to Lock-up.
Somerton	Alterations and repairs to Police Station.
Sunny Corner	Additions to Police Station.
Tamworth	Alterations and repairs to Police Station.
Taree	,, ,, Court and Watch-house.
Tibooburra	,, ,, Police Station.
Wallsend	Additions to Court-house and Police Station.
Wellington	,, to Gaol.
Windsor	,, ,,
Wilcannia	,, ,,
Wingham	,, to Police Station.
Wyalong	,, to Gaol.
Yantabulla	Repairs, &c., to Police Station.

LIST

LIST of Police Buildings completed during the year 1898.

Albury	Erection of Superintendent's quarters.
Bermagui	Temporary cell.
Berrigan	,,
Broken Hill	Erection of Police Barracks.
Carinda	Temporary cell.
Currabubula	Erection of Police Station.
Finley	Temporary cell.
Forbes	Erection of Police Station.
Ford's Bridge	,, ,,
Gladstone	,, ,, and Lock-up.
Horton	Removal of Police Buildings from Eulowric to (nearly completed).
Hunter's Hill	Temporary cell.
Lismore	Erection of Police Buildings.
Louth	Temporary cell.
Manilla	Erection of Police Station and Lock-up (nearly completed).
Peak Hill	,, Court and Watch-house.
Quirindi	,, Police Station and Lock-up.
Roselle	,, Lock-up.
Tilpa	,, Police Station.
Tinonee	,, Court and Watch-house.
Trundle	,, Police Station.
Ungaric	,, ,,
Wyndham	,, Court and Watch-house.

APPENDIX C.

RETURN of the number of men serving in the Police Force on the 31st December, 1898, and the year of their joining :—

	Superintendents.	Inspectors.	Sub-Inspectors.	Senior Sergeants.	Sergeants.	Senior Constables.	Constables.	Detectives.	Total.
1851	.....	1	.....	.....	.....	.....	.....	.....	1
1852	.....	.....	.....	.....	.....	.....	.....	.....	.....
1853	.....	.....	.....	.....	.....	.....	.....	.....	.....
1854	.....	.....	.....	.....	.....	.....	.....	.....	.....
1855	2	.....	.....	.....	.....	.....	.....	.....	2
1856	.....	1	.....	.....	.....	.....	.....	.....	1
1857	2	.....	.....	1	.....	.....	.....	.....	3
1858	1	.....	.....	.....	.....	.....	.....	.....	1
1859	1	.....	.....	.....	.....	1	.....	.....	2
1860	1	3	.....	.....	1	.....	.....	.....	5
1861	.....	1	1	2	.....	.....	.....	.....	4
1862	2	4	1	2	1	3	2	.....	15
1863	1	.....	1	4	6	1	4	.....	17
1864	.....	.....	1	2	.....	3	3	.....	9
1865	.....	.....	.....	.....	1	.....	1	.....	2
1866	.....	1	2	2	2	1	1	.....	9
1867	1	.....	2	3	1	2	.....	.....	9
1868	.....	1	5	3	3	3	.....	.....	15
1869	.....	.....	.....	1	1	1	1	.....	4
1870	.....	.....	2	.....	.....	2	2	.....	6
1871	.....	.....	.....	2	4	1	3	.....	10
1872	.....	.....	5	4	2	3	2	1	17
1873	.....	1	.....	3	6	1	3	.....	14
1874	.....	.....	.....	4	5	5	6	.....	20
1875	.....	.....	2	3	3	6	8	.....	22
1876	.....	.....	.....	4	6	4	6	1	21
1877	.....	.....	2	2	4	6	7	1	22
1878	.....	.....	1	3	8	14	14	.....	40
1879	.....	.....	2	5	12	13	15	.....	47
1880	.....	.....	.....	2	4	18	9	1	34
1881	.....	.....	.....	.....	7	21	17	1	46
1882	.....	.....	1	.....	7	28	21	1	58
1883	.....	.....	1	2	7	27	31	3	71
1884	.....	.....	1	3	7	37	41	2	91
1885	.....	.....	.....	2	8	18	56	1	85
1886	.....	.....	.....	.....	1	21	51	1	74
1887	.....	.....	.....	.....	4	21	50	.....	75
1888	.....	.....	.....	1	1	13	65	.....	80
1889	.....	.....	.....	.....	3	10	77	.....	90
1890	.....	.....	.....	.....	.....	5	96	.....	101
1891	.....	.....	.....	.....	.....	2	89	.....	91
1892	.....	.....	.....	.....	.....	3	122	.....	125
1893	.....	.....	.....	.....	.....	2	79	.....	81
1894	.....	.....	.....	.....	.....	1	99	.....	100
1895	.....	.....	.....	.....	.....	.....	99	.....	99
1896	.....	.....	.....	.....	.....	.....	97	.....	97
1897	.....	.....	.....	.....	.....	.....	91	.....	91
1898	.....	.....	.....	.....	.....	.....	150	.....	150
	11	13	30	60	115	297	1,418	13	1,957

APPENDIX D.

RETURN of Strength and Distribution of the Police Force on the 31st December, 1898.

District.	Station.	Mounted.							Foot.			
		Superintendents.	Inspectors.	Sub-inspectors.	Senior-sergeants.	Sergeants.	Senior-constables.	Constables.	Senior-sergeants.	Sergeants.	Senior constables.	Constables.
Metropolitan..	No. 1 Head Station	1	2	2	...	...	...	...	2	8	16	58
	Central Station	...	...	...	...	...	...	...	...	2	...	4
	Pyrmont	...	...	...	...	...	...	...	...	1	...	4
	General Post Office..	...	...	...	...	...	...	...	...	...	...	3
	Mint.....	...	...	...	...	...	...	...	1	...	...	3
	Glebe Island	...	...	...	...	...	...	...	...	...	...	1
	No. 2 Head Station	...	...	2	...	...	...	...	1	5	13	57
	Glebe	...	...	...	...	...	...	...	...	1	3	12
	Redfern and Darlington	...	1	1	...	...	...	...	...	2	7	26
	Waterloo and Alexandria	...	...	...	...	...	...	...	1	...	1	8
	Beaconsfield Estate	...	...	...	...	...	...	...	...	...	...	1
	Mitchell Road	...	...	...	...	...	...	...	...	...	...	1
	University	...	...	...	...	...	...	...	...	...	...	1
	Irish Town.....	...	...	...	...	...	...	...	...	...	...	1
	No. 3 Head Station	...	1	1	...	...	...	...	4	3	8	59
	Watson's Bay	...	...	...	...	...	...	...	...	...	...	1
	Waverley and Bondi	...	...	...	...	...	...	...	...	1	2	14
	Paddington and Woollahra	...	...	...	...	...	...	...	1	1	6	14
	Botany	...	...	...	...	...	...	...	...	1	...	3
	Double Bay	...	...	...	...	...	...	...	...	...	...	1
	Rose Bay.....	...	...	...	...	...	...	...	...	...	...	1
	Rushcutters' Bay ...	...	...	...	...	...	...	...	...	...	...	1
	Randwick & Coogee	...	...	...	...	...	...	...	...	1	2	8
	No. 4 Head Station	...	...	1	...	...	...	...	2	5	7	24
	Chief Secretary's Office	...	...	...	...	...	...	...	...	...	...	4
	Lands Office	...	...	...	...	...	...	...	...	...	...	3
	Treasury	...	...	...	...	...	...	...	...	...	...	4
	Balmain	...	...	1	...	...	...	...	1	1	5	10
	Manly	...	...	...	...	...	...	...	1	...	...	4
	Government House..	...	...	...	...	...	...	...	...	...	...	2
	Woolloomooloo	...	...	...	...	...	...	...	...	...	...	3
	Bourke-street.....	...	...	...	...	...	...	...	...	...	...	2
	Rozelle	...	...	...	...	...	...	...	...	...	...	2
	No. 5 Head Station	...	..	1	...	...	...	...	2	6	5	22
	Cook's River	...	...	...	...	...	...	...	...	...	...	2
	Concord	...	...	...	...	...	...	...	...	...	1	2
	Petersham	...	...	...	...	...	...	...	1	...	2	12
	Leichhardt	...	...	...	...	...	...	...	...	1	4	7
	Camperdown	...	...	...	...	...	...	...	...	...	...	4
	Ashfield	...	...	...	...	...	...	...	...	1	1	6
	Enfield.....	...	...	...	...	...	...	...	...	...	...	3
	Canterbury.....	...	...	...	...	...	...	...	...	...	...	1
	Marrickville	...	...	...	...	...	...	...	1	...	2	11
	Burwood.....	...	...	...	...	...	...	...	1	...	2	5
	Erskineville	...	...	...	...	...	...	...	...	...	...	4
	Kogarah	...	...	...	...	...	...	...	...	...	1	3
	Five Dock	...	...	...	...	...	...	...	...	...	...	2
	Stanmore	...	...	...	...	...	...	...	...	...	1	1
	Summer Hill	...	...	...	...	...	..	...	...	...	1	5
	Homebush	...	...	...	...	...	...	...	...	...	...	1
	Strathfield	...	...	...	...	...	...	...	...	...	...	3
	Hurstville	...	...	...	...	...	...	...	...	...	1	2
	Belmore	...	...	...	...	...	...	...	...	...	...	1
	Croydon	...	...	...	...	...	...	...	...	...	...	3
	Mortlake.....	...	...	...	...	...	...	...	...	...	...	1
	Annandale	...	...	...	...	...	...	...	...	...	1	4
	Drummoyne	...	...	...	...	...	...	...	...	...	...	3
	St. Peters	...	...	...	...	...	...	...	...	...	1	2
	Helsarmel	...	...	...	...	...	...	...	...	...	...	1
	Rockdale	...	...	...	...	...	...	...	...	...	...	4
	Peakhurst	...	...	...	...	...	...	...	...	...	...	1
	Arncliffe	...	...	...	...	...	...	...	...	...	...	1
	Dulwich Hill	...	...	...	...	...	...	...	...	...	...	2
	Rosedale	...	...	...	...	...	...	...	...	...	...	1
	North Sydney	...	1	...	...	...	...	...	...	2	8	21
	Willoughby	...	...	...	...	...	...	...	...	1	1	4
	Neutral Bay	...	...	...	...	...	...	...	...	...	1	3
	Lane Cove	...	...	...	...	...	...	...	...	...	1	1
	Mosman	...	...	...	...	...	...	...	...	...	1	3
	Greenwich	...	...	...	...	...	...	...	...	...	...	1
	Narremburn	...	...	...	...	...	...	...	...	...	...	1
	Water Police	...	1	...	...	...	...	...	1	...	9	17
	Longueville	...	...	...	...	...	...	...	...	...	...	1
	Wahroonga.....	...	...	...	...	...	...	...	...	...	...	1
	Lindfield.....	...	...	...	...	...	...	...	...	...	...	1
Northern	Armidale	1	...	...	1	...	...	5	...	...	1	5
	Do West	...	...	...	...	...	...	...	...	...	...	1
	Uralla	...	...	...	...	...	1	1	...	...	...	1
	Walcha Road.....	...	...	...	...	...	...	1	...	...	...	...
	Walcha	...	...	...	...	1	...	1	...	...	...	1

Districts.	Stations.	Mounted.							Foot.			
		Superintendents.	Inspectors.	Sub-inspectors.	Senior-sergeants.	Sergeants.	Senior-constables.	Constables.	Senior-sergeants.	Sergeants.	Senior-constables.	Constables.
Northern—*continued.*	Bendemeer	...	...	...	...	...	...	1	...	...	...	...
	Nowendoc	...	...	...	...	...	...	1	...	...	...	...
	Guyra	...	...	...	...	...	...	1	...	...	...	...
	Glen Innes	...	...	...	1	...	...	2	...	...	...	3
	Kookabookra	...	...	...	...	...	...	1	...	...	...	...
	Deepwater	...	...	...	...	...	1	...	...	...	...	...
	Emmaville	...	...	...	...	...	1	1	...	...	...	1
	Tenterfield	...	...	...	1	...	...	1	...	...	...	2
	Wilson's Downfall	...	...	...	...	1	...	1	...	...	...	...
	Bundarra	...	...	...	...	...	1	1	...	...	...	...
	Tingha	...	...	...	...	...	1	1	...	...	...	...
	Inverell	...	...	...	1	...	...	2	...	...	...	3
	Ashford	...	...	...	...	...	...	1	...	...	...	...
	Hillgrove	...	...	...	...	1	...	...	...	...	...	2
	Metz	...	...	...	...	...	...	...	...	...	...	1
	Guy Fawkes	...	...	...	...	...	...	1	...	...	...	...
	Grafton	...	...	1	...	1	...	1	...	1	...	5
	South Grafton	...	...	...	...	...	...	1	...	...	1	...
	Woolgoolga	...	...	...	...	...	1	...	...	...	...	...
	Coramba	...	...	...	...	...	...	1	...	...	...	...
	Ulmarra	...	...	...	...	...	...	1	...	...	...	...
	Brushgrove	...	...	...	...	...	...	1	...	...	...	...
	Lawrence	...	...	...	...	...	1	...	...	...	...	...
	Maclean	...	...	...	...	...	...	...	...	1	...	2
	Harwood	...	...	...	...	...	...	...	...	...	...	1
	Chatsworth	...	...	...	...	...	...	...	...	...	...	1
	Palmer's Island	...	...	...	...	...	1	...	...	...	...	...
	Yamba	...	...	...	...	...	...	...	...	...	...	1
	Copmanhurst	...	...	...	...	...	...	1	...	...	...	...
	Dalmorton	...	...	...	...	...	...	1	...	...	...	...
	Nymboida	...	...	...	...	...	...	1	...	...	...	...
	Lismore	...	...	1	1	...	...	1	...	...	...	6
	Lismore, North	..	...	...	...	...	...	...	...	...	...	1
	Casino	...	...	...	...	1	...	1	...	...	...	2
	Coraki	...	...	...	...	...	1	...	...	...	...	1
	Woodburn	...	...	...	...	...	1	...	...	...	...	...
	Broadwater	...	...	...	...	...	1	...	...	...	...	1
	Wardell	...	...	...	...	...	1	...	...	...	...	...
	Rous	...	...	...	...	...	...	1	...	...	...	...
	Ballina	...	...	...	...	...	1	...	...	...	...	2
	Woodenbong	...	...	...	...	...	...	1	...	...	...	...
	Drake	...	...	...	...	...	1	1	...	...	...	...
	Byron Bay	...	...	...	...	...	...	1	...	...	...	...
	Mullumbimby	...	...	..	...	...	...	1	...	...	...	...
	Murwillumbah	...	...	...	...	...	1	...	...	...	...	1
	Tumbulgum	...	...	...	...	...	...	1	...	...	...	...
	Cudgen	...	...	...	...	...	...	1	...	...	...	1
	Cooloon	...	...	...	...	...	...	...	...	...	...	1
Southern	Goulburn	1	1	...	...	...	3	3	...	2	2	11
	Collector	...	...	...	...	...	1	...	...	...	...	...
	Bungonia	...	...	...	...	...	...	1	...	...	...	...
	Marulan	...	...	...	...	...	...	1	...	...	...	...
	Crookwell	...	...	...	...	1	...	3	...	...	...	...
	Taralga	...	...	...	...	...	1	1	...	...	...	...
	Yass	...	1	...	...	...	1	2	...	...	...	2
	Gunning	...	...	...	...	...	1	...	...	...	...	1
	Dalton	...	...	...	...	...	1	...	...	...	...	...
	Gundaroo	...	...	...	...	...	1	...	...	...	...	...
	Gininderra	...	...	...	...	...	...	1	...	...	...	...
	Burrowa	...	...	...	1	...	...	1	...	...	...	1
	Binalong	...	...	...	...	...	1	...	...	...	...	1
	Frogmore	...	...	...	...	...	...	1	...	...	...	...
	Reid's Flat	...	...	...	...	...	...	1	...	...	...	...
	Pudman Creek	...	...	...	...	...	...	1	...	...	...	...
	Wee Jasper	...	...	...	...	...	...	1	...	...	...	...
	Rugby	...	...	...	...	...	...	1	...	...	...	...
	Bowning	...	...	...	...	...	...	...	...	...	...	1
	Young	...	...	1	...	...	1	1	...	...	1	3
	Cootamundra	...	...	...	1	...	...	2	...	...	...	4
	Temora	...	...	...	...	1	...	1	...	...	...	2
	Murrumburrah	...	...	...	...	1	...	1	...	...	...	1
	Marengo	...	...	...	...	...	1	...	...	...	...	...
	Wombat	...	...	...	...	...	...	1	...	...	...	...
	Wallendbeen	...	...	...	...	...	1	...	...	...	...	...
	Morangarell	...	...	...	...	...	...	1	...	...	...	...
	Barmedman	...	...	...	...	...	1	1	...	...	...	...
	Bethungra	...	...	...	...	...	...	1	...	...	...	...
	Stockinbingal	...	...	...	...	...	...	1	...	...	...	...
	Wyalong	...	...	...	...	1	...	1	...	...	1	4
	Reefton	...	...	...	...	...	...	1	...	...	...	...
	Marsdens	...	...	...	...	...	1	1	...	...	...	...
	Ungarie	...	...	...	...	...	...	1	...	...	...	...
	Yalgogrin	...	...	...	...	...	...	1	...	...	...	...
	Harden	...	...	...	...	...	...	...	...	...	...	1
	Braidwood	...	...	1	...	...	1	2	...	...	...	2
	Queanbeyan	...	...	...	...	1	...	1	...	...	...	3
	Moruya	...	...	...	1	...	...	1	...	...	...	1

Districts.	Stations.	Mounted.							Foot.			
		Superintendents.	Inspectors.	Sub-inspectors.	Senior-sergeants.	Sergeants.	Senior-constables.	Constables.	Senior-sergeants.	Sergeants.	Senior-constables.	Constables.
Southern—*continued.*	Araluen	...	...	...	...	...	1	...	...	...	..	1
	Bungendore	...	...	...	...	...	1	1	...	...	...	...
	Tarago	...	...	...	...	...	...	1	...	...	...	...
	Bateman's Bay	...	...	...	...	...	1	...	...	...	...	...
	Nelligen	...	...	...	...	...	...	1	...	...	...	...
	Central Tilba	...	...	...	...	...	...	1	...	...	...	...
	Nerrigundah	...	...	...	...	...	...	1	...	...	...	...
	Cobargo	...	...	...	...	...	1	1	...	...	...	...
	Bermagui	...	...	...	...	...	...	1	...	...	...	...
	Mongarlow	...	...	...	...	...	1	...	...	...	...	..
	Major's Creek	...	...	...	...	...	1	...	...	...	...	...
	Captain's Flat	...	...	...	...	...	1	...	...	...	...	1
	Emu Flat	...	...	...	...	...	...	1	...	...	...	...
	Animbo	...	...	...	...	...	...	1	...	...	...	...
	Cooma	...	...	1	...	1	...	2	...	...	...	3
	Bega	...	...	...	1	...	...	1	...	...	...	4
	Bombala	...	...	...	...	1	...	1	...	...	...	2
	Eden	...	...	...	...	...	1	...	...	...	...	1
	Candelo	...	...	...	...	...	1	1	...	...	...	...
	Buckley's Crossing	...	...	...	...	...	1	...	...	...	...	...
	Michelago	...	...	...	...	...	...	1	...	...	...	...
	Adaminaby	...	...	...	...	...	...	2	...	...	...	...
	Kiandra	...	...	...	...	...	1	...	...	...	...	...
	Delegate	...	...	...	...	...	1	1	...	...	...	...
	Nimitybelle	...	...	...	...	...	1	1	...	...	...	...
	Jindabyne	...	...	...	...	...	...	1	...	...	...	...
	Wolumla	...	...	...	...	...	...	1	...	...	...	...
	Wyndham	...	...	...	...	...	...	1	...	...	...	...
	Bemboka	...	...	...	...	...	1	...	...	...	...	...
	Towamba	...	...	...	...	...	...	1	...	...	...	...
	Berridale	...	...	...	...	...	...	1	...	...	...	...
	Cathcart	..	...	...	...	...	...	1	...	...	...	...
	Merimbula	...	...	...	...	...	...	...	...	...	...	1
	Panbula	...	...	...	...	1	...	1	...	...	...	1
Eastern	Depôt	1	...	...	...	...	...	...	...	1	...	1
	Parramatta	...	1	...	1	...	...	1	...	...	3	16
	Granville	...	...	...	...	...	...	...	...	...	...	3
	Auburn	...	...	...	...	...	...	...	...	...	...	2
	Rookwood	...	...	...	...	...	...	...	...	...	...	1
	Prospect	...	...	...	...	...	...	...	...	...	...	1
	Castle Hill	...	...	...	...	...	...	...	...	...	...	1
	Dundas	...	...	...	...	...	...	...	...	...	...	1
	Merrylands	...	...	...	...	...	...	...	...	...	...	1
	Ryde	...	...	...	...	...	1	1	...	...	...	1
	Hunter's Hill	...	...	...	...	...	...	...	...	...	...	1
	Gladesville	...	...	...	...	...	...	...	...	...	...	1
	Hornsby	...	...	...	...	...	...	...	...	...	...	1
	Peat's Ferry	...	...	...	...	...	...	...	...	...	...	1
	Woolwich	...	...	...	...	...	...	...	...	...	...	1
	Dural	...	...	...	...	...	...	1	...	...	...	...
	Beecroft	...	...	...	...	...	...	...	...	...	...	1
	Penrith	...	...	...	...	1	...	1	...	...	...	2
	St. Mary's	...	...	...	...	...	...	...	...	...	...	1
	Mulgoa	...	...	...	...	...	...	1	...	...	...	...
	Rooty Hill	...	...	...	...	...	...	...	...	...	...	1
	Emu Plains	...	...	...	...	...	...	1	...	...	...	...
	Springwood	...	...	...	...	...	...	1	...	...	...	...
	Katoomba	...	...	...	...	...	...	1	...	...	1	...
	Windsor	...	...	...	1	...	...	1	...	...	...	3
	Wilberforce	...	...	...	...	...	...	1	...	...	...	...
	St. Alban's	...	...	...	...	...	...	1	...	...	...	...
	Richmond	...	...	...	...	...	...	1	...	...	1	...
	North Richmond	...	...	...	...	...	...	1	...	...	...	...
	Rouse Hill	...	...	...	...	...	...	1	...	...	...	...
	Riverstone	...	...	...	...	...	...	...	...	...	...	1
	Wiseman's Ferry	...	...	...	...	...	...	1	...	...	...	...
	Liverpool	...	...	...	...	1	...	1	...	...	...	2
	Smithfield	...	...	...	...	...	...	1	...	...	...	...
	Bankstown	...	...	...	...	...	...	...	...	...	...	1
	Sutherland	...	...	...	...	...	...	...	...	...	...	1
	Campbelltown	...	...	...	...	1	...	1	...	...	...	1
	Appin	...	...	...	...	...	...	1	...	...	...	...
	Camden	...	...	...	...	1	...	1	...	...	...	1
	Picton	...	...	...	...	...	1	1	...	...	...	1
	Berrima	...	...	...	...	1	...	1	...	...	...	1
	Moss Vale	...	...	...	...	...	1	...	...	...	...	1
	Robertson	...	...	...	...	...	...	1	...	...	...	...
	Bowral	...	...	...	...	...	...	...	...	...	...	2
	Mittagong	...	...	...	...	...	1	...	...	...	...	1
	Burrawang	...	...	...	...	...	...	1	...	...	...	...
	Bundanoon	...	...	...	...	...	...	1	...	...	...	...
	Wollongong	...	...	...	1	...	...	1	...	...	1	2
	Dapto	...	...	...	...	...	...	1	...	...	...	...
	Fig-tree	...	...	...	...	...	1	...	...	...	...	...
	Bulli	...	...	...	...	...	1	...	...	...	...	1
	Clifton	...	...	...	...	...	...	...	...	...	...	1
	Helensburgh	...	...	...	...	...	...	1	...	...	...	1
	Corrimal	...	...	...	...	...	...	...	...	...	...	1

Districts.	Stations.	Mounted.							Foot.			
		Superintendents.	Inspectors.	Sub-inspectors.	Senior-sergeants.	Sergeants.	Senior-constables.	Constables.	Senior-sergeants.	Sergeants.	Senior-constables.	Constables.
Eastern—*continued.*	Kiama	...	...	...	1	...	...	1	...	...	...	1
	Shellharbour	...	...	...	...	...	...	...	...	...	...	1
	Albion Park	...	...	...	...	...	...	1	...	...	...	...
	Jamberoo	...	...	...	...	...	...	1	...	...	...	...
	Gerringong	...	...	...	...	...	...	1	...	...	...	...
	Nowra	...	...	...	...	1	...	1	...	...	...	2
	Berry	...	...	...	...	...	1	...	...	...	...	1
	Kangaroo Valley	...	...	...	...	...	...	1	...	...	...	...
	Milton	...	...	...	...	...	1	...	...	...	...	...
	Ulladulla	...	...	...	...	...	...	...	...	...	...	1
	Yalwal	...	...	...	...	...	...	1	...	...	...	...
Western	Bathurst	1	...	...	...	...	1	4	2	...	3	11
	Kelso	...	...	...	...	...	...	...	...	...	...	1
	Mill Town	...	...	...	...	...	...	...	...	...	...	1
	Oberon	...	...	...	...	...	...	2	...	...	...	...
	Sunny Corner	...	...	...	...	...	1	1	...	...	...	1
	Rydal	...	...	...	...	...	...	1	...	...	...	...
	Wallerawang	...	...	...	...	1	...	...	...	...	...	1
	Lithgow	...	...	...	...	1	...	1	...	...	...	2
	Hartley Vale	...	...	...	...	...	...	1	...	...	...	...
	Mount Victoria	...	...	...	...	...	...	1	...	...	...	...
	Hill End	...	...	...	...	...	1	...	...	...	...	1
	Sofala	...	...	...	...	...	1	1	...	...	...	...
	Wattle Flat	...	...	...	...	...	...	1	...	...	...	...
	Wyagdon	...	...	...	...	...	...	1	...	...	...	...
	Rockley	...	...	...	...	1	...	1	...	...	...	...
	Burraga	...	...	...	...	...	1	1	...	...	...	...
	Newbridge	...	...	...	...	...	...	1	...	...	...	...
	O'Connell	...	...	...	...	...	...	1	...	...	...	...
	Blackheath	...	...	...	...	...	...	...	...	1	...	...
	Orange	...	1	...	...	...	1	2	1	...	...	6
	East Orange	...	...	...	...	...	...	...	...	...	...	3
	Lucknow	...	...	...	...	...	...	1	...	...	...	...
	Millthorpe	...	...	...	...	...	...	1	...	...	...	...
	Blayney	...	...	...	1	...	...	...	...	...	...	1
	Trunkey	...	...	...	...	...	1	...	...	...	...	...
	Tuena	...	...	...	...	...	1	1	...	...	...	...
	Gallymont	...	...	...	...	...	...	1	...	...	...	...
	Carcoar	...	...	...	...	...	1	1	...	...	...	...
	Mandurama	...	...	...	...	...	...	1	...	...	...	...
	Mount McDonald	...	...	...	...	...	...	2	...	...	...	...
	Cowra	...	...	...	1	...	...	1	...	...	...	2
	Cargo	...	...	...	...	...	1	...	...	...	...	...
	Cudal	...	...	...	...	...	...	1	...	...	...	...
	Molong	...	...	...	...	1	...	1	...	...	...	1
	Manildra	...	...	...	...	...	...	1	...	...	...	...
	Woodstock	...	...	...	...	...	...	1	...	...	...	...
	Cumnock	...	...	...	...	...	...	1	...	...	...	...
	Dubbo	...	...	1	...	1	...	2	...	1	...	6
	Wellington	...	...	...	1	...	...	1	...	...	...	3
	Coonamble	...	...	...	1	...	...	1	...	...	...	3
	Obley	...	...	...	...	...	...	1	...	...	...	...
	Warren	...	...	...	...	1	...	1	...	...	...	2
	Dandaloo	...	...	...	...	...	...	2	...	...	...	...
	Nevertire	...	...	...	...	...	...	1	...	...	...	...
	Narramine	...	...	...	...	...	...	2	...	...	...	...
	Gilgandra	...	...	...	...	...	1	1	...	...	...	...
	Quambone	...	...	...	...	...	...	1	...	...	...	...
	Stuart Town	...	...	...	...	...	1	1	...	...	...	...
	Peak Hill	...	...	...	...	1	...	1	...	...	...	1
	Trangie	...	...	...	...	...	...	1	...	...	...	...
	Gulargambone	...	...	...	...	...	...	1	...	...	...	...
	Daviesville	...	...	...	...	...	1	...	...	...	...	...
	Tomingly	...	...	...	...	...	...	1	...	...	...	...
	Mudgee	...	...	1	1	...	...	2	...	...	...	5
	Wollar	...	...	...	...	...	...	1	...	...	...	...
	Gulgong	...	...	...	...	1	...	1	...	...	...	1
	Cobbora	...	...	...	...	...	1	1	...	...	...	...
	Mundooran	...	...	...	...	...	1	1	...	...	...	...
	Leadville	...	...	...	...	...	1	...	...	...	...	...
	Ilford	...	...	...	...	...	...	2	...	...	...	...
	Rylstone	...	...	...	1	...	...	1	...	...	...	1
	Hargraves	...	...	...	...	...	...	2	...	...	...	...
	Windeyer	...	...	...	...	...	...	1	...	...	...	...
	Coolah	...	...	...	...	...	...	2	...	...	...	...
	Capertee	...	...	...	...	...	...	1	...	...	...	...
	Forbes	...	...	1	...	1	...	2	...	...	1	4
	Condobolin	...	...	...	...	...	1	1	...	...	...	2
	Grenfell	...	...	...	...	1	...	1	...	...	...	2
	Goolagong	...	...	...	...	...	...	1	...	...	...	...
	Eugowra	...	...	...	...	...	...	1	...	...	...	...
	Parkes	...	...	...	...	...	1	1	...	...	...	3
	Alectown	...	...	...	...	...	...	1	...	...	...	...
	Trundle	...	...	...	...	...	...	1	...	...	...	...
	Warroo	...	...	...	...	...	...	2	...	...	...	...
	Fifield	...	...	...	...	...	...	1	...	...	...	...
	Bimbi	...	...	...	...	...	...	1	...	...	...	...
	Canowindra	...	...	...	...	...	1	1	...	...	...	...

Districts.	Stations.	Mounted.							Foot.			
		Superintendents.	Inspectors.	Sub-inspectors.	Senior-sergeants.	Sergeants.	Senior-constables.	Constables.	Senior-sergeants.	Sergeants.	Senior constables.	Constables.
Bourke	Bourke	1	...	...	1	1	...	3	...	...	...	6
	North Bourke	...	...	...	...	...	...	1	...	...	...	...
	Brewarrina	...	...	...	...	1	...	2	...	...	...	1
	Byrock	...	...	...	...	...	1	1	...	...	...	...
	Cobar	...	...	...	...	1	...	3	...	...	...	4
	Gongolgan	...	...	...	...	...	...	1	...	...	...	...
	Louth	...	...	...	...	...	1	1	...	...	...	...
	Tilpa	...	...	...	...	...	...	1	...	...	...	...
	Enngonia	...	...	...	...	...	...	1	...	...	...	...
	Nymagee	...	...	...	...	1	...	1	...	...	...	1
	Bobadah	...	...	...	...	...	...	2	...	...	...	...
	Nyngan	...	...	...	...	1	...	2	...	...	...	3
	Cannonbar	...	...	...	...	...	...	1	...	...	...	...
	Coolabah	...	...	...	...	...	...	1	...	...	...	...
	Girilambone	...	...	...	...	...	...	1	...	...	...	1
	Yantabulla	...	...	...	...	...	...	2	...	...	...	...
	Ford's Bridge	...	...	...	...	...	...	1	...	...	...	...
	Barringun	...	...	...	...	...	1	1	...	...	...	...
	Wanaaring	...	...	...	...	...	1	2	...	...	...	...
	Mount Drysdale	...	...	...	...	...	...	1	...	...	...	...
	Walgett	...	...	1	...	...	1	3	...	...	...	3
	Collarendabri	...	...	...	...	...	1	1	...	...	...	...
	Mogil Mogil	...	...	...	...	...	...	1	...	...	...	...
	Angledool	...	...	...	...	...	...	2	...	...	...	...
	Goodooga	...	...	...	...	...	1	2	...	...	...	...
	Comborah	...	...	...	...	...	...	1	...	...	...	...
	Tatalla	...	...	...	...	...	...	2	...	...	...	...
	Carinda	...	...	...	...	...	...	1	...	...	...	...
	Pilliga	...	...	...	...	...	1	1	...	...	...	...
	Come-by-Chance	...	...	...	...	...	...	1	...	...	...	...
North-eastern	West Maitland	1	...	1	...	...	1	2	...	2	2	11
	East Maitland	...	...	...	1	...	...	2	...	...	...	3
	Largs	...	...	...	...	...	...	...	...	...	...	1
	Paterson	...	...	...	...	...	1	1	...	...	...	...
	Gresford	...	...	...	...	...	...	1	...	...	...	...
	Lochinvar	...	...	...	...	...	...	1	...	...	...	...
	Greta	...	...	...	...	...	...	...	...	...	1	1
	Branxton	...	...	...	...	...	1	...	...	...	...	...
	Cessnock	...	...	...	...	...	...	1	...	...	...	...
	Ellalong	...	...	...	...	...	...	1	...	...	...	...
	Wollombi	...	...	...	...	...	1	1	...	...	...	...
	Morpeth	...	...	...	...	...	...	...	...	...	1	2
	Hinton	...	...	...	...	...	...	...	...	...	...	1
	Raymond Terrace	...	...	...	...	...	1	1	...	...	...	...
	Clarence Town	...	...	...	...	...	1	...	...	...	...	...
	Mulbring	...	...	...	...	...	...	1	...	...	...	...
	Cooranbong	...	...	...	...	...	...	1	...	...	...	...
	Wyong	...	...	...	...	...	...	1	...	...	...	...
	Gosford	...	...	...	...	1	...	...	...	...	...	1
	Howe's Valley	...	...	...	...	...	...	1	...	...	...	...
	Dungog	...	...	...	...	1	...	1	...	...	...	1
	Stroud	...	...	...	...	1	...	1	...	...	...	...
	Gloucester	...	...	...	...	...	...	1	...	...	...	...
	Copeland	...	...	...	...	...	1	...	...	...	...	...
	Bullahdelah	...	...	...	...	...	...	1	...	...	...	...
	Tea Gardens	...	...	...	...	...	...	1	...	...	...	...
	Bungwall Flat	...	...	...	...	...	...	1	...	...	...	...
	Forster	...	...	...	...	...	...	1	...	...	...	...
	Newcastle	...	1	1	...	...	...	...	1	3	4	28
	Point Road	...	...	...	...	...	...	...	...	...	...	2
	Lake Road	...	...	...	...	...	...	...	...	...	1	1
	Wickham	...	...	...	...	...	...	...	...	...	1	1
	Islington	...	...	...	...	...	...	...	...	...	...	1
	Tighe's Hill	...	...	...	...	...	...	...	...	...	...	1
	Lambton	...	...	...	...	1	...	...	...	...	...	2
	New Lambton	...	...	...	...	...	...	...	...	...	...	1
	Minmi	...	...	...	...	...	1	...	...	...	...	1
	Wallsend	...	...	...	...	1	...	...	...	...	...	3
	West Wallsend	...	...	...	...	...	...	...	...	...	...	1
	Charlestown	...	...	...	...	...	...	...	...	...	...	1
	Dudley	...	...	...	...	...	...	...	...	...	...	1
	Teralba	...	...	...	...	...	...	...	...	...	...	1
	Swansea	...	...	...	...	...	...	1	...	...	...	...
	Catherine Hill Bay	...	...	...	...	...	...	1	...	...	...	...
	Stockton	...	...	...	...	...	...	...	...	...	1	1
	Hamilton	...	...	...	...	...	...	...	...	...	1	1
	Adamstown	...	...	...	...	...	...	...	...	...	1	1
	Waratah	...	...	...	...	...	...	...	...	...	...	3
	Carrington	...	...	...	...	...	...	...	...	...	1	2
	The Glebe	...	...	...	...	...	...	...	...	...	1	1
	Singleton	...	...	...	1	...	...	2	...	...	1	3
	Jerry's Plains	...	...	...	...	...	...	1	...	...	...	...
	Broke	...	...	...	...	...	...	1	...	...	...	...
	Muswellbrook	...	...	...	1	...	...	1	...	...	...	2
	Denman	...	...	...	...	...	...	1	...	...	...	...
	Aberdeen	...	...	...	...	...	...	...	...	...	...	2
	Scone	...	...	...	1	...	...	1	...	...	...	1
	Stewart's Brook	...	...	...	...	...	...	1	...	...	...	...

Districts.	Stations.	Mounted.							Foot.			
		Superintendents.	Inspectors.	Sub-inspectors.	Senior-sergeants.	Sergeants.	Senior-constables.	Constables.	Senior-sergeants.	Sergeants.	Senior-constables.	Constables.
North-eastern—*continued.*	Merriwa	...	...	...	...	...	1	...	...	...	...	1
	Kerrabee	...	...	...	...	...	...	1	...	...	...	...
	Cassilis	...	...	...	...	...	1	1	...	...	...	...
	Tinonee	...	...	...	...	...	...	1	...	...	...	...
	Taree	...	...	...	...	1	...	...	...	...	...	2
	Wingham	...	...	...	...	...	...	1	...	...	...	...
	Cundletown	...	...	...	...	...	...	1	...	...	...	...
	Coopernook	...	...	...	...	...	...	1	...	...	...	...
	Camden Haven	...	...	...	...	...	...	1	...	...	...	...
	Port Macquarie	...	...	...	...	1	...	1	...	...	...	1
	Wauchope	...	...	...	...	...	...	2	...	...	...	...
	Bellbrook	...	...	...	...	...	...	1	...	...	...	...
	Kempsey	...	1	...	...	1	...	1	...	...	...	2
	Frederickton	...	...	...	...	...	...	1	...	...	...	...
	Smithtown	...	...	...	...	...	...	..	...	...	...	1
	Gladstone	...	...	...	...	...	1	...	...	...	...	...
	Arakoon	...	...	...	...	...	...	1	...	...	...	...
	Macksville	...	...	...	...	...	...	1	...	...	...	...
	Nambucca Heads	...	...	...	...	...	...	...	...	...	...	1
	Bowraville	...	...	...	...	...	...	1	...	...	...	...
	Fernmount	...	...	...	...	...	...	1	...	...	...	...
	Bellingen	...	...	...	...	...	1	...	...	...	...	...
South-western	Deniliquin	1	...	...	...	1	...	3	...	1	...	5
	Balranald	...	...	...	...	...	1	1	...	...	...	1
	Barrigan	...	...	...	...	...	1	...	...	...	...	1
	Finley	...	...	...	...	...	1	...	...	...	...	1
	Jerilderie	...	...	...	...	...	1	1	...	...	...	1
	Mathoura	...	...	...	...	...	1	...	...	...	...	...
	Moama	...	...	...	...	...	1	...	...	...	...	1
	Moulamein	...	...	...	...	...	...	2	...	...	...	...
	Tocumwal	...	...	...	...	...	1	1	...	...	...	...
	Wentworth	...	...	...	...	1	...	1	...	...	...	2
	Euston	...	...	...	...	...	1	1	...	...	...	...
	Pooncarie	...	...	...	...	...	1	1	...	...	...	...
	Cal Lal (Tareena)	...	...	...	...	...	...	1	...	...	...	...
	Broken Hill	...	...	1	...	...	...	3	...	1	2	13
	Do North	...	...	...	...	...	...	...	...	...	1	1
	Do South	...	...	...	...	...	...	...	...	...	1	1
	Do (Railway Town).	...	...	...	...	...	...	...	...	...	...	1
	Silverton	...	...	...	...	...	...	2	...	...	...	...
	Thackaringa	...	...	...	...	...	...	1	...	...	...	...
	Torrowangee	...	...	...	...	...	...	2	...	...	...	...
	Hay	...	...	1	...	1	...	2	...	...	...	4
	Booligal	...	...	...	...	...	1	1	...	...	...	...
	Carrathool	...	...	...	...	...	1	1	...	...	...	...
	Clare	...	...	...	...	...	...	1	...	...	...	...
	Darlington Point	...	...	...	...	...	...	1	...	...	...	...
	Euabalong	...	...	...	...	...	1	...	...	...	...	...
	Gilgunnia	...	...	...	...	...	...	1	...	...	...	...
	Hillston	...	...	...	...	1	...	1	...	...	...	1
	Ivanhoe	...	...	...	...	...	...	1	...	...	...	...
	Lake Cudgellico	...	...	...	...	...	1	...	...	...	...	...
	Maude	...	...	...	...	...	...	1	...	...	...	...
	Mossgiel	...	...	...	...	...	1	1	...	...	...	...
	Mount Hope	...	...	...	...	...	1	1	...	...	...	...
	Oxley	...	...	...	...	...	1	1	...	...	...	...
	Whitton	...	...	...	...	...	1	...	...	...	...	1
	Wilcannia	...	...	1	...	...	...	2	...	...	...	2
	Menindie	...	...	...	...	...	1	1	...	...	...	...
	Milparinka	...	...	...	...	...	1	1	...	...	...	...
	Tibooburra	...	...	...	...	...	1	1	...	...	...	...
	White Cliffs	...	...	...	...	1	...	1	...	...	...	1
North-western	Tamworth East	1	...	...	...	1	1	2	1	...	...	5
	Do West	...	...	...	...	...	...	...	...	...	1	1
	Murrurundi	...	...	...	..	1	...	1	...	...	...	1
	Blackville	...	...	...	...	...	1	...	...	...	...	...
	Gunnedah	...	...	...	1	...	...	1	...	...	...	2
	Barraba	...	...	...	...	...	1	1	...	...	...	1
	Nundle	...	...	...	...	...	1	1	...	...	...	...
	Manilla	...	...	...	...	...	1	1	...	...	...	...
	Quirindi	...	...	...	...	1	...	1	...	...	...	2
	Somerton	...	...	...	...	...	...	1	...	...	...	...
	Moonbi	...	...	...	...	...	1	...	...	...	...	...
	Carroll	...	...	...	...	...	...	1	...	...	...	...
	Werris Creek	...	...	...	...	...	1	...	...	...	...	1
	Boggabri	...	...	...	...	...	1	1	...	...	...	1
	Tambar Springs	...	...	...	...	...	1	...	...	...	...	...
	Baradine	...	...	...	...	...	1	...	...	...	...	...
	Coonabarabran	...	...	...	...	1	...	1	...	...	...	1
	Swamp Oak	...	...	...	...	...	1	...	...	...	...	...
	Currabubula	...	...	..	...	...	...	1	...	...	...	...
	Narrabri East	...	...	1	1	...	...	2	...	...	...	3
	Do West	...	...	...	...	...	...	...	...	...	...	1
	Wee Waa	...	...	...	...	...	1	1	...	...	...	...
	Kerramingby	...	...	...	...	...	1	...	...	...	...	...
	Meroe	...	...	...	...	...	...	2	...	...	...	...

Districts.	Stations.	Mounted.							Foot.			
		Superintendents.	Inspectors.	Sub-inspectors.	Senior-sergeants.	Sergeants.	Senior-constables.	Constables.	Senior-sergeants.	Sergeants.	Senior-constables.	Constables.
North-western —*continued.*	Moree	...	...	...	1	...	...	2	...	...	...	4
	Bingera	...	...	...	...	1	...	1	...	...	...	2
	Eulowrie	...	...	...	...	...	...	1	...	...	...	...
	Warialda	...	...	...	...	...	1	1	...	...	...	1
	Yetman	...	...	...	...	...	...	1	...	...	...	...
	Boggabilla	...	...	...	...	...	1	1	...	...	...	...
	Pallamallawa	...	...	...	...	...	...	1	...	...	...	...
	Garah	...	...	...	...	...	1	1	...	...	...	...
	Burren	...	...	...	...	...	...	1	...	...	...	...
	Mungindi	...	...	...	...	...	1	1	...	...	...	...
Murray	Albury	1	...	...	...	...	...	3	2	...	2	7
	Bowna	...	...	...	...	...	...	1	...	...	...	...
	Germanton	...	...	...	...	1	...	1	...	...	...	...
	Walbundrie	...	...	...	...	...	...	1	...	...	...	...
	Corowa	...	...	...	1	...	...	1	...	...	...	2
	Howlong	...	...	...	...	...	1	...	...	...	...	...
	Mulwala	...	...	...	...	...	1	1	...	...	...	...
	Walla Walla	...	...	...	...	...	...	1	...	...	...	...
	Jindera	...	...	...	...	...	1	...	...	...	...	...
	Culcairn	...	...	...	...	...	...	1	...	...	...	...
	Gundagai	...	...	1	...	...	...	3	...	...	1	3
	Tumut	...	...	...	1	...	...	2	...	...	...	1
	Adelong	...	...	...	...	...	1	1	...	...	...	1
	Shepardstown	...	...	...	...	...	...	...	...	...	...	1
	Batlow	...	...	...	...	...	...	1	...	...	...	...
	Jugiong	...	...	...	...	...	...	1	...	...	...	...
	Coolac	...	...	...	...	...	...	1	...	...	...	...
	Tumberumba	...	...	...	...	...	1	1	...	...	...	1
	Tooma	...	...	...	...	...	...	1	...	...	...	...
	Wagga Wagga	...	1	...	...	1	..	2	...	1	1	8
	Junee	...	...	...	...	...	1	1	...	...	...	3
	Tarcutta	...	...	...	...	...	1	...	...	...	...	...
	Humula	...	...	...	...	...	...	1	...	...	...	...
	Yerong Creek	...	...	...	...	...	...	1	...	...	...	...
	The Rock	..	...	...	...	...	..	1	...	...	...	...
	Coolamon	...	...	...	...	...	1	1	...	...	...	...
	Lockhart	...	...	...	...	...	...	1	...	...	...	...
	Narrandera	...	...	1	...	..	...	3	...	...	1	3
	Daysdale	...	...	...	...	...	...	1	...	...	...	...
	Urana	...	...	...	...	1	...	1	...	...	...	1
	Grong Grong	...	...	...	...	...	...	1	...	...	...	...
Belmore Barracks.												
Constables in course of instruction, under orders for transfer, &c.		...	...	...	...	...	...	25	...	...	...	26
Orderlies to His Excellency the Governor		...	...	...	1	...	1	2	...	...	...	...
Police Storekeeper		...	...	1	...	...	...	...	...	...	...	...
Armourer		...	...	...	...	...	...	...	1	...	...	...
Drill Instructors		...	...	1	...	1	...	...	1	...	...	...
Van-drivers, &c.		...	...	...	1	...	1	4	...	...	2	1
Detectives.												
Superintendent in charge		1	...	...	...	...	...	...	...	...	...	...
Sub-Inspectors		...	...	2	...	...	...	...	...	...	...	...
First-class Detectives	7	...	...	...	...	...	...	...	...	...	...	...
Second-class do	4	...	...	...	...	...	...	...	...	...	..	...
Third-class do	2	...	...	...	...	...	...	...	...	...	...	...
	13	11	13	30	31	56	140	445	29	59	157	973

Total of all ranks.. ..... 1,957.

Police Department,
Inspector-General's Office,
7th January, 1899.

Sydney: William Applegate Gullick, Government Printer.—1899.

1899.

LEGISLATIVE ASSEMBLY.

NEW SOUTH WALES.

RAILWAYS AND TRAMWAYS.

(REPORT OF RAILWAY COMMISSIONERS, QUARTER ENDING DECEMBER, 1898.)

Printed under No. 5 Report from Printing Committee, 29 March, 1899.

Offices of the Railway Commissioners of New South Wales,
27 January, 1899.

TO THE HONORABLE THE MINISTER OF RAILWAYS,—

Sir,

In accordance with the provisions of the 44th clause of the Railway Act of 1888, 51 Vic. No. 35, we have the honor to submit, for the information of Parliament, our Report for the quarter ended 31st December, 1898, upon the subjects specified, viz. :—

I.—STATE OF THE TRAFFIC.

RAILWAYS.			Quarter ended 31st Dec., 1897.	Quarter ended 31st Dec., 1898.
Miles open			2,639½	2,705¼
Revenue		1897. / 1898.		
	Passenger	£294,859 / £300,290	£894,712	£934,854
	Merchandise	£599,853 / £634,564		
Expenditure			£423,802	£444,429
Train miles run			2,187,760	2,397,651
Earnings per train mile			8s. 2¼d.	7s. 9½d.
Expenditure per train mile			3s. 10½d.	3s. 8½d.
Percentage—Expenditure to earnings			47·37	47·54
Number of passengers			5,912,452	6,344,015
Tonnage of goods traffic			1,087,667	1,268,027
Tonnage of live stock traffic			41,458	68,941

TRAMWAYS.	Quarter ended 31st Dec., 1897.	Quarter ended 31st Dec., 1898.
Miles open	62½	66¼
Revenue from all sources	£78,949	£88,913
Expenditure	£67,848	£76,328
Tram miles run	819,961	886,661
Earnings per tram mile	1s. 11d.	2s.
Expenditure per tram mile	1s. 7¾d.	1s. 8¾d.
Percentage—Expenditure to earnings	85·94	85·85
Number of fares collected	18,694,229	21,047,421

RAILWAYS.

II.—Condition of the Lines.

A report as to the condition of the lines will be found as an Appendix, page 4.

III.—Special Rates.

A statement of the special rates, and the reasons for making the same, will be found as an Appendix, page 4.

IV and V.—Staff.

These returns are given as an Appendix, pages 5 to 7.

General Remarks.

The result of the past quarter's working gives an increase in revenue earnings of £40,142, and an increase in expenditure of £20,627, being a net improvement of £19,515 as compared with the corresponding period of last year.

The coaching traffic shows a falling off in first-class passengers of £2,943, an increase of £7,106 in the second-class, and £1,268 in parcels, &c., the result being an increase of £5,431.

The goods department gives an increase of £34,711, general merchandise contributed £12,681, hay, straw, and chaff £4,160, coal and coke £5,866, other minerals £3,595, and live stock £27,526. Wool shows a decrease of £17,929, and grain, flour, &c., £1,188.

The passenger journeys made show an increase of 431,563, the additional traffic hauled reached 180,360 tons, and the train mileage shows an addition of 209,891 miles.

CONDITION OF THE LINES AND ACCOMMODATION FOR THE TRAFFIC.

Satisfactory progress continues to be made with relaying, resleepering, reballasting, and reducing the grades. The third viaduct at Wagga Wagga has been completed, and the renewal of the remaining viaducts in steel is being proceeded with.

TRAMWAYS.

The revenue earnings show an increase of £9,964, and the expenditure £8,480, the net improvement being £1,484.

The Rose Bay line, from Ocean-street, Woollahra, to Rose Bay Wharf, a distance of 1 mile 24 chains, was opened for traffic on the 4th of October last.

We have the honor to be,

Sir,

Your most obedient servants,

CHARLES OLIVER,
Chief Commissioner.

W. M. FEHON,
Commissioner.

DAVID KIRKCALDIE,
Commissioner.

APPENDIX II.

NEW SOUTH WALES GOVERNMENT RAILWAYS.

Report on Condition of Permanent Way and Works for the Quarter ending 31st December, 1898.

Sir, Office of Engineer-in-Chief for Existing Lines, 9 January, 1899.

I have to report for the information of the Commissioners that the Permanent Way and works have been efficiently maintained during the past quarter.

Steady progress has been made with relaying, reballasting, and resleepering in all divisions.

The grade improvements between Wyong and Morisset, and Werris Creek and Gunnedah, have been completed, and satisfactory progress is being made with others on the Northern Line between Waratah and East Maitland, Glennie's Creek and Liddell, Quipolly and Werris Creek; and on the North-west between Boggabri and Baan Baa.

The renewal of Wagga viaducts in steel has been carried on, and No. 2 Viaduct completed.

I have, &c.,
THOMAS R. FIRTH,
Engineer-in-Chief for Existing Lines.

The Secretary to the Railway Commissioners.

APPENDIX III.

NEW SOUTH WALES GOVERNMENT RAILWAYS.

STATEMENT, in accordance with clause No. 44 of the Railway Act, showing the Special Rates which have been made, and the reasons for making such rates, Quarter ending 31st December, 1898.

Article.	Rate or Particulars.	Reason for Alteration.
Dairy cows	Sent to the Stud Farm at Camden, to be charged half rates on return journey if forwarded at the convenience of the Department in stock trucks that would otherwise run empty.	To secure traffic.
Gas liquor	Eveleigh to Clyde, in iron drums, to be charged 8s. 11d. per tank of 6 tons; empty drums to be returned free.	do
Jadoo fibre and liquor	"B" class rates and conditions	New traffic.
Water Works plant	Moonbi to Picton, Cootamundra to Wellington, in 6-ton lots, per 4-wheeled waggon, "B" class rates.	To secure traffic.
Butter and bacon	Byron Bay to Lismore, 4s. per ton	To encourage traffic.
Goods	All goods used for operating West Wallsend, Seaham, and Killingworth Collieries to be charged actual mileage to Cockle Creek.	New rate.
Machinery for dealing with mining products.	Auburn to Cockle Creek, "B" rates and conditions	To secure traffic.
Soil	Bulli to Milson's Point, 5s. 6d. per ton, or St. Leonards, 5s. 3d. per ton in truck loads of not less than 6 tons.	do
Traction engine	Granville to Aberdeen, if loaded in one truck, "B" class rate	do
Wagon wheels (6)	Mt. Kembla to Auburn and Auburn to Unanderra, 1st class rate	Special rate.
Waxworks Exhibition	Half rates to be charged on the equipment on the return journey	To secure traffic.
Bullion (silver and lead)	2s. per ton from Sulphide Works, Cockle Creek, to Bullock Island and Newcastle, upon 4,000 tons in full truck loads being forwarded annually.	To encourage traffic.
Bullion	From Dyke to Newcastle, 5s. per 4-wheeled truck	New rate.
Circuses	By special authorised trains, 12s. 6d. per mile per train, with a minimum charge of £20 per day.	To secure traffic.
Small coal	Pacific Co.'s Colliery to Sulphide Works, Cockle Creek, 9d. per ton in owners' trucks.	New rate.
Water-pipes	Sydney to Cockle Creek for H. R. D. B. of Water Supply and Sewerage, "A" rates in full truck loads.	To secure traffic.
Wheat	Wheat forwarded from Wellington to Young to be charged at the ordinary rate of 19s. 3d. per ton in the first instance, but if the flour is subsequently sent to stations North of Demondrille, a rebate will be allowed to the through Up journey rates, plus 1s. 9d. per ton.	do
Fares	When pupils are travelling to school for the first time or returning home after completing their education, tickets at the following fares will be issued:— Under 16 years of age, half single fare. 16 years and over, half Holiday Excursion fare.	Extension of privilege.
Tickets	Holiday Excursion tickets issued from stations in the tourist districts to Sydney and Newcastle to be available for three months.	To accord with currency of tickets issued to tourist districts.
Birds and animals	Birds and animals for the Zoological Society of New South Wales free on production of a certificate, signed by the Superintendent of the Zoological Gardens, showing that they will be exhibited at the Gardens.	Special concession.
Season Tickets	Season tickets to be issued for nine months on the basis of the quarterly and half-yearly rates, less 5 per cent.	New rate.
Fares	The return fares from Sydney to Stanwell Park to be 5s. 7d. first, and 3s. 3d. second class.	To equalise fares.
Bicycles	Bicycles between Sydney and Brisbane, when accompanied by owners, will be charged 7s. When unaccompanied, parcels rates, plus 50 per cent., will apply.	To equalise rates.

APPENDIX IV.

NEW SOUTH WALES GOVERNMENT RAILWAYS AND TRAMWAYS.

RETURN, in accordance with Clause No. 44 of the Railway Act, showing the Appointments of Employees from the 1st October to the 31st December, 1898.

Date.	Name.	Position.	Rate.	Remarks.
1898.		ENGINEER-IN-CHIEF FOR EXISTING LINES BRANCH.		
1 Oct..	Cooper, Benjamin	Fettler	7/6 per day	
1 ,,	O'Hara, George	Labourer	6/6 per day	*Vice* M. Donovan.
1 ,,	O'Hara, James	Labourer	6/6 per day	*Vice* J. Watson.
7 ,,	Hagan, Patrick	Labourer	6/6 per day	*Vice* T. Atkins.
7 ,,	Hodges, Charles	Labourer	6/6 per day	*Vice* J. Kerrigan.
10 ,,	Shepherd, Thomas	Fettler	7/6 per day	*Vice* J. Jameson.
12 ,,	Ross, Charles	Labourer	6/6 per day	*Vice* F. Wilson.
13 ,,	Neat, Joseph	Labourer	6/6 per day	
14 ,,	Jeffroy, Robert	Labourer	6/6 per day	*Vice* T. Sherack.
17 ,,	Coyne, Robert	Labourer	6/6 per day	*Vice* M. Howe.
18 ,,	McCosker, Patrick	Fettler	6/6 per day	*Vice* M. Meahan.
21 ,,	Gordon, William	Labourer	6/6 per day	*Vice* T. Kowin.
21 ,,	Coyne, Stephen	Fettler	7/6 per day	
2 Nov.	McGuirk, James	Fettler	7/6 per day	*Vice* T. Fallon.
14 ,,	Ray, Frederick	Labourer	6/6 per day	*Vice* A. Hopkins.
15 ,,	Brennan, Robert	Fettler	7/6 per day	*Vice* J. Kelly.
19 ,,	Howard, Cornelius	Labourer	6/6 per day	*Vice* R. Pollock.
8 Dec.	Crofts, Norman	Boy	2/6 per day	*Vice* A. Johnson.
20 ,,	O'Donnell, Christopher	Labourer	6/6 per day	*Vice* J. Baker.
		CHIEF MECHANICAL ENGINEER'S BRANCH.		
1 Oct..	Simpson, William	Cleaner	3/3 per day	
1 ,,	Idstein, John	Oiler	6/6 per day	Transferred from Extra Staff.
1 ,,	Dowswell, Thomas	Labourer	6/6 per day	
1 ,,	Gardiner, Albert	Dresser	7/6 per day	
1 ,,	Polglase, Alfred	Oiler	7/- per day	
5 ,,	Daley, Edward	Cleaner	5/- per day	*Vice* D. Duff.
6 ,,	Hill, Ebenezer	Shop boy	2/6 per day	
6 ,,	Gray, George	Shop boy	2/- per day	*Vice* M. Syme.
8 ,,	Coleman, Isaac	Cleaner	5/- per day	
10 ,,	Bennett, George E.	Shop boy	2/3 per day	Transferred from Extra Staff.
14 ,,	Bowditch, George	Fuelman	6/6 per day	
14 ,,	Parkinson, Alfred	Fitter	9/6 per day	
14 ,,	Keane, George	Fitter	9/6 per day	
14 ,,	Potter, Richard	Lighter-up	6/6 per day	
14 ,,	Balmer, George	Fuelman	6/6 per day	
14 ,,	Sclanders, John J.	Oiler	7/- per day	
14 ,,	Wordsworth Henry	Fuelman	6/6 per day	*Vice* G. Hapgood.
17 ,,	Crawford, John W.	Cleaner	3/3 per day	
19 ,,	Pearce, William	Cleaner	5/6 per day	New opening, Finlay.
19 ,,	Allenson, John L.	Apprentice	10d. per day	
21 ,,	Hector, Mark	Pumper	8/- per day	Transferred from Extra Staff.
4 Nov.	Marrs, Daniel	Fitter	9/6 per day	*Vice* R. Lewis.
5 ,,	McKean, John	Office boy	10/- per week	
5 ,,	Kingsell, James	Cleaner	3/3 per day	
11 ,,	Atkinson, John	Fuelman	6/6 per day	Transferred from Extra Staff
11 ,,	Redding, James A.	Lighter-up	6/6 per day	
11 ,,	Guthrie, William	Fitter	9/6 per day	
11 ,,	Wakeling, Richard	Fitter	9/6 per day	
11 ,,	Pearce, Henry	Fitter	9/6 per day	
11 ,,	Brodie, John	Labourer	6/6 per day	
11 ,,	Linklater, Thomas	Labourer	6/6 per day	
11 ,,	Swift, Quinton	Fuelman	7/- per day	
11 ,,	Saggus, Henry	Oiler	7/- per day	
11 ,,	Douglas, James T.	Labourer	6/6 per day	
11 ,,	Atkinson, Jonas	Fuelman	6/6 per day	*Vice* W. Harding.
15 ,,	Roper, John	Apprentice	10d. per day	
18 ,,	Sharp, Joseph	Fitter	9/6 per day	Transferred from Extra Staff.
25 ,,	Wilson, Francis	Hammer boy	2/3 per day	*Vice* R. McFarlane.
1 Dec.	Gould, John	Fuelman	7/- per day	Transferred from Extra Staff.
1 ,,	Bracewell, Charles	Fitter	9/6 per day	
2 ,,	Grant, James S.	Cleaner	4/- per day	
8 ,,	Johnston, Arthur	Shop boy	3/- per day	
8 ,,	Burrows, Edward	Shop boy	3/- per day	
9 ,,	Bird, Joseph	Dresser	7/6 per day	Transferred from Extra Staff.
9 ,,	Bont, Frank	Moulder	10/- per day	
9 ,,	Bilton, Henry	Labourer	6/6 per day	
9 ,,	Russell, James H.	Labourer	6/6 per day	
9 ,,	Shearer, John	Coremaker	10/- per day	
15 ,,	Martin, Stephen	Firelighter	6/6 per day	
		CHIEF TRAFFIC MANAGER'S BRANCH.		
23 Sept.	Crosland, Robert	Porter	6/- per day	Transferred from Extra Staff.
5 Oct..	Roche, James	Gatekeeper	15/- per week	
6 ,,	Mitchell, George	Telephone boy	10/- per week	
6 ,,	Tarrant, James	Porter	6/- per day	*Vice* T. King.
6 ,,	Feetham, Annie	Gatekeeper	7/- per week	*Vice* M. Higgins.
7 ,,	Allsop, Charles	Apprentice clerk	£30 per annum	
10 ,,	M'Leay, Donald	Junior porter	3/4 per day	
13 ,,	Hickey, John	Platform attendant	5/- per week	
14 ,,	Arnold, Edwin	Porter	6/- per day	Transferred from Extra Staff.
14 ,,	Bickerstoff, Henry	Telegraph probationer	2/6 per week	Transferred from Extra Staff.
14 ,,	Ward, Reuben	Telegraph probationer	2/6 per week	
14 ,,	Wallace, Augustus	Probationer	10/- per week	
14 ,,	Williams, James	Telegraph probationer	2/6 per week	*Vice* J. Carlon.
14 ,,	Dempsey, Augustus	Telegraph probationer	2/6 per week	*Vice* J. Ferry.
15 ,,	Gregory, Frederick	Porter	6/- per day	*Vice* D. Darcy.
15 ,,	Walton, Emily	Gatekeeper	Free house	*Vice* E. Walton.
15 ,,	Mills, Miss Elton	Gatekeeper	7/- per week	*Vice* E. Mills.
18 ,,	Renehan, Bridget	Gatekeeper	5/- per week	
18 ,,	Cruise, Henry	Telegraph probationer.	2/6 per week	*Vice* M. Keys.
20 ,,	Maloney, John	Junior porter	4/2 per day	
20 ,,	Horder, William	Telegraph probationer	2/6 per week	
21 ,,	Davis, Henry	Junior porter	2/6 per day	*Vice* J. Murphy.
21 ,,	Hodges, Albert	Junior porter	2/6 per day	
22 ,,	Burton, Robert	Gatekeeper	15/- per week	*Vice* J. Pope.
23 ,,	Peacock, Mary	Gatekeeper	7/- per week	*Vice* M. O'Brien.
26 ,,	Watt, William	Junior porter	2/6 per day	*Vice* G. Watts.
28 ,,	Delaney, Wilfred	Telegraph probationer	2/6 per week	Transferred from Extra Staff.
28 ,,	Taylor, George	Telegraph probationer	2/6 per week	
28 ,,	Harrison, Mrs.	Barrack attendant	7/- per week	*Vice* E. Brownsmith.
31 ,,	Hall, John	Telegraph probationer	2/6 per week	*Vice* R. Birrell.
31 ,,	Hilliard, William	Telegraph probationer	2/6 per week	
3 Nov.	Currie, Maria	Gatekeeper	7/- per week	
6 ,,	Ashe, Thomas	Porter	6/- per day	*Vice* W. Welch.
9 ,,	Skelton, William	Telegraph probationer	2/6 per week	

APPENDIX IV—*continued.*

Date.	Name.	Position.	Rate.	Remarks.
1898.		CHIEF TRAFFIC MANAGER'S BRANCH—*continued.*		
11 Nov.	Connell, Adrian	Telegraph probationer	2/6 per week	*Vice* J. Wilson.
11 ,,	Humphreys, Harriett	Gatekeeper	2/6 per week and house.	*Vice* M. Peterson.
11 ,,	Fagan, Garnett	Telegraph probationer	2/6 per week	*Vice* H. Riches.
11 ,,	M'Rae, William	Gatekeeper	15/- per week	*Vice* V. Jones.
14 ,,	Brown, Jessie	Gatekeeper	Free house	*Vice* E. Dwyer.
19 ,,	Gleeson, Mary	Gatekeeper	7/- per week	*Vice* A. Willis.
23 ,,	Taylor, Charlotte	Gatekeeper	Free house	*Vice* A. Knight.
23 ,,	Earl, Mrs. Ellen	Gatekeeper	5/- per week	
24 ,,	Reid, Maria	Gatekeeper	Free house	*Vice* N. Hogan.
25 ,,	Cavanough, Kate	Gatekeeper	Free house	
25 ,,	Young, Athol	Telegraph probationer	2/6 per week	Transferred from Extra Staff.
25 ,,	Hadley, Oscar	Junior assistant	10/- per week	
29 ,,	Stewart, Mrs. Mary	Platform attendant	10/- per week	
29 ,,	Wilson, Mary	Gatekeeper	7/- per week	*Vice* C. M'Lean.
30 ,,	Fenning, Josiah	Porter	6/- per day	
2 Dec.	Bullock, William	Gatekeeper	7/- per week	*Vice* A. Bullock.
5 ,,	Tobin, Thomas	Telegraph probationer	2/6 per week	
8 ,,	Wade, Percival	Telegraph probationer	2/6 per week	*Vice* D. M'Kinnon.
9 ,,	Forster, Albert	Telegraph probationer	2/6 per week	Transferred from Extra Staff.
16 ,,	Beattie, Albert	Gatekeeper	15/- per week	
16 ,,	Burns, John	Gatekeeper	15/- per week	
16 ,,	Corcoran, Anthony	Junior porter	2/6 per day	
16 ,,	Cox, Margaret	Gatekeeper	2/6 per week and house.	*Vice* L. Bruderlin.
19 ,,	Donaldson, William	Coal-shipping overseer	£200 per annum	
19 ,,	Gazzard, Harrie	Telephone boy	10/- per week	
19 ,,	Birbeck, John	Telegraph probationer	2/6 per week	Transferred from Extra Staff.
20 ,,	Fitzpatrick, Jane	Gatekeeper	7/- per week	*Vice* S. Cutts.
22 ,,	Wheatley, Frederick	Telegraph probationer	2/6 per week	*Vice* A. Shea.
23 ,,	Farr, Hilary	Telegraph probationer	2/6 per week	*Vice* W. Lindsay.
24 ,,	Noon, James	Telegraph probationer	2/6 per week	*Vice* J. M'Cullock.
28 ,,	Moran, James	Apprentice clerk	£30 per annum	*Vice* R. Gale.
29 ,,	Fox, Alice	Gatekeeper	7/- per week	*Vice* A. Doig.
30 ,,	Jeffery, Caroline	Gatekeeper	7/- per week	*Vice* M. Smith.
		SIGNAL AND INTERLOCKING ENGINEER'S BRANCH.		
18 Nov.	Edwards, Ernest	Shop boy	2/- per day	
18 ,,	Harrap, William	Shop boy	2/- per day	
21 ,,	Nancarrow, Stephen	Shop boy	1/9 per day	
22 ,,	Wescombe, Henry	Shop boy	2/- per day	
		ELECTRICAL ENGINEER'S BRANCH.		
11 Oct.	Cummings, Alfred W.	Probationer	2/6 per week	*Vice* J. Thurston.
4 Nov.	Grimble, Theophilus	Probationer	2/6 per week	*Vice* O. J. Knopp.
25 ,,	Bell, Frank	District Inspector	8/- per day	*Vice* G. E. Huntley.
23 Dec.	Clarke, William	Probationer	2/6 per week	*Vice* C. McCann.
		TRAMWAYS—LOCOMOTIVE BRANCH.		
1 Oct.	Bonus, James H.	Labourer	6/6 per day	Transferred from Extra Staff.
9 Nov.	Ward, Leo F.	Pulley oiler	2/6 per day	*Vice* E. Mullens.
15 ,,	Ryan, Edward	Pulley oiler	3/- per day	
19 ,,	Dear, Alfred E.	Shop boy	3/- per day	
2 Dec.	Forrest, Tom	Fuelman	6/6 per day	Transferred from Extra Staff.
8 ,,	Morris, Thomas	Assistant oiler	3/- per day	*Vice* J. Beckmann.
		TRAMWAYS—TRAFFIC BRANCH.		
6 Oct.	Brown, Richard E.	Office boy	10/- per week	*Vice* J. Bishop.
21 ,,	Archer, George W.	Office lad	10/- per week	Transferred from Extra Staff.
25 ,,	Jones, Robert	Junior car cleaner	2/6 per day	
26 ,,	Ireland, William	Junior car cleaner	2/6 per day	
31 ,,	Stephenson, William	Office lad	10/- per week	*Vice* A. Pratt.
4 Nov.	Smith, Thomas	Conductor	6/6 per day	*Vice* W. Garland.
18 ,,	Chambers, John A.	Junior conductor	6/- per day	Transferred from Extra Staff.
18 ,,	Morris, Alfred L.	Junior conductor	6/- per day	
18 ,,	McCarthy, Joseph	Junior conductor	6/- per day	
29 ,,	Warton, Alfred C.	Junior conductor	6/- per day	*Vice* J. Watsford.
		TRAMWAYS—MAINTENANCE BRANCH.		
1 Oct.	Bryant, George	Labourer	6/6 per day	Transferred from Extra Staff.
1 ,,	Parish, James	Labourer	6/6 per day	

APPENDIX V.

NEW SOUTH WALES GOVERNMENT RAILWAYS AND TRAMWAYS.

RETURN, in accordance with Clause No. 44 of the Railway Act, showing the Removals of Employees from 1st October to the 31st December, 1898.

Date.	Name.	Position.	Rate.	Remarks.
1898.		ENGINEER-IN-CHIEF FOR EXISTING LINES BRANCH.		
8 Oct.	Meahan Michael	Labourer	7/6 per day	Retired.
15 ,,	Stewart, William	Ganger	8/6 per day	Resigned.
21 ,,	Howe, Michael	Labourer	7/- per day	Discharged.
24 ,,	Kelly, John	Labourer	7/6 per day	Retired.
31 ,,	Clinton, John	Fettler	7/6 per day	Deceased.
24 Nov.	Johnson, Anton	Office boy	2/6 per day	Discharged.
29 ,,	Webb, Harry	Storeman	9/6 per day	Deceased.
29 ,,	Hopkins, Abraham	Labourer	7/6 per day	Retired.
8 Dec.	Baker, Isaac	Fettler	7/6 per day	Retired.
16 ,,	Cutts, James	Fettler	7/6 per day	Resigned.
17 ,,	Kilduff, William	Fettler	7/6 per day	Retired.
20 ,,	Hyslop, James	Ganger	9/- per day	Deceased.
22 ,,	Williams, Francis	Fettler	7/6 per day	Resigned.
24 ,,	Coyne, James	Ganger	9/- per day	Deceased.
31 ,,	Donohoe, Thomas	Fettler	7/6 per day	Retired.
31 ,,	King, William	Inspector	£230 per annum	Retired.

APPENDIX V—*continued.*

Date.	Name.	Position.	Rate.	Remarks.
1898.		CHIEF MECHANICAL ENGINEER'S BRANCH.		
1 Oct.	Dent, George	Fireman	10/- per day	Resigned.
8 ,,	Smith, William	Carriage examiner	8/- per day	Deceased.
13 ,,	Lewis, Rowland	Fitter	11/- per day	Deceased.
26 ,,	McFarlane, Robert	Striker	7/- per day	Discharged.
31 ,,	Donald James	Cleaner	7/- per day	Written off books.
25 Nov.	Hanks, James	Storeman	8/- per day	Deceased.
26 ,,	Spence, Alfred	Boilermaker	10/- per day	Discharged.
9 Dec.	Dowling, Daniel	Fuelman	7/6 per day	Resigned.
14 ,,	Wall, Benjamin	Carriage and waggon builder.	10/- per day	Deceased.
18 ,,	Green, William	Shed foreman	£270 per annum	Deceased.
		CHIEF TRAFFIC MANAGER'S BRANCH.		
30 Sept.	Griffiths, Catherine	Office cleaner	20/- per week	Discharged.
2 Oct.	Parrish, Mrs. Mary	Platform attendant	12/- per week	Resigned.
5 ,,	Higgins, Mary	Gatekeeper	7/- per week	Resigned.
10 ,,	Ferry, James	Porter	7/6 per day	Discharged.
11 ,,	McKinnon, Donald	Porter	7/6 per day	Discharged.
11 ,,	Walton, Ethel	Gatekeeper	Free house	Resigned.
12 ,,	Mills, Mrs. Ellen	Gatekeeper	7/- per week	Deceased.
13 ,,	Wilson, John	Porter	7/- per day	Discharged.
22 ,,	O'Brien, Mary Anne	Gatekeeper	7/- per week	Resigned.
27 ,,	Brownsmith, Elizabeth	Barrack attendant	7/- per week	Resigned.
29 ,,	Cahill, Mrs. Isabella	Gatekeeper	10/- per week	Discharged.
31 ,,	Willis, Mrs. Anne	Gatekeeper	25/- per week and house.	Resigned.
31 ,,	McNabb, John	Station-master	£300 per annum	Retired.
2 Nov.	Murphy, Andrew	Porter	7/6 per day	Discharged.
5 ,,	Gavenlock, Francis	Gatekeeper	30/- per week	Resigned.
7 ,,	Peterson, Mary	Gatekeeper	22/6 per week and house.	Resigned.
9 ,,	Jones, Victor	Night officer	£140 per annum	Retired.
14 ,,	Dwyer, Ellen	Gatekeeper	Free house	Resigned.
14 ,,	Coll, Peter	Porter	7/- per day	Deceased.
23 ,,	Knight, Alice	Gatekeeper	Free house	Resigned.
24 ,,	Hogan, Nellie	Gatekeeper	Free house	Resigned.
29 ,,	Doig, Ada	Gatekeeper	20/- per week and house.	Deceased.
29 ,,	McLean, Catherine	Gatekeeper	7/- per week	Resigned.
30 ,,	Moxham, George	Station-master	£270 per annum	Retired.
1 Dec.	Shea, Arthur	Junior porter	4/2 per day	Resigned.
2 ,,	Bullock, Annie	Gatekeeper	7/- per week	Written off books.
6 ,,	Lindsay, William	Junior messenger	3/4 per day	Resigned.
7 ,,	Davis, Henry	Junior porter	2/6 per day	Resigned.
15 ,,	Bruderlin, Louisa	Gatekeeper	2/6 per week and house.	Resigned.
20 ,,	Cutts, Susan	Gatekeeper	7/- per week	Resigned.
24 ,,	Croke, John	Junior porter	4/2 per day	Resigned.
28 ,,	Cunningham, Elizabeth	Gatekeeper	7/- per week	Deceased.
28 ,,	Hyslop, Robert	Junior porter	5/- per day	Deceased.
30 ,,	Smith, Minnie	Gatekeeper	7/- per week	Resigned.
		ELECTRICAL ENGINEER'S BRANCH.		
2 Dec.	Huntley, Guy E.	District inspector	56/- per week	Resigned.
		COMPTROLLER OF STORES BRANCH.		
11 Oct.	Hall, Frederick F.	Assistant Comptroller of Stores, and Secretary to Staff Committee.	£350 per annum	Transferred to the position of Comptroller-General of Stores under the Public Service Board.
		TRAMWAYS—LOCOMOTIVE BRANCH.		
20 Oct.	M'Leay, Edward D.	Cleaner	5/6 per day	Discharged.
		TRAMWAYS—TRAFFIC BRANCH.		
6 Oct.	Walker, William S.	Senior conductor	9/- per day	Resigned.
4 Nov.	Bendall, William	Junior conductor	6/- per day	Discharged.
8 ,,	Frew, Samuel	Conductor	6/6 per day	Discharged.
30 ,,	Eyles, Reuben	Senior conductor	9/- per day	Discharged.
7 Dec.	Lewis, William R.	Junior conductor	6/- per day	Discharged.
20 ,,	Northey, James T.	Junior conductor	6/- per day	Discharged.

Sydney: William Applegate Gullick, Government Printer.—1899.

[6*d*.]

1899.

LEGISLATIVE ASSEMBLY.

NEW SOUTH WALES.

EXTENSION OF THE RAILWAY SYSTEM FROM REDFERN TO THE CIRCULAR QUAY.

(REPORT OF THE ENGINEER-IN-CHIEF FOR THE VICTORIAN RAILWAYS.)

Printed under No. 5 Report from Printing Committee, 29 March, 1899.

SCHEDULE.

No. 1.

The Engineer-in-Chief, Victorian Railways, to The Premier of New South Wales.

Proposed Redfern and City Extension Railway.—Brief interim Report.

Board of Land and Works (Railway Construction Branch),
Engineer-in-Chief's Office, Melbourne, 19 December, 1898.

Sir,

In reply to your telegram of even date, I beg to report as follows :—

1. The most important business portion of the city of Sydney may be taken as extending from Redfern Station to Circular Quay, a length of about 1¾ mile by an average width of 47 chains to the waters of Darling Harbour, to serve which, when the metropolitan population grows to twice its present number, will require two railways—one on the eastern side and the other west of George-street.

2. Redfern Station is much over-taxed now, and cannot with any safety remain the terminus for the whole of the passenger traffic much longer.

3. The extension to the northern limits of the city is highly desirable in the interests of the city, the travelling public, and the railway corporation.

4. The probabilities for expansion of traffic at no distant period, with proper railway facilities, are, I consider, three to four fold the present limit; and this should be provided for in any design worthy of acceptance.

5. If cost did not govern, a line near to and west of George-street, bisecting the business portion of the city and curving round to Circular Quay, would, in my opinion, meet the requirements best; but the evidence points to such a line being enormously costly, and not likely to pay for many a year.

6. No line located east of College-street, on the eastern side of Hyde Park, would adequately meet requirements.

7. If the cost of land resumption, or reasons of State, prevented the whole of the passenger traffic—country and suburban—being provided for at a central station on a suitable site, Redfern Station might still remain the terminus for long-journey trains without serious disadvantage beyond a slight extra cost of working; and the suburban traffic only need be carried into and through the city.

8. No city railway will suit the requirements that does not provide stations at about half-mile intervals between Redfern and Circular Quay—say, three or four additional stations.

9. If the line be extended to Circular Quay, space should be found near that station for train storage room during slack time of day and night. The number of trains requiring storage for an expansion of three times the present traffic would be very large, needing some miles of sidings. The only alternative would be to send the trains all back to Redfern or their suburban termini, which would entail empty running and great expense.

10. Any terminus short of Circular Quay should be designed with a view to speedy extension to that point, and all designs should permit a connection with North Sydney and extension to the eastern suburbs, &c. The traffic between North Sydney and the city and suburbs on the city side of Port Jackson must expand to large proportions within a short time.

11. For any midway terminus—say at Hyde Park—storage room might still be found at Redfern, but not for any large expansion of traffic without remodelling that station.

12. The basement of the new markets near the Town Hall is entirely unsuited for a railway station, and it would be a piece of vandalism to appropriate it, even if it were well adapted for the purpose.

13. The area proposed for a central station on the Commissioners' Hyde Park scheme would be perhaps adequate for thirty or forty years growth of traffic; by restricting the design to suburban traffic only, the area might be reduced by (say) 30 per cent., but not more, I think. 14.

14. If a scheme of through running can be devised, and four lines of way are provided for, the width required at wayside stations would not be less than 132 feet, made up thus:—

Three platforms, each 30 feet wide	=	90 feet.
Space for rails, two, each 21 feet	=	42 „
Total		132 „

confined between vertical walls. Slopes, drainage, buildings, &c., might require a considerable addition to this.

Bearing on this question, the following comparison between the accommodation provided and proposed for Spencer-street and Flinders-street passenger stations, Melbourne, and that proposed in the Commissioners' scheme, Hyde Park, Sydney, may be of value:—

Platform stalls for trains—

	Melbourne.	Sydney.
Flinders-street...	14	
Spencer-street...	8	
Total	22	11
Length, 500 ft. for through running		700 ft. dead end.

Total length of platform facing—

	Melbourne.	Sydney.
Flinders-street	7,000 ft.	
Spencer-street	5,100 „	
Total	12,100 „	7,430 ft.

Acres of ground covered by platforms, buildings, and lines between platforms—

	Melbourne.	Sydney.
Flinders-street	$7\frac{1}{2}$ acres.	
Spencer-street...	$4\frac{1}{4}$ „	
Total	$11\frac{3}{4}$ „	$8\frac{1}{2}$ acres.

Although the number of trains now handled at Melbourne is three times the number in Sydney, it seems to me that, with good suburban facilities, Sydney must expand to an equal number with Melbourne.

I regret that time does not permit a fuller report. I shall be glad if you can give me a fortnight from now to prepare my complete statement, as I should like to peruse the bulk of the evidence taken by the various Commissions and study the topography of Sydney, which would enable me to put the matter in a much fuller and clearer light.

I have, &c.,
F. RENNICK.

No. 2.

The Engineer-in-Chief, Victorian Railways, to The Premier of New South Wales.

Proposed Redfern and City Extension Railways.

Board of Land and Works (Railway Construction Branch),
Engineer-in-Chief's Office, Melbourne, 5 January, 1899.

Sir,

I have the honor, in accordance with your request of the 5th ultimo, to submit my views on the question of Sydney city railways.

Why is a city railway necessary? Because the great bulk of the business of Sydney is done in the city between Redfern and Circular Quay, on an area of about $1\frac{3}{4}$ mile long by a width, between the city reserves and Darling Harbour, of about 47 chains, and on this area—now devoid of railway facilities—on account of its configuration and surroundings, the business must increase immensely as Sydney develops.

The number of people living in the suburbs and entering the city daily for business and pleasure is now very large, growing fast, and in course of time must become enormous; hence the necessity of providing quick, cheap, safe, and comfortable daily transit to and from this portion of the city is obvious.

It may be said, generally, that omnibuses are behind the age for street traffic in large cities; that surface tramways—horse, steam, cable, or electric—are only suitable for local and short traffic; and that railways—overhead, surface, or underground, on which an average speed, inclusive of stops, of 15 or 20 miles an hour can be given—are alone suitable for a large population living at some distance from their city businesses and requiring frequent transit to and from their homes in the suburbs. To the low-paid clerk, mechanic, shop-worker, factory-hand, and labourer, whom an efficient suburban railway system enables to live amongst healthy surroundings in the suburbs, instead of being cooped up in a city, it affords a priceless boon; and to persons of every class it means a large saving in time and money.

As to tunnel working, it is a choice of evils; but with a good system of ventilation, even steam traction may be rendered tolerable. However, the day of electric traction for all suburban traffic seems near at hand—even now it is a moot point whether it is not a cheaper system for large trains, as it undoubtedly is for small ones, than steam. But even at a slightly increased cost the extra cleanliness and comfort which it affords would justify its adoption for any extensive system of suburban traffic. The present suburban railways do not accommodate half of the suburban population; the other portion is perforce restricted to trams and omnibuses—a slow, costly, and uncomfortable service.

If Sydney were as well provided with suburban railways as Melbourne, the number of passengers, instead of being only about 18 millions might reach 45 millions per annum, and the trams would still be required for local or short distance traffic. The omnibuses would, of course, be almost entirely abandoned.

The

The following is a comparison of suburban railways and tramways within a radius of 10 miles of the two cities :—

	Melbourne.	Sydney.
Suburban Railways, double tracks	10 No., length 85 mls.	4 No., length 40 mls.
Average number of trains in and out per day	about 1,200.	about 330.
Suburban passengers per annum	39,000,000.	„ 18,000,000.
City and Suburban Tramways	about 48 mls.	40 mls.
Passengers per annum...	„ 38,000,000.	about 30,000,000.

So the future possibilities of growth in Sydney are large indeed.

Redfern Station is too remote from city businesses to meet present requirements. Measured in time it means more than a half-hour's walk or a quarter of an hour's tram ride to the northern end of the city; and in money, for those who ride, 4d. per day. By rail the time would be reduced to six or seven minutes and the money to 2d., or ½d., per day, depending on the class of traffic.

The capacity of Redfern as a railway terminus is now much overtaxed, and relief must be had either by extending and remodelling that station at once, or by extending the railway through the city and providing adequate wayside stations for suburban and city passengers. If one of these stations could be made the chief city station, with provision for long-distance as well as short-distance traffic, the railway ideal would be realised. The Commissioners scheme for a central station in Hyde Park, at St. James's Road, would meet this view most admirably.

From a city business point of view, the best position for the city railway would obviously be one dividing the business portion equally on the east and west, and, therefore, a line a little west of George-street would appear to fulfil this condition best; but the evidence taken by the two Royal Commissions and the Public Works Committee, which thoroughly investigated the question of "city railways," appears to show conclusively that a railway to fulfil all the requirements of present and future traffic along this route, would be enormously costly and not likely to pay for years.

On economic grounds, therefore, an eastern route must be selected, and that favoured by the Railway Department close to Elizabeth-street seems to meet the economic condition best. In this scheme it is proposed to extend 6 (six) lines into a central station in Hyde Park, and to deal with the whole of the passenger traffic at 11 platform stalls. It may be taken that the maximum capacity of these 6 lines, 3 "in" and 3 "out," would be 72 trains "in" or 72 trains "out" per hour—the platforms and shunting space being sufficient to dispose of the trains—or nearly three times the present maximum hourly traffic at holiday times at Redfern Station. With such accommodation, four times the present ordinary traffic could be safely dealt with. This means that the accommodation proposed would suffice for about 80 million suburban and long-distance passengers per annum. The Melbourne suburban railway passenger traffic is now 39,000,000, and has been as high as 43,000,000 per annum. Sydney, if adequately supplied with suburban railways, might have as large a suburban traffic as Melbourne; so that the provision deemed necessary by the Railway Commissioners for a central station in Hyde Park seems moderate in view of the probabilities of expansion in the near future. For such a traffic as this, the space for storage of trains and spare carriages would need to be four (4) times that now occupied at Redfern and Macdonaldtown—4 x 328 = 1,312 carriages, or 4 x 4,842 yards = 19,368 yards—equal to eleven (11) miles of sidings, which, with the necessary approaches and shunts, would cover an area of about 30 acres. The total area at Redfern Yard now, inclusive of both passenger and goods accommodation, is only 27 acres; and hence the almost absolute necessity of adding to this area for storage ground to meet the expected growth of traffic; and hence also the late Chief Commissioner's emphasised statement that to give additional ground to Redfern Station, under any circumstances, would be of immense advantage. Whether Redfern remain the terminus for long-distance traffic or not, this enlargement to meet the future growth of traffic seems absolutely necessary. The simplest and best way of meeting this necessity would be, it seems to me, to divert Devonshire-street to a position 9 or 10 chains north of and parallel to its present one, and appropriate a sufficient area of the Benevolent Asylum and Cemetery Grounds, as proposed by the late Chief Commissioner and other railway authorities.

As to the possibilities of growth of city and suburban traffic, it is a well-known fact that in New York the yearly number of passengers by tram and train is considerably over 200 per head of the population served; in Melbourne it is at least 180 per head; and in Sydney, with equal facilities, it would be as large, or, say, 40 millions by suburban railways and 40 millions by trams. The present suburban railway traffic is about 18 millions, and the present tram traffic, perhaps, 30 millions.

Supposing the first city railway be from Redfern to Circular Quay by the eastern route, and that all the accommodation proposed by the Commissioners be provided, then, on the growth of the city and business requiring further accommodation, a line along the western route, even at a very high figure, might be entertained. Sydney would then have magnificent railway facilities, sufficient for a metropolitan population of perhaps 1,000,000 people. New York may be instanced as a city whose chief business is concentrated, by force of natural surroundings, within circumscribed limits, the same as Sydney. Its width averages 2 miles, and although there are four leading elevated railways less than half a mile apart, and trams in nearly every "up and down" street, the traffic is so enormous that relief is now sought in every direction by the conversion of horse trams to cable and electric conduit, as well as by projected underground railways. In this connection the traffic of the New York elevated system is worth quoting as an instance of immense traffic on a city railway. This system is 36 miles long; capital, £15,000,000; number of locomotives, 334; number of carriages, 1,122 (equal to more than 200 trains); train mileage per annum, 9,827,000; passengers per annum, 185,000,000 (equal to ten times the suburban railway traffic of Sydney); earnings, £1,850,000; fare, 5 cents., up to 10 miles in some cases.

As the width of the chief business portion of Sydney is not one-third that of New York, the future traffic here for a large metropolitan population must become enormous.

Any comparison of present costs of schemes for city railways should be made on the basis of equal accommodation; thus, if it be deemed necessary to provide six lines from Redfern to, and a large terminal station at, Hyde Park on the eastern side, a competing scheme on the western side should also provide for six lines and a corresponding station; the same for any proposed extension to Circular Quay. Of course, any extension into the city should be designed to suit any projected line to the eastern suburbs and a connection eventually with North Sydney. North Sydney is growing so rapidly that an extension to

Circular

Circular Quay seems to be an immediate necessity, and as it is shown in evidence that the eastern line can be extended from St. James's Road to the Government House grounds, near Circular Quay, for less than £100,000, this seems the right thing to do at once. The traffic to and from the ferries and shipping, and between North Sydney and the existing railway suburbs, as well as the ordinary city business traffic which might be expected on this extension, would, it appears to me, justify its immediate construction. Any terminus at Circular Quay should provide land enough for several miles of sidings for shunting and storage of trains. For this purpose an area on the western side of Government House would appear to be well suited.

The whole cost of a large central station, providing not only full passenger accommodation but offices for the traffic and general administration staff, should not be charged to any city railway. Of the total estimated cost for the Hyde Park scheme—£650,000—nearly half would be a fair charge to the whole Railway property of New South Wales and the other portion only should be charged to the extension for suburban traffic; and the fact that the increase of revenue expected from the proposed extension is shown to pay handsomely on the total cost does not affect this aspect of the case.

What should be done?

The western scheme, on account of the excessive cost of providing four or six lines with adequate station accommodation and a terminal station at or near the "Rocks" is, it appears to me, out of the question under present conditions of traffic.

The project of resuming 24 acres of old Sydney at the "Rocks," cutting it down to a suitable level and making new roads, &c., at an estimated cost of £800,000, and then appropriating 10 or 12 acres for a central station and disposing of the balance of the land, cut up on modern lines into building allotments fronting broad streets, for (say) £400,000, is not one that should commend itself to Railway managers, intent only on giving the best available service to the people and still making the railways pay their way.

As a scheme for city improvement the remodelling of this place would be highly desirable if it could be achieved at some gain or without loss to the promoters; and this, no doubt, would be done were there "money in it" without linking it to a scheme of city railways.

If the eastern route be adopted, and everything seems to point to this as the most suitable under present conditions, then, when this railway becomes taxed to its utmost capacity, relief may be obtained by constructing the western line with several city stations for a suburban traffic only and connecting it by an overhead railway along Circular Quay with the eastern line at the Quay station. If it be deemed best to make the connection with North Sydney by bridge, instead of by tunnel, the western route would answer better for that purpose. With a rapid advance of Sydney business and traffic, the time may not be remote when this western line, and a connection with North Sydney, may become a necessity even at a very high cost.

What shall the eastern line be? Undoubtedly the Commissioners' scheme, with a central station for all passenger traffic at Hyde Park, and a continuation to Circular Quay, with adequate storage and shunting ground there, as well as at Redfern, is the best.

Next to that is their alternative dual scheme for a suburban station on the site at Market-street, between Castlereagh and Elizabeth Streets, with a terminus for long-distance trains only in the Park, and a continuation to Circular Quay as before described.

The next best thing to be done.

The next best thing to be done, failing either of these, would be to make Redfern the chief city station, taking in a large portion of the Benevolent Asylum reserve and old Cemetery, and diverting Devonshire-street to a position parallel to and 9 or 10 chains north of its present one. This would give the necessary increase in length and area to the Redfern Yard.

The railway should then be extended to Circular Quay for suburban traffic, and stations provided at Liverpool-street, at the High School, near St. James's Road, between Castlereagh and Elizabeth streets, making Circular Quay station in the Government House grounds, opposite Albert-street, the terminus. Here sufficient of the Government Reserves should be appropriated for shunting and storage room for future growth of traffic. This extension might be carried out without appropriating any of the surface of Hyde Park. Of course, nearly the whole of the long-distance trains under this scheme would be handled at Redfern, which would not be quite so convenient for the passengers as a more central station at St. James's Road.

The inconvenience, however, would be greatly minimised by the fact that these passengers could readily change from or to suburban trains at Redfern, which must always be a stopping place for all trains, and remain one of the most important of city stations. With the frequent suburban service required for a large increase of traffic, due to development and the construction of further suburban railways, long-distance passengers requiring to change trains at Redfern would be little delayed either on arrival or departure. Whether the chief station be at Redfern or at St. James's Road, the cost of working the traffic must be sensibly the same—perhaps a little in favour of Redfern—because trains when done running would be stored at the station they arrived at or departed from instead of incurring the cost of empty running between Redfern and St. James's Road if the latter were the terminus. The chief difference would be only the relative convenience to passengers.

These alternative schemes, with many others, have been inquired into and reported on by two Royal Commissions and the Public Works Committee, who have generally recommended the Hyde Park scheme in one form or another. I have only dealt with them in what appears to me their order of merit.

It would be presumption for me, with limited knowledge of the circumstances, surroundings, and requirements of the Sydney metropolitan district, to attempt to formulate a better scheme than any of those suggested from time to time by qualified officers of the State, who have given as many years to the consideration of the question as I have days; but I have made a close scrutiny of the physical and business features of Sydney, watched the railway, tram, and omnibus traffic to and from the Redfern Station during the busy hours of the day, read and studied the reports and a large amount of the evidence taken by the two Royal Commissions and the Committee of Public Works, listened attentively to and carefully perused information tendered by advocates of rival schemes, received pertinent information fully and freely tendered by the Railway Commissioners through their officers, and from the Engineer-in-Chief of Railway Construction, Mr. Deane; and with all due deference I submit my conclusions on the question of Sydney City Railways.

In

In my interim report I compared the areas for railway passenger accommodation in Melbourne and as proposed for Hyde Park, Sydney. Dealing with the whole of the areas in occupation and for extension for all kinds of railway business, the following comparison may be of interest:—

	Melbourne. (including Flinders-st., Spencer-st., and Newport.)	Sydney. (including Redfern, Eveleigh, and Darling Harbour).
Approximate area occupied for—	acres.	acres.
Passenger business, including running and shunting lines ...	60	20
Goods " " " ...	130	55
Carriage sidings, carriage sheds, and engine sheds	80	45
Workshops, including approach lines, sidings, &c, ...	80	35
Spare land available for extensions	310	45
Totals	660	200

I have, &c.,
F. RENNICK,
Engineer-in-Chief, Victorian Railways.

No. 3.

The Premier of New South Wales to The Engineer-in-Chief, Victorian Railways.

Dear Mr. Rennick, The Treasury, Sydney, N.S.W., 7 January, 1899.

I have just received your Report on the extension of the railway into the city, which I beg most heartily to thank you for, as a most valuable contribution on the vexed question.

The only point I wish to allude to is the fact that the scheme including the station in Hyde Park was, however admirable, not within the intentions of the present Premier, and that I wanted you to proceed on the basis of some other solution—even if not the best—of the question. On that point your Report—you will forgive me for saying so—is almost silent. For instance, take this part of a sentence: "As it is shown in evidence that the eastern line can be extended from St. James's Road to the Domain near Circular Quay for less than £100,000, this seems to be the right thing to do at once." In other words, you practically brush aside the actual position of affairs—that the Government will not deprive the people of the use of Hyde Park as a park, and as covered with a series of important city thoroughfares, and sacrifice the actual to that extent to the "ideal," with which, I can assure you, I am already most fully acquainted. The "railway ideal," when it comes into contact with a "health ideal," must, I think, take second place, if, at any rate, any other scheme is possible, and within reasonable bounds of expense.

"*What shall the eastern line be?*" Under that heading a few lines only as to the alternative scheme.

Now, having put the Government under many obligations by your kind visit, and the great trouble you have taken, would you object to give me a short addendum report, confined entirely to the "next alternative scheme," showing me your full opinion of it, on the basis that the Hyde Park official scheme is out of the question?

Yours, &c.,
G. H. REID.

No. 4.

The Engineer-in-Chief, Victorian Railways, to The Premier of New South Wales.

Board of Land and Works (Railway Construction Branch),
Dear Mr. Reid, Engineer-in-Chief's Office, Melbourne, 11 January, 1899.

In reply to your letter of 7th instant, I have to state that I regret to find my meaning has been made obscure by the omission of a few words in copying my report, page 15. I now forward herewith this page corrected for substitution, with the omitted words underlined in pencil.

The alternative eastern scheme—*which would not appropriate any portion of Hyde Park*—which I recommend is briefly this: Make Redfern the terminus for long-distance trains and extend the railway to Government grounds, near Circular Quay, for city and suburban traffic, providing stations at Liverpool-street, at the High School site, Market-street (between Castlereagh and Elizabeth Streets), and in the Government House grounds, Albert-street.

The plan which I enclose will show the general features. My scheme is for a covered-way through Hyde Park, open station at Market-street, tunnel and covered-way from King to Bridge Streets, open line thence to Fort Macquarie. Levels for lines and stations to be fixed definitely by Mr. Deane. Level of station opposite Albert-street would be about 30 feet above datum, or (say) 20 feet above Circular Quay. I understand that if the surface of Hyde Park be kept intact there is no objection to tunnelling or "cut and cover" work with the necessary ventilating shafts there, if the Park be deemed the best route for the line. The exact location of the railway, the extent and nature of the works, and of the accommodation to be provided at stations, should be left to the Constructing Authority and the Railway Commissioners. For an outsider like myself to properly indicate these, and also estimate the cost, would require a lengthened study as well as a survey of the project. I have no doubt whatever that the scheme thus indicated, which would not be a costly one, though inferior from a railway point of view to the Hyde Park scheme, with an extension to Circular Quay, would in practice be found an excellent one, and amply meet requirements for many years to come.

In quoting Mr. Deane, that the extension from "St. James's Road" to the Government House grounds, near Circular Quay, could be carried out for less than £100,000, it should not be inferred that this applied to the extension of the Hyde Park scheme only. Perhaps *St. James's Road* was an unfortunate expression, but I used it only to indicate the northern end of the line recommended by the Public Works Committee. Whether a station be placed in the Park or at the High School site, between Castlereagh and Elizabeth Streets, the extension thence to Circular Quay would cost practically the same.

I trust you will find this correction and explanation satisfactory.

Yours, &c.,
F. RENNICK,
Engineer-in-Chief, Victorian Railways.

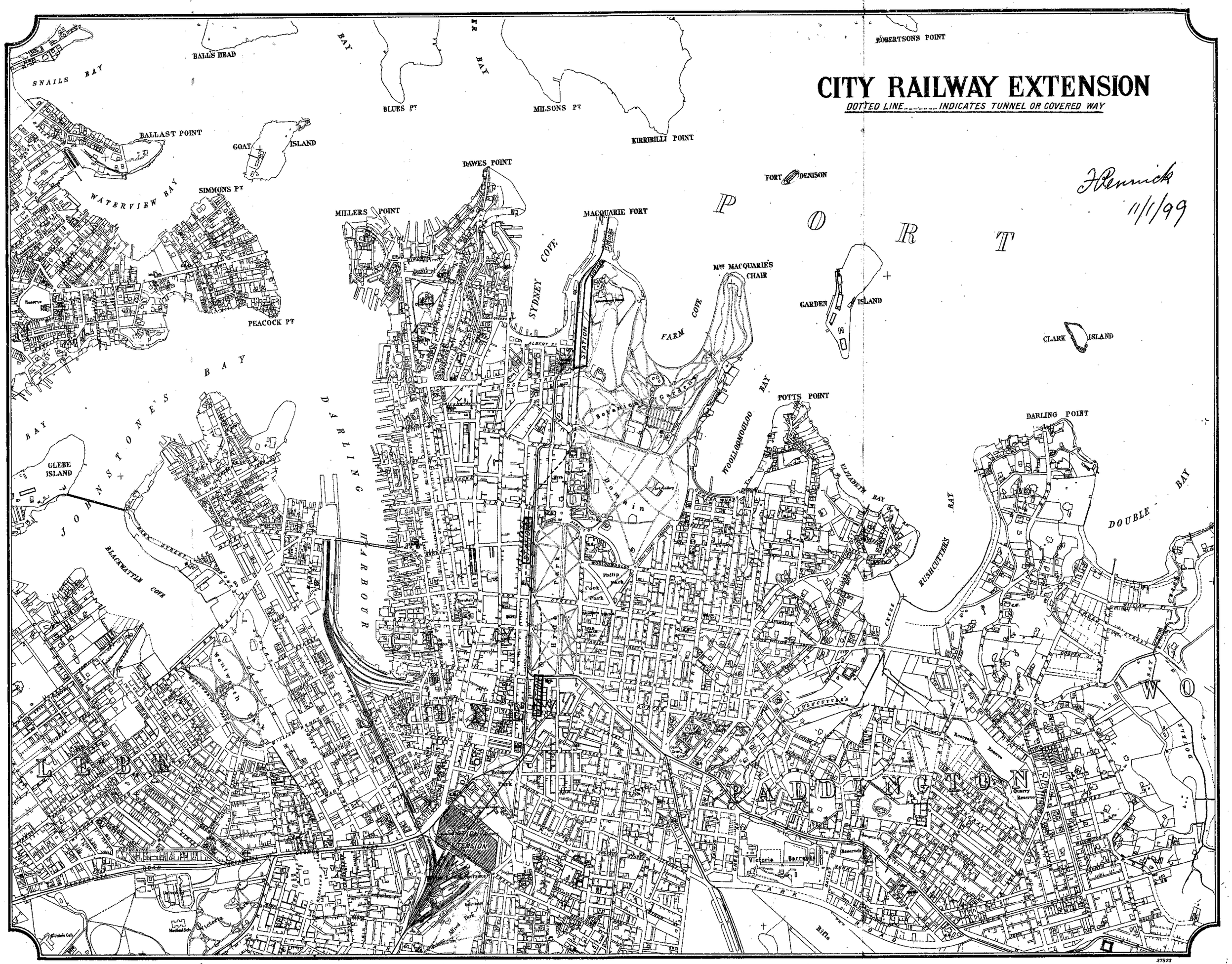
[Plan.]

Sydney: William Applegate Gullick, Government Printer.—1899.

[9*d*.]

CITY RAILWAY EXTENSION

DOTTED LINE_____INDICATES TUNNEL OR COVERED WAY



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LEGISLATIVE ASSEMBLY.

NEW SOUTH WALES.

PARLIAMENTARY STANDING COMMITTEE ON PUBLIC WORKS.

REPORT

TOGETHER WITH

MINUTES OF EVIDENCE, APPENDIX, AND PLAN,

RELATING TO THE

PROPOSED WATER SUPPLY WORKS

FOR THE

BOROUGH OF WOLLONGONG.

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

Printed under No. 2 Report from Printing Committee, 14 *March,* 1899.

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MEMBERS OF THE COMMITTEE.

LEGISLATIVE COUNCIL.

The Honorable WILLIAM JOSEPH TRICKETT, Vice-Chairman.
The Honorable PATRICK LINDESAY CRAWFORD SHEPHERD.
The Honorable ANDREW GARRAN, LL.D.

LEGISLATIVE ASSEMBLY.

JOHN PERRY, Esquire, Chairman.
WILLIAM THOMAS DICK, Esquire.
JOHN CHRISTIAN WATSON, Esquire.
ROBERT HENRY LEVIEN, Esquire.

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PLAN.

PARLIAMENTARY STANDING COMMITTEE ON PUBLIC WORKS.

WATER SUPPLY WORKS FOR THE BOROUGH OF WOLLONGONG.

REPORT.

THE PARLIAMENTARY STANDING COMMITTEE ON PUBLIC WORKS, appointed during the first Session of the present Parliament, under the Public Works Act of 1888, 51 Vic. No. 37, the Public Works Act Amendment Act of 1889, 52 Vic. No. 26, the Public Works (Committees' Remuneration) Act of 1889, 53 Vic. No. 11, and the Public Works Acts Further Amendment Act of 1897, 61 Vic. No. 6, to whom was referred the duty of considering and reporting upon "the expediency of constructing Water Supply Works for the Borough of Wollongong," have, after due inquiry, resolved that it is expedient the proposed works be carried out (such works to provide for extension to Port Kembla on the south and towards Bulli on the north), at a cost of £25,211; and, in accordance with the provision of sub-section IV, of clause 13, of the Public Works Act, report their resolution to the Legislative Assembly :—

A PREVIOUS PROPOSAL.

1. From an official statement made before the Committee by the Under Secretary for Public Works it will be seen that the question of a water supply for the town of Wollongong has been before the Department of Public Works for some years. It first took definite form in 1892, when a scheme was submitted by the Department for the supply of Wollongong and the localities north of it, at an estimated cost of £66,000, and afterwards inquired into by the Parliamentary Standing Committee on Public Works, who reported that the localities north of Wollongong did not desire a water supply, and recommended a modification of the scheme which would be sufficient for Wollongong alone, at a cost not to exceed £30,000. In this scheme, which had been designed with the view of supplying not Wollongong only, but also Bulli, Woonona, Bellambi, Corrimal, Para Meadow, and Balgownie, it was proposed to tap the Cataract River at its junction with Angel Creek, and then to supply the water by gravitation; a service reservoir for Wollongong to be constructed at Mount Ousley, and one to meet the wants of Bulli, and the other places named north of Wollongong, on the high ground at the back of Bulli. The junction of the Cataract River with Angel Creek, which is situated in a north-westerly direction from Wollongong, was contiguous to, and gave special facilities for, a supply to the northern villages, but was not the most economical source from which to draw a supply for Wollongong only; and the Borough Council of Wollongong—owing to a heavy fall of revenue—not feeling inclined to incur the liabilities attached to the scheme, a further investigation for a more suitable proposal was made by the Department of Public Works, with the result that a scheme with the Cordeaux River as the source of supply was decided upon.

DESCRIPTION

Description of the Present Scheme.

2. In the scheme before the Committee, it is proposed to supply Wollongong, or Wollongong and Port Kembla, with water from the head of the Cordeaux River at the point where the Mount Kembla Road crosses the stream. There a dam will create a storage reservoir, with a capacity of 65,500,000 gallons if the work be carried out to supply Wollongong only, and 168,000,000 gallons should provision be made to supply Port Kembla as well as Wollongong. From the storage reservoir the water will be conveyed by gravitation through the mountain range between the river and Wollongong by means of 6 or 8-inch pipes in a tunnel three-quarters of a mile long, and from the tunnel outlet the water will flow through 5¼ miles of 6 and 4-inch pipes to a service reservoir of 400,000 gallons capacity, situated on a conical hill 242 feet above Wollongong, and a little more than a mile out of the town, whence it will be distributed by 11½ miles of 6, 4, and 3-inch pipes. Suitable provision is made for carrying a pipe-line from the central station to Port Kembla when required. The dam, which, as designed, is of arched or curved form, the convex side facing the water, will be constructed of concrete, rising from the bed-rock to a height of 30 feet for the smaller scheme, and 40 feet for the larger, and for the smaller scheme will be from 9 to 3 feet in thickness, and for the larger from 12 to 3 feet. The method of construction adopted materially increases the strength of the dam. The pipes will be of cast-iron through the tunnel, and of welded steel along the pipe-line. The scheme can without difficulty be adapted to the requirements of Wollongong only, or to those of Wollongong, Port Kembla, and any intermediate village; and, if necessary, can be extended to supply the towns and villages north of Wollongong as far as Bulli or Thirroul.

Estimated Cost.

3. The estimated cost of the works required to supply Wollongong only is £21,219, and of those necessary to supply both Wollongong and Port Kembla, £24,711. The details are as follow :—

Wollongong.

Storage dam...	£2,368
Land clearing and fencing...	1,473
Tunnel and outlet works ...	5,307
6-inch and 4-inch supply main	2,980
Service main and reticulation	5,972
400,000 gallons service reservoir	1,189
Engineering and contingencies	1,930
Total	£21,219

Wollongong and Port Kembla.

Storage dam...	£4,380
Land clearing and fencing ...	1,473
Tunnel and outlet works ...	5,307
8-inch and 6-inch supply main	4,144
Service main and reticulation	5,972
400,000 gallons service reservoir	1,189
Engineering and contingencies	2,246
Total	£24,711, or with £500 for full-sized pipes to the Service Reservoir, £25,211.

Of the cost of the larger scheme, £16,871, it is represented in the official statement of the Under Secretary for Public Works, would be chargeable against Wollongong, and £7,840 against Port Kembla. The details of this charge against Wollongong in the extended scheme are :—

Storage dam (half cost)	£2,190
Land clearing and fencing ...	793
Tunnel and outlet works (half cost)	2,654
Supply main (half cost 8-inch and 6-inch, whole cost of 4-inch)	2,545
Service main and reticulation	5,972
400,000 gallons service reservoir	1,189
Engineering and contingencies	1,528
Total...	£16,871

The Committee's Inquiry.

4. In their inquiry respecting the proposed work, the Committee examined the Under Secretary of the Department of Public Works, the Engineer-in-Chief for Public Works, the engineer of the Public Works Department in charge of the survey and estimate connected with the scheme, the Engineer-in-Chief, Metropolitan Board of Water Supply and Sewerage, and the Government Astronomer; they afterwards visited Wollongong, where they inspected the sites of the proposed works, and took evidence from representatives of the Borough Council, and from others. Accompanied by the engineer in charge of the survey and estimate, they proceeded to the Cordeaux River, where the site selected for the dam, and the area of land which would be covered by the water in the storage reservoir when the dam has been constructed, were carefully examined, and inquiries made respecting the flow of water in the river. As far as possible the Committee inspected the catchment area, and they also visited the site of the tunnel, including the points of inlet and outlet, followed generally the route of the pipe-line, and examined the site of the service reservoir.

The principal points upon which the Committee have endeavoured to obtain evidence in order that they may arrive at a right conclusion upon the proposal are—

1. The necessity for a water supply.
2. The nature of the scheme, and whether it will provide an adequate water supply at a reasonable cost.
3. Whether the Borough Council of Wollongong, as representing the residents, is favourable to the scheme and able to pay for it.
4. The extent to which places contiguous to Wollongong are interested, and the desirableness of adopting the smaller, the larger, or a more extended scheme.
5. The condition of affairs with regard to country water-supply works already carried out.

Necessity for a Water Supply.

5. The water available to the residents of Wollongong, under present circumstances, is both inadequate and dangerous to the public health. Apart from rainwater caught from roofs, the only sources of supply are holes dug in the flats on the south-eastern side of the town, into which water drains slowly through a clay subsoil, to be afterwards distributed at considerable expense by carts. This supply is very limited, and, as the flats are the chief receptacle for the town sewage, very undesirable. In the opinion of the Government Medical Officer of the district, who attributes some of the epidemics from which the town and district have suffered to shortness of water, it is absolutely essential for the general health that an ample supply of good water should be provided. It is desirable also in the interests of the coal trade. Some of the collieries are very short of water, and are put to considerable expense in obtaining supplies for their locomotives, while one has for weeks past been obtaining water for a similar purpose from Sydney by steamer. On both sanitary and commercial grounds there is strong evidence that a scheme for a proper water supply for the town and district is indispensable.

The Source of Supply.

6. The capacity of the Cordeaux River for supplying the district with water is to all appearance unquestionable. All the witnesses agree upon this point. On the day of the Committee's visit of inspection they ascertained from a resident near the site selected for the dam that the river was never known to be so low as it then was. Mr. F. A. Franklin, a competent civil engineer not connected with the Department of Public Works, who accompanied the Committee on their visit, gauged the discharge of the stream (the water where the test was made being concentrated at one opening, so that both the velocity and the discharge could be ascertained), and found the velocity to be at the rate of 30 feet per minute, and the discharge equal to 259,200 gallons in twenty-four hours. The unusual lowness of the river at the time was due to the unprecedented drought the district has experienced for some time past; in ordinary seasons the stream is much larger. This may be understood from the fact that the rainfall in the neighbourhood of the

Cordeaux

Cordeaux is the largest recorded in the South Coast district. According to evidence given by the Government Astronomer, it amounts to an annual average of 60½ inches, and has been as much as 104 inches. Since 1871 it has not been below 31 inches. This heavy fall is ascribed to the abrupt rise of the hills in the vicinity of the river, and to the proximity of the range to the sea, conditions which are known to produce an exceptionally heavy rainfall.

The Catchment Area.

7. The catchment area, 3¾ miles in extent, appears small, but the rainfall is so heavy that, according to the evidence, in ordinary seasons every shower makes a fresh in the river. Equally satisfactory is the evidence with regard to the purity of the area. There are three farm-houses in the vicinity, but it is proposed to purchase all the privately-owned land up to a minimum distance of 12 feet above the maximum water-level. This is considered by the officials to be quite sufficient. To resume any larger quantity of land is not only regarded as unnecessary, but it would needlessly add to the cost of the scheme. Dairy-farming is the principal occupation carried on in the locality, together with some fruit-growing. A certain amount of cattle grazing on a catchment area is not injurious, and pollution from other sources can always be dealt with effectively.

Reticulation.

8. The cost of the scheme has been kept as low as possible consistent with due regard to effectiveness. In accordance with this, the reticulation proposed to be carried out in Wollongong is, for the present, confined to streets where the supply is likely to be remunerative. In some other cases, where water-supply schemes have been carried out, the reticulation has been made too general, with the result that lengths of pipes have lain comparatively idle for years. The practice now is not to lay any pipes which will not bring in an adequate return. In the present case the reticulated area can be enlarged by the inclusion of other streets, as may be found necessary; or, as pointed out by the Mayor of Wollongong, the streets not included in the reticulation can be supplied, if required, from standpipes, from which the residents can cart their water, and pay for what they receive. The streets comprising the reticulation area were decided upon by the Government officials in conjunction with officers of the Borough Council, and may therefore be accepted as those only to which for the present the scheme should be applied.

Revenue and Expenditure.

9. According to an official statement put before the Committee by the Under Secretary for Public Works, the estimated revenue expected to be obtained from the reticulated area is £1,025, made up of £900 5 per cent. rate, £75 from public buildings, and £50 for water supply by meter; but, in addition to this, a minimum sum of £150 would be obtained from the Railway Commissioners for water supplied to locomotives, and £100 from the consumption of water by shipping visiting Wollongong Harbour, making a total revenue of £1,275. From an amended statement to be found in the evidence of the Engineer-in-Chief for Public Works, however, it would appear that the estimate of revenue should be a more liberal one. He explains that £300 should be the estimate for meter rates, fees from stock, stables, gardens, public buildings, and shipping (though he believes it could easily be raised to £400), and this, with £150 as the minimum revenue from the Railway Department, and the £900 assessment, would make a total of £1,350. Then, he points out, if power were given to a Board administering the scheme to rate along the pipe-line (which, however, is not the present practice), there would be a revenue from that source of about £250, making an estimated total revenue of £1,600. Allowing £150 for a man and horse, £50 for a council clerk, a similar amount for repairs and renewals, and £50 for assessment, printing, &c., or in all £300, to which he adds the amount for payment of interest and repayment of capital cost—3·616 per cent. on £24,711, or £893—he makes the total expenditure connected with the scheme £1,193, an estimate

estimate which leaves a credit balance of £400. The proportion of the £893 representing interest on the cost of construction, it may be explained, would be paid into the Consolidated Revenue, and the remainder representing repayment of principal into the Treasury to the credit of the Loans Repayment Fund. With £500 for full-sized pipes to the Service Reservoir, which the Engineer-in-Chief for Public Works, in his evidence, recommends, the annual cost of the scheme would be slightly higher.

Position of the Borough Council in Relation to the Scheme.

10. The scheme has the approval of both the Borough Council of Wollongong and a majority of the ratepayers. When the Cordeaux River was suggested as the source of supply at a cost of about £21,000, the question was submitted first to a public meeting, and then to a plebiscite of the Municipality, with the result that the voting was largely in favour of the scheme. The Borough is quite prepared to pay interest on an expenditure of £22,000, but would prefer the cost to be kept down to £20,000. The water-rate would bring the total municipal rating up to 2s. 5d. in the £. This, it is represented, the residents are able and willing to pay, a statement which is supported by the fact that the Municipality is able not only to meet its engagements, but to pay off an old Bank overdraft at the rate of £200 per year.

Adaptability of the Scheme for Extension.

11. The adaptability of the scheme to the requirements of localities north of Wollongong is a prominent feature in the proposal. No increase in the capacity of the storage reservoir would be required for this extra consumption of water; the only additional expense would be that connected with the increased size and extension of the pipe-mains, some reticulation, and the construction of a service tank or reservoir at Bulli. From information obtained at the instance of the Committee, it appears that the total cost of supplying water to all the districts between Wollongong and Thirroul, a small town a mile north of Bulli and of almost equal importance, would be £13,881. Whether the revenue that would be collected in the form of a water-rate and special charges for water supplied would be sufficient to cover this extra expenditure is a question for further consideration. A rough estimate of revenue was placed before the Committee by the Engineer-in-Chief for Public Works, showing that the expected revenue would probably pay 3¼ per cent. on the new expenditure.

The Interest of Outside Places in the Scheme.

12. Previous to their visit to Wollongong the Committee communicated with representative people in all the localities which the proposal of 1892 was intended to serve. In most cases no reply was received. However, four witnesses identified with the district outside Wollongong appeared before the Committee at Wollongong, amongst whom were the Chairman of the Progress Association at Corrimal, and the Mayor of North Illawarra. The former, in accordance with a resolution passed at a public meeting, advocated the extension of the scheme to Corrimal but could give no particulars with regard to probable revenue, and the latter gave evidence generally in favour of the Borough he represented participating in the benefits from the scheme, while representatives of several Companies informed the Committee that they would, to a certain extent, be purchasers of the water. Respecting the population centres outside Wollongong, it is very probable, as may be seen from the evidence, that when the works have been carried out, and the advantages of an ample supply of good water are seen, there will be a general desire to participate in the scheme.

Method of controlling the Scheme.

13. The method by which the scheme, after the construction of the works, should be controlled, is a matter which in the course of the inquiry has come before the Committee; and it appears to them that the best course to take will be to put the administration of the scheme, at least in the first instance, under the Metropolitan Board of Water Supply and Sewerage. They have the machinery—the officers and the experience—to administer the scheme economically and effectively, and the catchment area includes a portion of the country from which water is obtained

obtained for the supply of Sydney. Doubtless, the Wollongong Borough Council could control the more limited scheme advantageously; but, when other Municipalities or localities outside that Borough come into the scheme, it can only be under a special Act that the Wollongong Council will be able to rate outside properties, and it may be more acceptable to other places if the administration be by an independent authority. At present the cost of maintaining a local representative Board would be altogether disproportionate to the probable revenue. The question of differential rates may possibly arise, as the evidence is to the effect that the compact population of the town of Wollongong will be supplied more cheaply per head than the more scattered and distant populations residing on the north and the south, but by keeping separate accounts it can be clearly seen to what extent each Municipality or district is affected, and in this way all injustice averted.

Works Constructed under the Country Towns Water Supply and Sewerage Act.

14. Inquiry made by the Committee shows that the water supply works already carried out for country Municipalities, though not at first in a satisfactory state as regards repayment of the cost incurred in their construction, are now in a much improved financial condition. In some cases the cost of the works was so high, and the ability to pay so limited, that it was found necessary to write off a large proportion of the debts; but now, the Committee are informed, with the exception of one or two towns which, as the evidence indicates, cannot pay, there is no material difficulty experienced in collecting the annual revenue necessary to repay the debts as recently gazetted, together with the interest thereon. The proposed works will be constructed, and no doubt administered, in the light of the experience gained in the past from the construction of between thirty and forty other country works, and it is unlikely that in the present instance any serious mistake as to cost will be made.

Conclusion arrived at by the Committee.

15. After careful inquiry, the Committee have come to the conclusion that the larger of the two schemes under consideration should be carried out. This will supply Wollongong, and, when required, Port Kembla on the south, and the towns and villages as far as Bulli and Thirroul on the north. It will also be, in the end, the cheaper scheme, as to provide at present only for Wollongong will unduly increase expenditure in the future. For instance, if the dam were at first constructed to meet the requirements of Wollongong only without making it of a certain width at the base it could not afterwards be increased in height. The height of a dam depends upon the width of its base; and, as it is undoubted that Port Kembla and the northern townships will eventually come under the scheme, it is essential that the storage reservoir should be constructed accordingly. Though anxious to keep down the cost as far as possible until places outside Wollongong are prepared to take the water, the Committee find that, instead of there being an advantage in limiting the works for the present to those necessary for Wollongong only, the expense attending such a course will eventually be considerably higher and the results not so satisfactory. They, therefore, have concluded that it is advisable to carry out the larger scheme at once. This will be no disadvantage to Wollongong, while it will be beneficial to the scheme generally. If the scheme be administered as proposed, Wollongong will contribute at most the 1s. water-rate whatever the total cost may be. Until Port Kembla and other localities become consumers—and they must become so within a short period—the difference between the revenue derived from Wollongong and that necessary to be obtained should undoubtedly be paid by the Government.

In the evidence of one of the witnesses examined, it will be seen that some doubts were expressed with regard to the Cordeaux River being the best source of supply for Wollongong and the adjoining districts, and as to the purity of the water. A tributary of Brandy and Water Creek, which flows into American Creek, about a quarter of a mile behind the Mount Kembla coal-mine, was mentioned as a much better means of supply, and the catchment area in connection with the Cordeaux scheme was described as consisting largely of basalt which, when the storage reservoir is

is low, will impregnate the water with magnesia. To this the Engineer-in-Chief for Public Works replies that after having had a thorough examination of the whole country made he is perfectly satisfied that the source of supply proposed is the best that can be obtained, and as for the presence of basalt on the catchment area he explains that the country is sandstone with, perhaps, a basaltic dyke here and there, but not to an extent in any way likely to affect the purity of the water. Similar conditions are found over the whole of the catchment area of the Sydney Water Supply.

The Committee are of opinion that the scheme is a good one, well designed, and likely to prove satisfactory, both in the effectiveness of the water supply and returning sufficient revenue, and on the motion of Mr. Trickett, seconded by Mr. Watson, they have unanimously passed the following resolution :—

> "That, in the opinion of the Committee, it is expedient the proposed Water Supply Works for the Borough of Wollongong, as referred to the Committee by the Legislative Assembly, be carried out (such works to provide for extension to Port Kembla on the south, and towards Bulli on the north), at a cost of £25,211."

JOHN PERRY,
Chairman.

Office of the Parliamentary Standing Committee on Public Works,
Sydney, 2 March, 1899.

PARLIAMENTARY STANDING COMMITTEE ON PUBLIC WORKS.

MINUTES OF EVIDENCE.

WATER SUPPLY WORKS FOR THE BOROUGH OF WOLLONGONG.

WEDNESDAY, 25 *JANUARY*, 1899.

Present:—

JOHN PERRY, Esq. (Chairman).

The Hon. Patrick Lindesay Crawford Shepherd.
The Hon. Andrew Garran, LL.D.
The Hon. William Joseph Trickett.
William Thomas Dick, Esq.
John Christian Watson, Esq.
Robert Henry Levien, Esq.

The Committee proceeded to consider the expediency of constructing Water Supply Works for the Borough of Wollongong.

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

1. *Chairman.*] You have prepared a statement in reference to the proposed scheme for the water supply of Wollongong? Yes; I will read it. R. R. P. Hickson. 25 Jan., 1899.

Wollongong Water Supply.

The question of a water supply for the town of Wollongong has been before the Department of Public Works for some years, but first took definite form in 1892, when a scheme was submitted by the Department for the supply of Wollongong and the villages north of it at an estimated cost of £66,000. This and other schemes were inquired into by the Parliamentary Standing Committee on Public Works, who reported that the villages north of Wollongong did not desire a water supply, and recommended a modification of the scheme sufficient for Wollongong alone, at an estimated cost of £30,000. The original scheme, which had been propounded with the view of supplying, not Wollongong alone, but also the villages north of it, proposed to tap the Cataract River at its junction with Angel Creek. This point, which lay in a north-westerly direction from Wollongong, was contiguous to and gave special facilities for a supply to the northern villages, but was not the most economical point to draw a supply from for Wollongong alone. This being recognised by the Department, and owing to the heavy fall in revenue, the Wollongong Council, not feeling inclined to undertake the liabilities of this scheme, a further investigation was made for a more economical one. This has been obtained with the Cordeaux River as the proposed source of supply. It is proposed to tap this river and create a storage by means of a concrete dam, at a point almost due west of Wollongong at the crossing of the Mount Kembla road, the catchment area draining in above the storage dam being about 3¾ square miles, and a portion of the Sydney water supply catchment area. The dividing range lying between the Cordeaux River and Wollongong will be pierced by a tunnel three-quarters of a mile long, through which the supply will be conveyed by a cast-iron pipe, and thence to the service reservoir, a distance of about 5¼ miles, by a welded steel pipe. The service reservoir of 400,000 gallons capacity will be situated on a conical hill on the outskirts of the town, whence the supply will be distributed by about 11½ miles of 6-inch, 4-inch, and 3-inch pipes.

Two estimates have been prepared, one for the supply of the town of Wollongong alone, and one in which the storage reservoir and supply main have been made of sufficient capacity to allow of the scheme being extended to include, at a future date, Port Kembla and any intermediate village. In the scheme for the supply of Wollongong alone the quantity of water proposed to be stored will be 65½ million gallons; a 6-inch diameter cast-iron pipe will be taken through the tunnel, and a 4-inch welded steel pipe to the service reservoir, the estimated cost being as follows:—

Storage dam	£2,368
Land-clearing and fencing	1,473
Tunnel and outlet works	5,307
6-inch and 4-inch supply main	2,980
Service main and reticulation	5,972
400,000 gallons service reservoir	1,189
Engineering and contingencies	1,930
Total	£21,219

In the scheme for the inclusion of Port Kembla, a storage of 168,000,000 gallons will be provided, an 8-inch diameter cast-iron pipe will be taken through the tunnel and a 6-inch diameter welded steel pipe to the bifurcation to Port Kembla, the estimated cost being as follows:—

Storage dam	£4,380
Land-clearing and fencing	1,473
Tunnel and outlet works	5,307
8-inch and 6-inch supply main	4,144
Service main and reticulation	5,972
400,000 gallons service reservoir	1,189
Engineering and contingencies	2,246
Total	£24,711

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Of this amount the following would be chargeable against Wollongong :—

Storage dam (half cost)	£2,190
Land-clearing and fencing	793
Tunnel and outlet works (half cost)	2,654
Supply main (half cost 8-inch and 6-inch, whole cost of 4-inch)	2,545
Service main and reticulation	5,972
400,000 gallons service reservoir	1,189
Engineering and contingencies	1,528
Total	£16,871
Chargeable against Port Kembla	7,840
Total	£24,711

The rate-books of the Council have been carefully gone into, and for only such streets as can pay interest on the cost of the pipes laid has reticulation been provided.

The estimated revenue available from the reticulated area is as follows :—

5 per cent. rate	£900
Public buildings	75
By meter	50
	£1,025

Allowing £200 per annum for working expenses, interest at the rate of 3½ per cent., and repayment of principal extending over 100 years, or annual payments at the rate of 3·6160 per cent., the revenue available from rates will be sufficient for a scheme costing up to £23,000; but, in addition to this, it is believed that the Railway Commissioners will take water to the extent of £150 per annum, and the probable revenue from the wharfs is estimated at £100 per annum. This additional £250 per annum would allow of an additional expenditure of £7,000. It will be seen that, in any case, so far as Wollongong is concerned, the financial state of the scheme is sound.

By resolution of Parliament, December 22nd, 1898, this matter was referred to the Parliamentary Standing Committee for inquiry and report.

2. Has this scheme been submitted to the people of Wollongong? Not officially; but the Member for the district has received information in regard to it, and has gone into the matter. I believe that, as a matter of fact, the people of Wollongong agree with the scheme.
3. Has the Borough Council been communicated with in reference to the proposal? A letter was sent to the Member for the district in connection with it; but I do not think there has been any resolution of the Borough Council up to the present time.
4. A scheme was before the Public Works Committee in 1892;—are any reasons given for the delay in re-submitting the scheme recommended by that Committee? I could not tell you what the history of the matter was. You will be able to obtain that from other sources.
5. *Dr. Garran.*] The catchment area is a small area by itself; you are damming up the outlet? Yes.
6. What sort of a foundation have you for the dam? It is a good rock foundation.
7. Sandstone rock? Yes. You will be able to get the details from the engineer, Mr. Wade.
8. Do you propose to build a solid concrete dam? Yes.
9. If you increased the storage near Mount Kembla, you would have to do so by raising the height of the dam? We shall have to raise it and to thicken it.
10. There would be no other way of increasing the storage? No.
11. Could you do that afterwards? Not very well. We could not do it as economically as in the first instance.
12. At present, I suppose, the people at Port Kembla could not pay their share? No.
13. If we went to extra cost now, it would not be fair to charge Wollongong with it; it would have to be borne by the Government? Yes, at present.
14. In the proportionate charges, as between Wollongong and Port Kembla, you have not merely charged Port Kembla with its own branch work, but also with its share of the other work? It is questionable what its fair share should be. We have charged one-half, but I do not think it is fair to charge a small community like that with one-half the cost of these works. I think the charge should be in proportion to population.
15. Or consumption? Either consumption or population.
16. In connection with Port Kembla, there will be a good deal of shipping? In time, no doubt, there will be.
17. The population might be small, whereas the demand for shipping purposes might be large? That is a matter for re-adjustment.
18. That is the reason I ask you whether the scheme could be added to hereafter? Not economically.
19. We must decide at once? I think so.
20. The tunnel will be all in rock? Yes.
21. You do not propose to carry the water in the tunnel itself with a concrete bottom, but merely to construct a tunnel big enough to carry the pipes? Yes.
22. You take the water direct from the reservoir? Yes.
23. What is the life of the pipes you are going to put down in connection with the service reservoir? The life of a cast-iron pipe is about sixty years.
24. Supposing you had wrought-iron pipes? We have not sufficient information before us to enable us to say what the life of a steel pipe is, but my impression is that it would be about the same.
25. Then you ought to have provision for renewing the pipes in sixty years? Yes.
26. Is there any provision in the financial arrangements for the renewal of the pipes? No.
27. Then, there will require to be a fresh debt? That applies to all the waterworks which have been carried out.
28. Have you not, in any case, provided for the replacement of the pipes? The Council is supposed to put a sum by every year for the renewal of the pipes at a certain time; whether they do so or not I cannot say.
29. Do not the Water and Sewerage Board make any provision whatever for the renewal of pipes? I could not tell you, at this moment, whether they do or do not.
30. Is there anything in the soil through which these pipes must be carried which would cause corrosion or disintegration? I do not think so.

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31. You know that there is that element in the case of some soils in this country;—there may be a good deal of salt or magnesia, for example? We have had one case of the kind; but it is a moot question whether the failure of the pipes was due to salt in the soil.
32. In this case will the pipes be laid mostly in sand or on the rich soil on the slopes of the mountains? They will be laid mostly in sand.
33. You are aware that upon the slopes there is a good deal of volcanic detritus? Yes.
34. Would that have an injurious effect upon the pipes? No.
35. You think the pipes would last fully sixty years? Yes.
36. The service reservoir appears to be large enough for present wants, but could you increase it if more water were wanted than is required at the present time? It could be increased at considerable expense, but I do not think any increase would be necessary; it is a large reservoir.
37. Could you make a second reservoir in the neighbourhood equally handy? Yes, or we could increase the size of the proposed reservoir.
38. I am speaking of the service reservoir? That could be easily increased, but it is ample, I think, for requirements.
39. As to the street reticulation,—you know that in many country towns as soon as the plans have been approved there has been a demand for more streets to be supplied? Yes.
40. That has added largely to the cost of the works? Yes.
41. And then the complaint is made that the Department has under-estimated the cost? Yes.
42. Have you come to any understanding with the local people as to what streets shall be supplied? We have estimated for the streets which, in our own opinion, it is necessary to supply.
43. But the local people may have another opinion? If they require more work to be done an extra charge will be made. We have made our calculations upon the quantity of pipes we propose to lay down. If, on the other hand, more streets are to be reticulated there will be a larger revenue.
44. But there will also be a larger expenditure? There will be a larger revenue to meet it.
45. The more you reticulate in outlying streets the greater the expense in proportion to the revenue? Yes.
46. So that every extra pipe you have to lay means that you have a more expensive business to conduct? Yes.
47. I want to know whether, if we sanctioned this scheme, the local people understand that as much reticulation is provided for as is wanted at present? They will be able to give you that information themselves.
48. You know there has been a great deal of trouble between the Government and some of the country towns as to the loans? Yes.
49. Do you not think it would be expedient before we sanctioned this scheme that there should be a thorough understanding on the part of the local people as to what it is to cost? Yes.
50. And as to what the burden upon them is to be? Most undoubtedly.
51. You think they understand that at the present time thoroughly? Yes.
52. Has the work been described in the local newspapers? I do not know.
53. Has the question been discussed in the Municipal Council? I do not know. The scheme has been fully described to the local Member, and I understand that he has communicated with the council. No doubt what you say is correct—that is to say, that before the work is undertaken there should be a definite understanding.
54. I remember a previous instance where there was to be an understanding with the local Member, who had really no financial responsibilities? Quite so.
55. These works must not be proceeded with, you think, in any case until there has been some official acceptance of the scheme? There are certain forms to be gone through. For instance, there must be a resolution by the council agreeing to the scheme and to the debt.
56. Does the Department itself take special pains to explain things to the council, or does it leave them to find matters out for themselves? We send them plans, and they express their opinion upon them.
57. So far as the quality of the water is concerned, it would be from the same source as the Sydney water supply;—it could not very well be better than that? No.
58. So far as the distance is concerned, I suppose the reservoir is at the nearest point at which you could obtain water for Wollongong? Yes.
59. You are not taking a roundabout journey—the pipes are in a pretty straight line? Yes.
60. So that, upon all engineering grounds, it is a good and desirable scheme? Yes.
61. As to your estimate of cost, you know that people complain that there is a great deal of difference between the estimated cost of some of these works and the actual cost? Yes.
62. Are you clear that these works can be carried out for the estimated amount? It is Mr. Darley's estimate, and I would rather you questioned him upon that point. I believe the sum provided is ample.
63. It is all simple, straightforward work? Yes.
64. You have had experience in concrete dams, especially in connection with the Sydney water supply? Yes, and in a good many country towns.
65. You have also had experience in tunnelling through sandstone rock? Yes.
66. Have you used steel pipes anywhere in connection with water supply? At Parkes, at Tamworth, and at Forbes, I think.
67. Have there not recently been complaints at Tamworth of leakage? Yes; in that case they are riveted pipes. In these works it is proposed to use welded pipes.
68. Have you had any experience in the use of welded pipes? We have had none; but experience in England is favourable to their use.
69. This will be your first experience in the use of welded pipes? For water supply.
70. Do you think the defects at Tamworth are due to riveting? Partly to that and partly to the way in which the pipes have been used. I gather from what Mr. Wade has reported that the sluice-valves have been closed too quickly, and what he calls a "ram" has been set up. The pipes have consequently had a great strain upon them. It is a matter of opinion whether the defect is due to that or to riveting.
71. Will the pressure in the case of water coming down from the proposed elevation be severe upon the pipes? The pipes, I believe, are amply strong to bear the force and weight of water in them.
72. What is the difference in height between the main reservoir and the service reservoir? I could not say from memory, but Mr. Wade will be able to give you that information.
73. The pressure upon the pipes has been carefully estimated? Yes.

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74. There is no fear upon that score? Not the least.
75. Is there a graduated descent, or are there sudden descents and then levels? It is up and down. There are no very sudden descents.
76. There are some rises? Yes; the pipe-line is not on even ground.
77. *Chairman.*] How is it proposed to administer the supply? That will be done by the council as in the case of all other country towns.
78. They will collect all the rates, and will be responsible to the Government? They are responsible for a certain amount per annum.
79. Have you not had similar arrangements with other councils in the past? All country towns are treated in the same way.
80. Have the financial arrangements between the council and the Government been satisfactory? Some of the earlier ones were not at all satisfactory. We did not make the same conditions as we have made in the case of the later schemes. We have not now the same trouble.
81. They pay now? They pay; but in some cases they have to be asked to pay.
82. I see no allowance made for any land that might be required;—is the land that is to be taken outside of Wollongong all Crown land? I would rather you asked Mr. Wade that question. I have not been over the ground myself. Mr. Wade will give you every detail.
83. It was proposed in the former instance to provide a supply for Wollongong, Bulli, Woonona, Bellambi, Corrimal, Para Meadow, and Balgownie, with a storage capacity of 60,000,000 gallons;—it is proposed now to provide a supply to Wollongong alone with a storage capacity of 65,500,000,—what is the reason of that? I think Mr. Wade will explain to you that you can get a larger area for water in the Cordeaux scheme than you can in the case of the Cataract scheme. That would probably account for the difference.
84. You say that you have provided reticulation only for such streets as will pay 5 per cent. upon the outlay;—can you give us the relative proportion between those streets and the other streets in the borough? That information can be obtained.
85. Is any provision whatever made to meet cases of accident or emergency? There is a good balance between the revenue and working expenses.
86. And that balance would be increased if, as you suggest, the Railway Department paid £150 per annum and the wharfs £100 per annum;—you think that would provide an ample fund to meet emergencies? Yes. In addition to that we have put down the amount of £200 per annum for working expenses; a portion of that is for repairs. I suppose one-half of it would go in that way.
87. There are such things as pipes leaking and bursting;—all that sort of thing has to be attended to? I believe the amount put down is ample to meet such cases.
88. Do you know what the population of the borough is? I could not say from memory.
89. Do you know the value of its ratable property? No.
90. Can you supply us with a list of the other towns in the Colony supplied under the Act? Yes.
91. Can you tell the Committee whether the supplies which have been provided in these places have given satisfaction? As a rule, they have done so. Some of the councils think they have been charged too much and want to get the amount reduced.
92. *Mr. Dick.*] Some of them have had the amount reduced? Yes; I will give you a statement on that subject.
93. *Chairman.*] Have any refused to pay the amounts due, giving as a reason the fact that the scheme did not meet their requirements? They have tried to do so in one or two cases, but the Crown Solicitor has written a letter which has very soon put that right.
94. Have you reason to suppose that the Wollongong people think that the scheme is a suitable one, or are you merely expressing the Departmental opinion? I express my own opinion, and I think you will find the Wollongong people are of the same opinion. However, they can speak for themselves.
95. *Mr. Watson.*] Does not a catchment area of 3¾ square miles seem very small for anything like a large supply? There is a heavy rainfall on the area. Of course, out in the west it would be too small, but in this case I think the area will be sufficient. I will let you know what the rainfall is.
96. Is it the largest catchment that could be obtained there, or could it be increased with a small expenditure upon drains or something of that sort if needed? You cannot increase the catchment once the dam is put in. The only way to increase it would be to take the dam further down the river, taking in a further area.
97. *Chairman.*] The water is from the same source as is the Sydney water supply? Yes.
98. Have you consulted the Water and Sewerage Board with reference to the use of portion of their catchment area? I do not think it is necessary. This little pocket out of the enormous catchment area of the Sydney supply is of no account.
99. You are decreasing the water available for the supply of Sydney by the quantity taken for Wollongong? I do not think there will be any trouble on that score.

FRIDAY, 27 *JANUARY*, 1899.

Present:—

JOHN PERRY, Esq. (Chairman).

The Hon. Patrick Lindesay Crawford Shepherd. | William Thomas Dick, Esq.
The Hon. William Joseph Trickett. | John Christian Watson, Esq.
Robert Henry Levien, Esq.

The Committee further considered the expediency of constructing Water Supply Works for the Borough of Wollongong.

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

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100. *Chairman.*] This scheme for Water Supply Works for Wollongong is an altogether different scheme from that which was before the Public Works Committee in 1892? Quite a different scheme.
101. Will you explain to the Committee the details of the scheme? The proposal is to construct a reservoir

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reservoir on the Cordeaux River, at the point a little south of west from Wollongong, and to lead the water in an 8-inch pipe, laid in a tunnel excavated through the main range, thence down to a reservoir at a height of 242 feet above Wollongong, and a little over a mile out of the town by 6 and 4-inch welded steel mains; thence into Wollongong in an 8-inch main. The reason for taking the water by 6 and 4-inch mains from the mouth of the tunnel is that it is desired to bring the 6-inch pipes down to a point at which it will be convenient to take another pipe hereafter towards Port Kembla. No doubt, in the near future, it will be necessary to do that, and it is proposed to make the provision at once by making a pipe large enough to the junction for that supply. I might add here that this scheme does not take into account the supply of districts lying north of Wollongong, I refer to Para Meadow, Corrimal, Bellambi, Bulli, and other places. Some years ago, when the matter was referred to the Public Works Committee, pressure was brought to bear upon the Department to take Bulli and other places into consideration, and a scheme was put forward for a reservoir lying between Wollongong and Bulli. It was decided to bring the water from the Cataract River; but, although considerable pressure was brought to bear upon the Department to provide for the wants of Bulli, when the scheme came before the people there and they saw what they would have to pay, they repudiated it and said they did not want it at all. Therefore the scheme has been cut down to the supply of Wollongong only, with provision for the eventual supply of Port Kembla. No doubt Port Kembla will require a supply; Parliament has already passed the Port Kembla harbour scheme, and that will mean that a large population will one day be centred there. The proposed scheme, therefore, will specially suit Wollongong and Port Kembla; but, at the same time, it will also be suitable and available for the supply of Bulli hereafter, although not quite so completely as that district could have been supplied under the old scheme. At the same time it will not cost very much more to take the water to Bulli by this new scheme.

102. *Mr. Levien.*] Where did you start from under the old scheme? At the head of the Cataract River, which takes its rise behind Mount Keira at the back of the range. The water was brought from Korimul or Broker's Nose, near where the Cataract River takes its rise. The two rivers eventually meet just where the Sydney water supply is taken off.

103. *Chairman.*] You say that when the people to the north of Wollongong found what they had to pay for the scheme they objected to it;—do you know whether the Department has since been in communication with them on the subject? Not that I am aware of.

104. Mr. Hickson stated the other day that it was intended only to supply certain streets of Wollongong with water, and that other streets were left out of the calculation altogether;—has the Borough Council of Wollongong been consulted upon that feature of the case? I think so. A number of the streets in cases of this kind are merely on paper. There are no persons residing in them, and we cannot lay reticulation mains except in cases were there is sufficient population to pay the cost. The proposed reticulation area is usually sent to the Council, and they are asked to mark the position of any houses. It does not do to reticulate all the streets shown upon a plan. That was done in the case of some towns, and we had long lengths of pipes lying idle for years. The practice now is not to lay pipes anywhere which will not bring in an immediate return for the supply of water. It would not pay to lay a long length of main to supply one house; we are guided entirely by the populous centres, and as houses are erected afterwards the reticulation is extended.

105. The Department has been in consultation with the Borough of Wollongong in regard to the proposal? Not lately, I think.

106. I mean as to the supply of certain streets only? That matter, I believe, was settled with the Council.

107. I do not see from Mr. Hickson's statement that any provision was made for wear and tear? The estimate in that statement includes only the cost of the scheme up to its completion. Wear and tear would have to be provided for out of maintenance.

108. In the estimated revenue, have you allowed anything for it? The amount charged to Wollongong, if the scheme is carried out with a branch to Port Kembla, will be about £16,000, whereas the rates and sale of water taken on a low basis will be sufficient to pay for £23,000. There is, therefore, a considerable margin for maintenance. For example, only £50 is put down for the sale of water by meter, and the revenue from that source ought to be much larger than that. Everything is estimated upon a very low scale.

109. I noticed recently a statement in the newspapers to the effect that some of the pipes in these water supply schemes, notably at Tamworth, have proved defective. Do you think you have allowed a sufficient margin to meet a contingency of that sort? Ample. We propose to use a different class of pipes from that in use at Tamworth. We shall use welded pipes at Wollongong, whereas riveted pipes were used at Tamworth. The pipes at Tamworth are really not defective, but they are a class of pipes that require careful handling, and I can quite see if they are not in the hands of experts or of careful men they would not be the best sort of pipe to use. If they were in the hands, for instance, of the Metropolitan Board, it would be an entirely different matter. The Metropolitan Board have miles of the same class of pipe in Sydney under just as heavy pressure, and they have proved satisfactory. The pipes at Tamworth have been badly treated. No doubt they will be all right in the future when more care is used. The pipes have been rammed. For some reason or other the caretaker shut down the water at the head of the pipes, and the main was allowed to empty. The water was then suddenly turned on again, and the pipes were, therefore, subjected to a strain. Had they been cast-iron pipes some of them might have burst; but in the case of wrought-iron there is simply a strain in a case of that kind, with a consequent leak. There was no leak in the main until the water was cut off and turned on in the way I described.

110. The leakage was due to a sudden extreme pressure? Quite so; a pressure to which the pipes should not be subjected. Printed directions were issued to the Council as to the care necessary in filling the mains, but I am given to understand that they were allowed to fill too quickly. They were possibly allowed to fill in hours, whereas they ought to have filled in days.

111. Has it been the experience of the Department that welded steel pipes will stand a pressure of that sort much better than will riveted pipes? Yes. There will not be not so many joints; it is the riveted joints which are strained and which set up the leak.

112. What is the cost of one in comparison with the other? There is not a very great difference. The welded pipes are a little more costly.

113. But their life perhaps is greater than that of the other pipes;—therefore the cost will be less in the long run? They will not be so liable to injury from ramming.

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114. Therefore, the cost of maintenance will be less? Yes.
115. What other schemes has been considered by the Department in connection with this water supply, besides the two you have mentioned? A scheme was considered some years ago, put forward by Mr. MacCabe: his scheme was to put a dam on the Cordeaux River, some 3 miles lower down than we propose to put it, and to lead the water by pipes round the western side of the range to the back of Mount Kiera where the coal-workings are. It was then proposed to take the pipes down to an air-shaft at the back of Mount Kiera, and out through the coal-workings down to Wollongong. I went down to look at the site proposed, and I did not like it; it was not at all satisfactory.
116. That scheme gave a very much larger catchment area? Yes.
117. As to the question of catchment area, do you consider a catchment area of 3¾ miles sufficient for a supply of water to Wollongong, and if necessary, Port Kembla; also, for the supply of towns to the north? I do, with the storage we can obtain there. It is so near the coast range that every shower of rain will set the creeks running. In fact they seldom stop running. Whenever there is a shower there there is a good fresh in the Cordeaux, and when there is no rain elsewhere they often get it there.
118. Have you gauged the volume of water running past the point at which you propose to put the dam? Not lately.
119. We have had six months now of very dry weather; have any of your officers taken the volume of water at this point since November last? No.
120. I believe 55 inches is the average rainfall there? About that.
121. Supposing we had three dry seasons similar to the last, do you think that catchment area would prove sufficient? The catchment area is sufficient with the storage we have. Very little rain will fill the storage. At that point we can get a storage of 172,000,000 gallons, of which 168,000,000 gallons will be actually available.
122. How many days' supply would that be? For the whole district, it would be about two years' supply.
123. *Mr. Watson.*] The reservoir proposed in this scheme, according to Mr. Hickson, is to store only 55,500,000 gallons? The proposed reservoir will store 172,000,000 gallons.
124. *Chairman.*] Has a careful examination of the catchment area been made with reference to the risk of pollution from farms? Yes; I have been over the area. There were three farm houses on the catchment, but it is proposed to buy all the land up to the maximum water level.
125. Is the cost of purchasing the land included in the item, land-clearing and fencing? Yes.
126. *Mr. Trickett.*] Does the resumption include the whole of the catchment area? No; it includes 59 acres; it includes a certain width outside the edge of the water only. It would average about a chain, I suppose.
127. What is the occupancy of all the land beyond within the catchment area? There is a little tillage, but it is chiefly dairy farming.
128. Are there sufficient cattle grazing there to affect the purity of the water? I do not think so.
129. Has that been carefully considered? Yes; we never object to a certain amount of cattle grazing. There is grazing all round the Prospect Reservoir, although portion of it has been discontinued lately. But in the old country and elsewhere, so long as there is nothing foul put into the water, grazing is not objected to.
130. It is not of such a character that offensive matter could accumulate in large quantities and be washed into the reservoir? Nothing could be done which would cause pollution of the water. That could always be stopped under the Act. The Board take a certain water area, and they can stop anyone from polluting the water. This catchment area is already part of the Sydney water supply catchment area, and is under the inspection of the Metropolitan Board. They have inspectors going round there, and they will not allow any pollution.
131. If a large dairying industry were proposed to be started in the locality, it could be stopped if it were likely to pollute the water? There is ample power to stop pollution under the Country Towns Water Supply Act, but the Metropolitan Board also take very prompt measures to stop pollution when their attention is called to it.
132. Is there any fear of the Sydney water supply suffering by reason of this quantity of water being taken off? No; it would not be seriously affected.
133. There would still be ample water left for the supply of Sydney and suburbs? Ample.
134. Have the Metropolitan Board been consulted upon this point? I am not aware of it.
135. Of course they would have to give their consent before this scheme could be carried out? I think that if an Act of Parliament were passed it would not be really necessary to consult the Board; the matter could be provided for in the Act.
136. But it would be only courteous, before diverting any of the Sydney supply, to consult the Metropolitan Board? I rather think I made a recommendation, some time ago, in connection with the former scheme, that the Board should be consulted, and I believe they were consulted. That, however, could be easily discovered. The old scheme provided for a catchment area from the Board's territory, and I think I made a recommendation that they should be communicated with. That would be seven years ago.
137. At that time the Board offered no objection? No. Of course, I make that statement subject to correction. I was a member of the Board at the time, and I am under the impression that the Board was written to on the subject, and I am nearly sure they signified that they had no objection.
138. *Chairman.*] You were at one time President of the Board? I was President for four years.
139. Therefore you could tell the Committee whether there is in the Act any power to prevent water being taken to supply Wollongong without the Board's consent? I do not think there is any such power.
140. Suppose the point were raised that you could not take the water? A certain area is gazetted as a catchment area for the purpose of preventing pollution and is put under the care of the Board; but the taking of the water is a very nice point. There is nothing in the Act by which the Board are actually given all the water that falls upon the area.
141. *Mr. Trickett.*] But you recognise that it would be desirable to communicate with the Board? Yes; if only a matter of courtesy that should be done.
142. Is it proposed that this water-supply should be managed by the Municipal Council of Wollongong or by a separate board? I am glad that I have been asked that question. When I was speaking about the Metropolitan Board just now, I thought it a fitting time to introduce this point. There is some complication

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complication in this case. Wollongong is a small municipality, and the catchment area of the proposed scheme is, as I have already explained, under the control of the Metropolitan Board. A certain length of pipe-line, together with a large population which has to be supplied from that pipe-line, is in the Municipality of Central Illawarra, and if the water is to be supplied anywhere north of the immediate Borough of Wollongong you get into the Borough of North Illawarra. You are therefore dealing with three boroughs and also the Metropolitan Water Board. I should like to suggest, for consideration, that the whole matter should be left to the Metropolitan Board. They have the necessary machinery for management, and it would require only a little alteration in the Act. It would be only in accordance with the amending Act which was before Parliament some time ago.

143. *Mr. Watson.*] Do you mean as to construction? No; I mean control. The Board have the machinery at the present time, and they are already working a scheme down at Richmond. A scheme was carried out for Richmond and placed under the control of the Board, and I believe it is giving the Richmond people entire satisfaction. The municipality being outside the County of Cumberland the Board have limited powers. Only those persons for example can take the water who wish to do so; they cannot be made to pay for it whether they take it or whether they do not. The Board also control the water supply for Liverpool and Campbelltown, and in those cases the Corporation have no trouble whatever. The Board have the necessary machinery, and can rapidly extend reticulation from time to time as may be necessary. It is always a difficult matter with these small municipalities. There is no one there to supervise the work, and they do not understand it. Wherever possible I think these supplies should be put under the control of the Board. In this case the catchment area is under the control of the Board, and the supply will be in two municipalities, if not in three. The only way out of the difficulty, as far as I can see, is to either make an independent Board or to put the matter under the control of the Metropolitan Board, and I would suggest that it be put under the Metropolitan Board.

144. *Chairman.*] That would be preferable to starting a new Board? Yes; I think it would be very undesirable to start a new Board. The same difficulty cropped up at Newcastle in connection with the supply of the outlying districts. In that case the supply was taken through a great many municipalities, and it was impossible to have one municipality controlling another. Therefore, they had to form an independent Board; but in this case, where the Metropolitan Board are so closely in contact with the supply, I think they should be allowed to manage it. If we were providing water-works for one municipality only the matter would be in a different position.

145. *Mr. Trickett.*] At the present moment Wollongong is the only place which you are absolutely certain will take the water, but you may possibly have to supply Port Kembla;—have the people of Port Kembla also been consulted? There is no township at Port Kembla to consult. It is a matter for the Government to consider. They will certainly want water there for shipping; there is no doubt about that. If the harbour is carried out, it will be a central shipping depôt for the whole district, and I have no hesitation in saying that it will become a considerable centre of population. It is quite likely that to a large extent Wollongong may move down in that direction. I certainly think it is desirable to make provision now in connection with this scheme for a supply of water to Port Kembla.

146. As regards Port Kembla, you have at the present time no means of communication with the people there as a whole, because the place is not incorporated? Quite so.

147. If this water system were put under the Metropolitan Board, would it increase the cost of administration to any degree to the people supplied? No.

148. It would not be any more expensive for the Metropolitan Board to manage the supply than if it were managed by the local authorities? No; the Board would manage it more economically, in my opinion. They have all the necessary machinery.

149. If repairs were needed they could be carried out more cheaply by the Board? Yes.

150. Because they have every facility for effecting repairs? Yes; and they have the necessary engineering skill to look after the work.

151. But special legislation would be required to extend the control of the Board? That could be easily provided for.

152. That could be really done in the measure necessary for these works? Yes.

153. In the case of the Country Towns Water Supply Act what is the limit within which water rates are chargeable? If a pipe passes a persons premises within a distance of 50 yards he has to take the water or, in any case, pay for it.

154. That would apply to this supply? Yes.

155. Is that a reasonable distance, do you think? I think so.

156. With regard to the towns at present supplied has that provision led to any amount of friction or resistance on the part of residents? Not within the metropolitan area. In some country districts there has been a little difficulty, and an amending Act has been proposed to remedy it. The difficulty which has arisen is of this kind: Suppose a resident has a 20-acre paddock, and a Corporation has a pipe laid along a street fronting that paddock. If the whole paddock is not within the 150 feet it cannot be rated. The local authority has no means of subdividing a paddock for rating purposes, and to say that a certain portion shall be rated while another portion shall not be rated. The whole paddock must come within the distance. It is intended to amend the law in that respect. In two or three cases the municipalities have been unable to collect rates because portion of a property has lain outside the limit, but it is not a very serious point; there is not a very large sum involved.

157. Could you tell us whether the water schemes at present in existence are in a satisfactory state as regards the keeping up of contributions? On the whole there are very few defaulters. I have not seen the return lately; but when I last saw it there were very few defaulters.

158. Are they all upon the hundred years' basis of repayment? Athough the amending Act has not yet been passed, the Minister is working upon that basis. He has anticipated the passing of the amending Act.

159. The country water supplies as a whole are found to be satisfactory, and the municipalities are keeping up their payments? Yes. I think I am right in saying that there are only very few in arrear.

160. One part of your pipe-line in this case passes through a tunnel? Yes.

161. What size will it be? 5 feet 6 by 3 feet; we have made it a convenient size for the men to work in.

162. It is proposed to lay the pipe through the tunnel? Yes.

163. Will the pipe be always full of water? Yes.

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164. Therefore, the strain or pressure upon the pipe will be equal all the year round? Yes; there will be a very small strain upon the pipe there because it is on the very top.
165. Will there be any heavy grades? Not in the tunnel; we could not have a heavy grade in the tunnel. The heavy grade commences after you pass out of the tunnel; then you go down the hill very rapidly.
166. What is your experience in regard to water-pipes;—where does the heaviest strain come upon them—on the level or when you come to the bottom of a steep incline, or where? On the level. Wherever the pipes are on the level there is trouble, because the air will accumulate. That is the case at Tamworth. There is always trouble of that kind upon the horizontal portions of a pipe-line. All water contains air, and under pressure it gives it off. The air is rushing backwards and forwards upon the level and cannot get away, and that causes shocks. I had the authority of the Minister to put in some air-vessels at Tamworth; it is a thing we do not often have to do, but it is necessary in this case to allow the air to escape. We have air-valves in at the present time, but they are not enough.
167. You have provided for a scheme to include Port Kembla;—will the service reservoir in that case be the same size as the service reservoir for the supply at Wollongong? I have not gone into the Port Kembla scheme yet. We are providing this scheme only for the taking of the water down to a certain point, from which it could be taken to Port Kembla. We shall have to construct a reservoir of about the same size as that at Wollongong close to Port Kembla; that has not yet been gone into.
168. How many days' supply will the service reservoir of 400,000 gallons at Wollongong contain? About four and a half, with the present population.
169. That is allowing about 90,000 gallons a day? Thirty gallons a head per diem.
170. Is that upon the same basis as the Sydney supply? It is what is found necessary for domestic use in country towns. In Sydney the quantity allowed is larger, because so much water is used for street-watering and for manufacturing purposes. That necessity does not exist in the case of country towns. The consumption in the large factories and by the Railway Department in Sydney is very large indeed. It runs up the average consumption to over 40 gallons per head. In the case of country towns 30 gallons is generally found to be enough.
171. But beyond the domestic consumption at Wollongong, the shipping and the railway will require to be taken into consideration? We have make ample provision. If you took Sydney upon the same basis there would not be more than a few hours' supply stored before we had the Centennial Park Reservoir. In Wollongong you have four and a half days' supply stored. The object of a service reservoir near the town is to bring the supply close and to make it immediately available.
172. Having regard to reasonable economy, four and a half days' supply is a liberal allowance? It is ample.
173. Do you think the size of the pipes you have provided is enough in view of the possibility of contamination or corrosion? They are amply large.
174. Has the land compensation question been gone into by the Government Valuator? Not by the Government Valuator yet.
175. But a rough estimate has been made? Yes.
176. Would the scheme before the Committee admit of water being obtained by the people of Bulli if they required it at any time? I might mention that the distance from the proposed service reservoir at Wollongong would be only 2 miles further than from the reservoir originally proposed in connection with the supply to Bulli. The reservoir in that case was situated a little to the north of Mount Kiera. The supply of Bulli would merely mean the construction of 2 additional miles of pipe-line. The new reservoir is a little higher, so that it could serve Bulli equally with the old reservoir.
177. The people of Bulli could be supplied without any great additional expense? Yes.
178. With regard to the scheme generally, has it been considered in relation to probable extension to other small centres in the district? It has.
179. You think it is the most convenient scheme in that way? I do.
180. And although various other schemes have been from time to time considered by the Government, you think the scheme before us is the best one available? I do, under the altered circumstances.
181. *Mr. Watson.*] You anticipate a large increase of population at Port Kembla when the harbour is constructed? I do.
182. You say that it will probably shift the centre of population to some extent as far as Wollongong is concerned? Yes.
183. Do you think it will have any effect as far as the revenue-producing possibilities of the district are concerned? Yes; although the revenue from Wollongong may to some extent be decreased.
184. You think that will be made up by the increase of population at Port Kembla;—therefore, the possibility of a shifting population would be an additional argument in favour of the control of a supply by some such body as the Water and Sewerage Board? I think so; to admit of the collection of revenue from all sources.
185. A body of that kind governing a larger area than that governed by any borough would be able to provide for such a contingency in regard to shifting population as that you have named? Yes.
186. Do you think it reasonable to anticipate a large increase of population in that direction? There is practically no population at Port Kembla now.
187. But you think that upon that part of the coast there is likely to be a large increase within a few years? Yes; when the harbour is constructed a large amount of shipping will be centred there.
188. You think there will be an increase of population within the sphere of influence of the proposed harbour? It is my firm belief that there will be a large centre there before many years are over.
189. Then any scheme you may adopt in this instance should be designed to serve, if necessary, a large population? Yes.
190. Having that possible increase of population in view, do you think the catchment area in connection with the proposed scheme would be sufficient? I think it will be quite sufficient.
191. A catchment area of 3¾ miles seems a very small one from which to obtain water for some thousands more than live in the district at the present time? That is on account of the large rainfall, and it is also a good collecting country.
192. Are there steep slopes? The slopes are pretty steep. The water will all come forward to the reservoir. A storage of 158,000,000 gallons available will carry the district over any dry period.
193. Do you think it is probable that there would be any similar quantity of coal shipped from the proposed port to that now shipped from Newcastle? I do not think so.

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194. Nor will there be so large a population? No.
195. You have mentioned the abandonment of the scheme in consequence of the people of Wollongong being afraid that they could not bear the cost;—was there any other reason for its abandonment? One reason is that at that time there was no talk of Port Kembla. Since then Parliament has passed an Act authorising the construction of a harbour at Port Kembla, and it seems very desirable, therefore, to provide a water supply for the place. I should mention that the Smelting Company of Australia, who have large works to the north of Lake Illawarra, brought some pressure to bear upon the Government at one time to carry out the scheme to which you refer to supply them with water; but finding there was some delay in the matter they have carried out a temporary scheme of their own. Whether they will become customers of the local supply or not I cannot say. They have constructed a reservoir on the creek, a little to the north and west of Dapto, and they are pumping water from it to their own works at the present time. We cannot count, therefore, on supplying that company, although we may have to supply them with water for drinking purposes.
196. Viewing Port Kembla in conjunction with the possibility of supplying the boroughs to the north of Wollongong, Port Kembla would be in no worse position under the original scheme than Bulli would be by the adoption of the later one—in each case it would mean about 2 miles extra of pipe-line? In the proposed scheme it is intended to supply only Wollongong from the reservoir at a certain pressure. We can supply Port Kembla from a branch off where there would be a very high pressure. Six-inch pipes would carry water from the proposed scheme to Port Kembla, whereas from the old scheme you would probably have had to lay 10-inch pipes to supply both Wollongong and Port Kembla.
197. The pressure would be less? Yes, taking it from the reservoir.
198. The new reservoir is higher than the old one? Yes; but we do not propose to supply Port Kembla from the service reservoir as might be necessary if we carried out the old scheme. We propose to take the supply for Port Kembla from our pipe-line at a point where we have a big pressure—the pressure of the main storage reservoir.
199. Under the other scheme you would have had for Port Kembla only the service reservoir pressure? Yes.
200. What is the height of the service reservoir in connection with this scheme? It is 242 feet above high-water level.
201. There is an impression abroad among some persons that the estimate of cost of the original scheme was excessive;—do you know if there is any justification for it; do you think the cost would be materially reduced now? It might be reduced a little, but not much. Some items would be cheaper; others would be dearer. Pipes, for example, are dearer now than they were then; but then on the other hand we are doing concrete work cheaper. The one thing would about balance the other.
202. The original scheme had a much larger catchment area? But it had a very much smaller storage.
203. The possibilities of storage for a small expenditure were less? Yes; we could not for a reasonable expenditure have increased the 55,000,000 storage in the old case. In this case we have three times the storage capacity.
204. In your items of expenditure £200 is allowed for working expenses; I suppose that includes maintenance;—do you think it is sufficient? That will be for the turncock and the collection of revenue.
205. You think the cost of collection, and the services of a turncock and other possible expenditure, will be covered by that amount;—what about the up-keep, for example? The up-keep would have to be taken out of the margin. It is hard to estimate what the expenditure in that direction would be; it might be little one year and more the next. But in a gravitation scheme, as a rule, maintenance is a very small item.
206. But it is proper to have such an item in your estimates? Yes, although it is very small.
207. Do you anticipate that the cost of collection will be less in this case than in the case of Newcastle? Very much less. Newcastle is a large district to collect over.
208. But do you think the percentage would be less or more in this instance? In the case of Newcastle you have to allow for the salaries of the Board. There is a separate Board in that case. You would not have that cost to contend with in the case of this scheme. There is a great deal of extra expense in Newcastle for a comparatively small district. The Newcastle scheme is also a pumping scheme of a very costly nature.
209. When a Select Committee was inquiring into the administration of the Hunter River District Water Supply and Sewerage Board, the following figures were given to the Committee:—General administration, £1,116; cost of collecting revenue, £3,297; working expenses, £3,700;—what I wanted to get at was an estimate of the cost of collection—that is to say, the percentage. In the case of Newcastle, the percentage was about 12½ per cent.; in this scheme is it likely to amount to £120 per annum;—I am referring now to the cost of collection alone; I should imagine that with a larger business the percentage would be lower? I do not know how the amounts are made up. Wollongong only is chargeable, and in a small town like that there is little more than the cost of a turncock.
210. Does it not seem to you that the £200 per annum is a small sum to allow for the cost of collection and working expenses? I do not think so. One turncock could look after the whole scheme.
211. What would you pay him? About £100 a year.

TUESDAY, 31 *JANUARY*, 1899.

Present:—

JOHN PERRY, Esq. (CHAIRMAN).

The Hon. PATRICK LINDESAY CRAWFORD SHEPHERD.
The Hon. ANDREW GARRAN, LL.D.
The Hon. WILLIAM JOSEPH TRICKETT.
WILLIAM THOMAS DICK, Esq.
JOHN CHRISTIAN WATSON, Esq.
ROBERT HENRY LEVIEN, Esq.

The Committee further considered the expediency of constructing Water Supply Works for the Borough of Wollongong.

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

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212. *Chairman.*] You were asked at the last meeting of the Committee to supply certain information? Yes. I have a printed document, laid before Parliament, which I think contains practically all the information for which I was asked. The return was laid upon the Table of the House, and ordered to be printed on the 13th May, 1897, at the instance of Mr. Millen. He asked for a statement of the cost of works, debts as gazetted, and annual repayment instalments in connection with the country towns water supply; also, for a statement of loans made to municipalities, debts as gazetted, and annual repayment instalments; also, a statement of the annual repayment instalments due to the 31st December, 1896, and balances owing by municipal councils on 26th April, 1897; also, a statement of expenditure to the 31st December, 1896, on works completed, but not yet gazetted, and on works in progress. Added to this return are the towns whose supplies have since been completed and gazetted, and it practically contains all the information asked for. It shows in regard to each supply the Departmental estimates of the cost of works; the actual cost of works included in the estimate; the cost of additional works asked for by the municipal councils; interest at 3½ per cent. per annum accrued from date of commencement of work up to the date of gazetting the debt; the total amount of the cost of works and interest; repayments made by municipal council in reduction of cost prior to the date of gazetting the debts; the remission on amount of debt granted by Governor-in-Council; the debt as gazetted; the period of repayment and the annual repayment of instalments. The return shows the payments made by the municipal councils up to the 26th April, 1897, and the balance owing at that date; also the annual repayment of instalments due to the 31st December, 1896. Another portion of the return shows the loans advanced on account of water supply works constructed by the municipal councils, the debts as gazetted, and the annual repayment of instalments. I have not been able to bring the return up to date in regard to the amounts owing. Those are particulars which would have to be obtained from the Treasury books, because the payments do not come through my Department; but the return may be taken as a correct guide up to the 26th April, 1897. At that time there were only three defaulting towns. Bourke has since paid up. It has been always a little in arrear, but finally pays up. The other towns are Balranald and Wentworth, and I doubt if ever they will pay up fully. The population has largely left the towns.

213. Repayment has been made easier by extending the period to 100 years? Yes.

214. Since that arrangement has been made the councils occupy a more satisfactory position as regards repayments? It would appear so. The matter has not come under my notice, but according to this return there were only three towns in arrear. There may be other towns in arrear at this moment, but they will probably pay up in time.

215. The return to which you refer has been made up since the alteration in the method of repayment? Yes.

216. Were you not asked to supply some further information? I think not. This is the only information for which I was asked in the way of a statement.

217. *Mr. Dick.*] With regard to estimates is it not, in some cases, a fact that the Departmental estimate has been greatly exceeded in the actual cost of water supply works? Each case requires to be dealt with separately. The information would have to be afforded in regard to each case; but generally the Departmental estimate has not been exceeded.

218. Was not that the case at Bathurst? The Department made no estimate in the case of Bathurst. That estimate was made by Mr. Clarke, an English gentleman who came out here.

219. He also made an estimate in regard to the Newcastle supply? Yes; but of course Newcastle grew by leaps and bounds after the work was done. There are several townships now which did not exist at that time. In the case of Albury, Goulburn, Bathurst, Deniliquin, and Manly, the Department made no estimate; but in the case of many other towns the work would have been carried out for less than the estimate; but for the council asking for a large amount of work which was not originally included—for instance, extra reservoirs and extra miles of reticulation.

220. Even making that allowance, were not the Departmental estimates exceeded? Only in a few cases, and then only by a nominal amount.

221. In cases where the excess was fairly large, the estimates were not made by your Department? No; the Department was not responsible for them.

222. Your estimate in the case of this particular scheme is £21,000? Yes, for Wollongong only.

223. Allowing interest at 3 per cent., the burden upon the people of this country to be recouped by the people of Wollongong would be £735? It works out at 3·616 per cent.

224. Would the £200 you have allowed for working expenses include such items as repair of leakages, and so forth? It should, certainly; but I may mention that I have gone into the matter more fully since I was last here, and I have made out a fresh estimate after looking more closely into the matter. The estimate of probable revenue has been very much understated. I find that the probable revenue would be much larger than we have taken credit for.

225. Has any charge been entered against the annual cost for the work of collecting rates? That will be included in the £200.

226. That amount then would include wages and the cost of repairs and the collecting of rates? That is the amount which is put down, but I have not gone into the details. Since I have been here I have gone into the question of revenue more fully however, and I have to amend the former estimate in some particulars.

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particulars. For instance, for the 5 per cent. assessment, I wish to put down £900, not taking into account £75 for public buildings. I have put down £300 for meter rates; fees for stock, stables, gardens, and public buildings, and shipping, and £150 as probable revenue from the railway, making a total of £1,350. I believe that the £300 which I have given could very well be raised to £400. The Municipal Council, however, would not have power to rate outside the borough, although they could sell water by agreement to any person; but if the power to rate along the pipe-line were given to a Board, there would be a revenue from that source of about £250; making a total probable revenue of £1,600. On the expenditure side of the account I have reckoned 3·616 per cent. on £24,711 or a total of £893. I have allowed for a man and horse, £150; for a council clerk (say) £50; for repairs and renewals, £50; for assessment printing, &c., £50; making a total of £300, or a total expenditure of £1,193, leaving an amount of £400 to the good.

227. I conclude that the estimate put before us some time ago was not your estimate;—there is a great difference between the two estimates? It would be an estimate of one of my officers.

228. Upon which of these estimates are the Committee to rely? I have submitted to the Committee a more liberal statement. I think the sum of £200 to which you have referred is sufficient for the purposes indicated.

229. Will it include legal expenses? That is an unknown quantity which we cannot estimate. If, for example, the council do an illegal act and get into a lawsuit, we can make no estimate. Strictly speaking, there should be no legal expenses.

230. Will the legal position of the Council in this case be different from that of the Newcastle Board in regard to suing for rates? They will be in no different position that I know of, but legal expenses are an unknown quantity which we cannot estimate. If the Council do an illegal act they must be responsible for it.

231. You put down a certain amount for the cost of collection;—that must be taken to include legal expenses in insisting upon recalcitrant ratepayers meeting their obligations? In that case, of course, they must be made to pay, and bear the costs.

232. But these Boards often make mistakes? That is not an engineering matter.

233. You estimate the revenue of £1,600 approximately, and an expenditure of £1,192? Yes.

234. It is different from the statement which was put before us on a former occasion? This statement is based on wider powers for the collection of revenue.

235. Under these wider powers do you include the power to tax people along the pipe-line; that is to say, all persons within a certain distance of the pipe-line? If the whole scheme is put under the Metropolitan Board they will have power to rate all property along the pipe-line.

236. Could you give us some information concerning the scheme of repayment in 100 years;—do you put together the interest and a certain amount of sinking fund per annum and make the total 3.616 per cent. upon the total cost, or in what way do you deal with the two separate elements in the matter? The matter is one which does not pass through my hands at all. I hardly know how the accountant has dealt with the matter. Your better plan would be to call the accountant of the Public Works Department; he has the handling of all these receipts.

237. Did he make the calculation of 3·616 per cent.? I think so. The account portion does not pass through my hands at all.

238. There seem to have been lately some experiments with different classes of pipe;—has the experience you have gained led you to believe that steel pipes are the most suitable in these cases? For smaller diameters.

239. Have they not welded steel pipes at Moree? There is no water supply there yet, although the Department carried water from the bore to the railway. Welded pipes may have been used in that case, but I do not know anything about it. They very likely used 2½ or 2 inch ordinary water-pipes, which would be welded.

240. Under this amended scheme it would be necessary, you think, either to allow the Metropolitan Board to manage it or to elect a separate Board? What I say is that if the whole revenue possible is to be collected, some Board must be appointed to do it, unless special powers are given to the Wollongong Council. At the present time they have not the power to lay pipes or to collect revenue in another municipality except by agreement In this case the scheme lies in two, if not three, municipalities, and, in my judgment, the best way out of the difficulty would be for the Metropolitan Board to deal with the matter. Either that must be done or another Board must be elected.

241. Of the two courses you think the better one would be to put the matter in the hands of the Metropolitan Board? That is what I would recommend.

242. Would that not increase the annual expenditure considerably? Not necessarily.

243. Has that not been the experience of Boards in other parts of the Colony? If the works were handed over to the Metropolitan Board there would be no increase of cost. Liverpool, Campbelltown, and Richmond have supplies which are managed by the Metropolitan Board, but I see no reason why that Board should not also manage the Wollongong supply.

244. You do not advocate a special Board for the locality? I would not recommend a local Board.

245. *Mr. Trickett.*] In connection with former schemes of this kind we have generally had a map showing the reticulation,—has one been prepared in this case? Yes.

246. As to the tunnel through the rock, would it not be possible to make a tunnel which could be used as a pipe;—would it not be practicable, for instance, to make a 3-foot tunnel? It would not be safe in this case, because the tunnel comes out from below the water level, and it would be under pressure. If you abandoned the idea of pipes you would have to plug the tunnel at one end, and then if a fall or slip took place in the tunnel it would be impossible to get into it without emptying the reservoir.

247. How many other schemes have been considered from time to time for the supply of Wollongong with water? I can recollect only two others. There may have been more, but only two have received serious consideration. I refer to the scheme last before the Committee, taking water from the head of the Cataract River, and to the scheme proposed by Mr. MacCabe, taking water from the Cordeaux River at a point below where we propose to take it now. Mr. MacCabe led the water down through a shaft and out through the coal workings.

248. For the tunnel you have estimated 30s. per cubic yard? Twenty-two shillings and six pence per lineal foot.

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249. You do not estimate by the cubic yard? No, by the foot running. Small sewerage tunnels are generally estimated in that way.
250. Is it cheaper than your former estimate? It is a little dearer I think.
251. Is the whole of the tunnel through rock as far as you know? I fancy the greater part of it will be through shale, but we may meet with some rock.
252. Will the pipe-line, after it leaves the tunnel, pass through private land or will it pass along a roadway to avoid the expense in connection with private land? For a considerable distance it will pass through private land.
253. And if the pipe-line goes through any person's property? They claim compensation; but we arrange for the purchase of easements at a reasonable rate. We have arranged matters at Tamworth in that way on very reasonable terms indeed. Unfortunately, in the Resumption Act, no power is given for the purchase of easements. In the old country and most of the other colonies there is a section in the Resumption Act giving the Corporation or the Government, as the case may be, power to purchase easements over property; but, unfortunately, that power does not exist in this country. In some cases the Government has been obliged to take a chain of land through farms without any disturbance whatever to the occupancy of the land, and have had to pay for it. In some cases there has been an interference with one year's crop and that has been all. Once the pipes had been laid down there has been undisturbed occupancy of the land. In some cases we have got over the difficulty by offering so much for easements. That has been done successfully at Tamworth and also in connection with a supply which we are carrying out for Kiama.
254. Will the pipe-line in this case pass through much agricultural land? None at all; it is chiefly grazing land.
255. So that the cost of all the land required for the pipe-line will not be expensive? No; it will come to only a small sum per acre.
256. I have noticed in recent newspapers that in connection with the Tamworth supply there has been some complaint as to the purity of the water;—is it not a fact that the water has been polluted? No. We have been suffering from a drought, and the reservoir was new. All new reservoirs require flushing out. There is a certain amount of decayed vegetation on the surface which requires washing out, and if the water lies stagnant for any length of time, as it would be liable to do in a dry season like this, it naturally becomes bad. After the first flood it will be all right. We had the same difficulty at Prospect, but when the first flood came there was no further trouble. The same difficulty occurs in reservoirs all over the world. In the case of Tamworth the water has been lying stagnant for a long period, and it cannot be otherwise than of doubtful quality. As soon as rain sets in the trouble will disappear. Apart from that, there should be good water at Tamworth. The catchment is decomposed granite and granite rock country; it is a clean collecting ground, free from occupation.
257. You do not think that in the case of the supply we are now considering there is likely to be any pollution? I do not think so; as I explained before, the catchment area forms part of the catchment area for the Sydney water supply. The Metropolitan Board have inspectors going round to stop any form of pollution.
258. In your estimate you have put down service-mains and reticulation as costing £5,772;—could you separate the two items? Yes; the service-mains would cost £987, and reticulation £4,985.
259. *Mr. Levien.*] What is the difference between the supply-main and the service-main? Eight 6 and 4-inch pipes come down from the storage reservoir to the service-reservoir. That is the supply-main. The main leading from the service-reservoir to the town is generally known as a service-main.
260. *Mr. Trickett.*] You have exhibited plans showing the reticulation? Yes.
261. Have you been guided in that matter by the result of consultation with the municipal authorities? I cannot say absolutely. I sent an officer down there to go through the town and mark the position of all the houses. He is, unfortunately, absent to-day, and I cannot find out whether he conferred with the Mayor or not. Our usual practice is to obtain a plan of the town and send it down to the Council, and ask them to let the Council clerk mark off every house with a cross right through the streets, and to suggest in what streets the mains should be laid. We have to study what they ask for with a little care, because you may have some alderman in a house 1 or 2 miles out wanting us to lay a main which would not pay at all. We can often decide such questions better than the Council themselves, because we know whether it would pay to lay a certain main or not. In this case I sent an officer down, and asked him to mark off all the houses, and the plan you see is the result of his investigation. Whether or not he consulted the Mayor, I cannot say.
262. In laying your reticulation, you are guided by the number of residences and by public convenience? Yes.
263. You said the other day that the service-reservoir would provide a supply for four days? Yes.
264. I noticed that in connection with a former proposal the service-reservoir was to provide an eight-day supply? Four days' supply is ample for a gravitation scheme.
265. Admitting of the repair of pipes or anything of that kind? It is ample for everything.
266. What is the height of your service reservoir above Wollongong? 242 feet over high-water-mark.
267. That would give you an elevation sufficient to supply the whole of the population area? Every portion of it.
268. You think a supply would also be available for Port Kembla? Yes; the supply to Port Kembla would be taken off the supply main higher up.
269. Where is it proposed to put the service reservoir for Port Kembla? It is proposed to take a branch from the central station to a point at Port Kembla. Port Kembla, therefore, would be supplied from the main storage reservoir. A smaller reservoir would have to be constructed at some height above Port Kembla for the local service.
270. Will there be any overflow from the reservoir in this case? We shall put in a large automatic ball valve which will regulate the supply and keep the water at one level.
271. What form of construction will you adopt? There will be concrete lining.
272. Are any mining operations being carried on in the catchment area or adjacent to the pipe-line? None that I know of.
273. There is no likelihood of the pipe-line being disturbed by any mining? There may be some mining along the pipe-line.

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274. Will any of the pipe-line be underground? It will be underground the whole way.
275. Is that necessary in open country of that kind? It is the usual practice to lay small pipes underground.
276. Are they better protected? Yes; they are less liable to injury.
277. Have you at the dam a by-wash or an overflow? The dam will be in concrete with an overflow.
278. Where will the overflow go to? It will go to the Sydney supply.
279. So that really in favourable seasons, with a fair average rainfall, the Sydney supply will hardly suffer at all? Only to the extent of the quantity of water taken away by Wollongong and the district.
280. The overflow water will not be diverted in any way? No; it will pass straight down the river.
281. Is there any sewerage system in Wollongong at the present time? No.
282. Would the proposed water supply be available for flushing purposes? Yes.
283. It would be regulated by meter, I suppose? Any householder having a closet will be entitled to the use of all the water required for closet purposes.
284. You could not introduce water into closets without a sewerage system? No.
285. I was referring more particularly to the flushing of streets? That is a matter which, of course, would be in the hands of the Council.
286. Mr. MacCabe submitted a scheme for consideration some time ago, but it was a pumping scheme? I am under the impression that it was a gravitation scheme.
287. It was very expensive? It was, and I thought it objectionable in many ways.
288. I find the following in an appendix to the inquiry by the Committee into the proposed water supply for Wollongong some years ago; it is under the hand of Mr. Pridham. The document says:—"Mr. MacCabe proposes that the water should be pumped from the confluence of the Goondarin Creek and the Cordeaux River, to a point near the top of the range about 4 miles 60 chains from the proposed pumping-station?" It is some years since I saw anything in connection with the scheme, and I thought for the moment that it was entirely a gravitation scheme.
289. The cost of pumping is set down at £23,000, and the total cost of the scheme at £100,875. The expense really put the scheme out of the question? Yes. Mr. MacCabe proposed to put a dam across the river somewhere below the point at which we propose to put it.
290. You do not approve of a pumping supply except when you cannot get a supply by gravitation at a reasonable cost? Quite so.
291. Wollongong, at present, has no regular supply except what the people themselves provide? The supply is, I think, from roof water.
292. I understand that in your estimates of the cost of construction you have put down the lowest possible figures. You think £21,000 is a fair sum if the supply is to be for Wollongong alone, and £24,000 if Port Kembla is to be included? Yes; I do not think the scheme can be carried out for less than that. It would not be safe to make a less estimate.
293. You think the ordinary 10 per cent. allowed in works of this kind for contingencies will cover everything which is likely to arise? Yes.
294. *Dr. Garran.*] The reservoir which you now propose is ample for the present purposes of Wollongong? For the present and prospective purposes.
295. Supposing that hereafter the demand should greatly increase by the inclusion of Port Kembla or some other northern villages—could you increase the storage at your main reservoir? We could not easily increase it, but I think it will prove large enough, not only for the present, but for prospective requirements. We have allowed for a probable increase by-and-by.
296. Could you mechanically increase the supply, and if you could, what would be the cost of increasing the storage at the time? I have not gone into that question.
297. But there is a possibility of increasing the supply? I have included the larger dam in my estimate. The proposed dam will impound 172,000,000 gallons. I do not think we can very well increase that storage.
298. That, you think, is the maximum quantity you can store? Yes.
299. You could not give me the difference between the cost of the larger and the smaller dams? No, not at this moment. I have purposely included the larger dam in this scheme in order to meet contingencies.
300. Another proposal for giving additional water would be to make another dam lower down on the river? You would require to go higher up. If you went lower down you would have to pump.
301. You would not make a separate tunnel and a separate pipe? No.
302. The capitalising of the pumping would amount to as much as the making of a new tunnel, you think? I have not gone into that matter. I think the proposed reservoir will be ample for many years to come.
303. You have not estimated the cost of obtaining a fresh supply from a point lower down? I do not think there is any need to make such an estimate now.
304. If you took a branch pipe-line down to Port Kembla you would want a service reservoir on that line? Yes.
305. Have you settled where that should be? No.
306. You know you could construct it? Yes; on a site similar to that at Wollongong.
307. At what elevation? About 150 feet or 200 feet.
308. And at the point where your pipe leaves the storage reservoir, what elevation would it be above the service reservoir? The level of the main reservoir is 1,105 feet, and the service reservoir 242 feet, showing the difference of 863 feet.
309. You will have the full pressure of that height upon your pipe;—do you propose to break it halfway with any valve? No; there will be the full pressure the whole way.
310. The pipes have been calculated to bear it? Yes.
311. You do not think it is necessary to make a halfway stoppage? No.
312. Is there any spot where it would be practicable to make a midway reservoir? Yes; anywhere along the pipe-line we could make a reservoir.
313. But you do not think there is any engineering necessity for it? Not if we use welded pipes.
314. You do not think the pressure is at all to be feared? No.
315. Have you any water supply in the Colony with a pressure like that you have named? We have over 700 feet at Tamworth.

316.

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316. That is where a great many leaks have taken place? Yes; but a different description of pipe was used.
317. With regard to this supply, will there be any valves to be regulated, or will there be a natural pressure from the reservoir down the pipes? There will be the natural pressure.
318. There will be no alteration from day to day shifting the pipes about? No; there will be an automatic valve. The trouble at Tamworth was due to the man shutting down at the top end, instead of shutting down at the reservoir, emptying the pipes and letting the water rush in them again.
319. You will not interfere in this case at all;—the automatic valve of the service reservoir will regulate everything? Yes.
320. You have no example of any pressure quite as great in this Colony? No.
321. Are there any examples outside the Colony with which you are acquainted? Plenty.
322. It is not considered an excessive pressure? No. I went along the pipe-line of an American supply where I saw pipes of the same thickness with over 2,000 feet of head constantly on.
323. Is the area of your reservoir under any mineral lease or license? I think not.
324. Has not a great deal of the land on the top of the range been taken up for future mining? I do not think so; it is mostly freehold land.
325. In that case, the owners will have the mineral rights, and they might also lease their rights to the Mount Kembla or some other company? They could lease their rights, but they could not work upon the catchment area.
326. Why could they not work if they have the freehold? The Metropolitan Board have the power to stop any mining operations which are likely to injure the water.
327. You are certain they have that power? Yes.
328. They can interfere with anyone having the right to take coal away from under their land? If they like to take the coal away from under their land they can do so.
329. But would you like to have coal taken away from under your reservoir, for example? We propose to resume that area.
330. And as to the remainder of the land it would not matter if it were mined under? No. When you were speaking of mining operations I had in my mind the possible contamination of the water.
331. But you say now that no mining could take place under the reservoir or dam? No.
332. As to the rest of the area it would not matter if the coal were taken away? No.
333. Do you propose to purchase the land or only the coal right? We propose to buy the whole area up to a certain distance above high-water mark.
334. You have included that in your expenditure? Yes.
335. So far as a pipe-line is concerned, you are not sure whether it will be free from mining disturbances? Some portions of it might be liable to be mined under.
336. But it would not require much compensation to prevent mining under it, because, after all, it is only a narrow belt? I do not think there is likely to be any damage or risk of damage resulting from mining along the pipe-line.
337. Has any portion of the proposed line been already undermined? Not that I know of.
338. As to the cost of the work, it would appear that there is not much margin in any of these calculations? No. I have gone into the matter pretty carefully.
339. Taking the dam, for example, you have had considerable experience in the making of concrete dams and sandstone gutters? Yes; we know exactly what the work will cost; the only uncertain element is the nature of the foundation.
340. But you bored at your foundation, I presume? We have put down trial shafts, but between two shafts you might, nevertheless, come upon a pocket. That is a matter you cannot provide against. Unless you took out the foundation before you made your estimate you could not tell what the exact cost would be.
341. But excepting that one risk, the cost of making a dam in a sandstone gully is pretty well determined? Yes; in this case we have put down more than I know we can get the work done for.
342. As to the tunnelling, also, you know from experience exactly what that will cost? Yes.
343. Tunnelling through sandstone or shale can be calculated to a nicety? Yes.
344. And the cost of the pipes and the laying of them can also be calculated easily? Yes.
345. The cost of a service reservoir and reticulation is also easily calculated? Yes.
346. There is only one element of uncertainty in the work? Yes, the foundations of the dam.
347. Apart from that you are pretty sure about the expenditure? Yes.
348. Then we may tell the people of Wollongong that there is no risk of your estimate being very much exceeded? Safely.
349. Suppose the dam is found to have a bad foundation, how much extra expense would it involve? There is the uncertain element which enters into dams in all parts of the world. Take the Tamworth dam; we thought we had a magnificent foundation there. We opened up a great deal of it and we found as fine and solid granite rock as you could wish to see. When we came to clear off we found a small vein through the rock which was traced into a pot-hole 4 feet down. No one believed that such a thing had existed. We had to go down 10 feet, whereas we estimated that we could build on the surface. In the case of any dam you are liable to come upon a place of that description.
350. In sandstone rock you are particularly liable to do so? Yes; but this particular dam is to be built upon a bluestone dyke.
351. That would be safer? Yes; still there is some risk attaching to it.
352. You are on one of those basaltic dykes which run through the whole country? Yes; we selected that site on account of the dyke.
353. It is on that account a very suitable site? Yes; I do not think the estimated cost is likely to be exceeded; still, no engineer can possibly say that it will not be exceeded.
354. How much a mile does reticulation cost? In a district which is within easy reach of Sydney, such as Wollongong, the cost would be about £600 per mile.
355. I understood you to say that you might have to take a pipe a long distance to the residence of some influential residents, which would not pay? Yes; but if you take the average, the price runs out at about £600.
356. In the case of remote outlying places, which would take a smaller pipe, I suppose the cost might be £500 a mile? Say £400 a mile.
357. So that if it were proposed to carry reticulation into a less populous district it would take £400 a mile? Yes.

358.

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358. How many miles of reticulation have you provided for? Ten miles 13 chains.
359. Have the local people seen the reticulation plan? I am not sure. I sent an officer down, but I do not know whether or not he consulted the Mayor.
360. Do you think your reservoir will be sufficient for the supply of the northern villages as well as Port Kembla? Yes.
361. You think a long time will have elapsed before you will require to make a larger dam for that purpose? Yes; the reservoir in the scheme before the Committee some years ago had a capacity of only 50,000,000 gallons. That was considered enough for the supply for Wollongong and the northern villages. The reservoir now proposed has three times that capacity.
362. You propose now to make the dam a full size? Yes.
363. You think that is the wisest plan? Yes.
364. You do not put before the Committee the smaller-sized reservoir? No.
365. *Mr. Shepherd.*] The Cordeaux River takes its rise in the catchment area? Yes.
366. Will you be entirely dependent upon the rainfall for the supply, or are there natural springs? There may be natural springs, but they would be dependent upon the rainfall.
367. The catchment area embraces all the watersheds feeding the proposed dam? What we call the catchment area is the watershed.
368. What is the nature of the country within the catchment area? It is fairly good grazing country.
369. There is no good agricultural land? Some of the best of it is the area we propose to resume for the reservoir?
370. I think you said the land was all alienated? It is nearly all alienated; all the area required for the reservoir has been alienated.
371. I understand that there is no actual settlement in the catchment area? There are three farms.
372. Does the nature of the country preclude the use of an open cutting in preference to pipes? There must be pipes; the pipes are going down hill all the way.
373. Would there be a saving of expense in an open cutting? An open cutting is impossible; the pipes go down hill very fast.
374. The scheme is entirely one of gravitation? Yes.
375. *Mr. Watson.*] Assuming that the works were constructed, and were put under the Metropolitan Board, would it follow that the cost of the scheme would be estimated side by side with the cost of the metropolitan scheme? No, it would have to be worked independently.
376. But you would have to set aside a proportion of the working expenses of the Board, such as salaries for officials and general office expenses against the income from this scheme? No; it is not usual to take any portion of salaries into a little scheme of this sort. It is not done when the Board is keeping accounts for Liverpool, Campbelltown, and Richmond
377. But if a number of schemes were tacked on to the Board you might have an agitation among the ratepayers within the metropolitan scheme to have that done? In any case the amount would not be very great.
378. It is so small you think that it is not worth considering? No; when the Board is dealing with seven or eight millions it is not worth considering a few thousands.
379. It will be practicable, you think, to give the Board control of the scheme without imposing upon the people of Wollongong a greater liability even with less working expenses? The people of Wollongong would simply pay the rates and be under no responsibility.
380. But if the works were under the Council they might not be taxed the whole 5 per cent.? Nor does it necessarily follow that they will be under the Board. If the works are placed under the Board it is more than likely that that rate would be reduced, because the Board have larger means of collecting revenue from outside sources. I have put down £250 as revenue from outside sources, but I think that a large revenue could be obtained by the Board from along the pipe-line. There are quite a number of little villages. The whole line is thickly populated. The pipe-line runs along the spur, and it is on the spur that the population is located. The Council could not collect rates there, but it would be possible for the Board to collect a large amount of revenue from that locality.
381. You think that if the scheme were under the control of the Board they would be justified in imposing rates on people along the pipe-line in preference to the sale of water by agreement? The sale of water by agreement is very unsatisfactory. Some persons only take it now and again. Others will not take it at all.
382. Seeing that the pipe-line passes through only pastoral land, where there is already a large rainfall, and where water can be easily stored, do you think it would be fair to impose a tax on the whole people? I think it is likely that at times they would be hard up for water.
383. Notwithstanding the large rainfall? Yes. The pipe-line runs along the spur of the mountains, and the land falls away on both sides.
384. It would not be easy to conserve water there? Only by tanks.
385. Would the tax to which you refer apply to farms? Partially they would come under the head of vacant land, and in that case the rate is very low.
386. It would be practicable to so arrange the scheme that the rating of such lands would not necessarily follow? Anything of that sort would be arranged in the Bill.
387. You think a good income could be derived from residents along the pipe-line if the Metropolitan Board had control of the scheme? That is my opinion.
388. *Chairman.*] The distance, you say, between the tunnel and the balance reservoir is about 5½ miles? Yes.
389. The fall in that distance is about 900 feet? Yes.
390. The pipes will be so constructed as to withstand that pressure? Yes.
391. There will be no necessity to introduce pressure-regulating valves? No.
392. Upon what pressure are you reckoning in the town of Wollongong? The service reservoir is 242 feet high; the railway station is about 54 feet. At that point, therefore, there would be 190 feet of pressure. There would be rather more than that over a good portion of the town.
393. *Mr. Watson.*] That would be between 80 lb. and 90 lb. to the square inch approximately? Yes; a very good pressure.

John

John Moore Smail, Engineer-in-Chief, Metropolitan Board of Water Supply and Sewerage, sworn, and examined:—

J. M. Smail. 31 Jan., 1899.

394. *Chairman.*] It is proposed to take a portion of the land now under the control of your Board for the proposed reservoir;—has any communication been made to the Board in reference to the matter? Yes.

395. Have they considered it? Yes.

396. Is there any objection on the part of the Board to the portion required being taken off the land under their control? No; I reported upon the matter to the Board, and they were quite agreeable that it should be done.

397. If it were suggested that the water supply for Wollongong and the locality should be handed over to the control of the Metropolitan Board, would there be any objection to it on the part of the Board? I see no objection to it myself; we are already managing the supplies for Richmond, Liverpool, and Campbelltown, and we are carring out a water supplies for Camden.

398. If you took control you would relieve the Municipality of Wollongong of any liability in the matter? Certainly.

399. Suppose the scheme were a financial failure, upon whom would fall the burden of making good any deficiency? We would have to raise the rate until the scheme was not a failure.

400. Is there not a limit to the rate? We can rate to 1s. in the £.

401. Is it proposed in this case to rate at 5 per cent.;—have you any other means of raising revenue, supposing that was not sufficient? No.

402. Suppose the demand fell short of the amount at which the scheme would pay interest and sinking fund and maintenance? It would be a question of assessments, not a question of demand; people would have to pay for the water whether they took it or not.

403. But if there were a shortage in revenue, upon whom would the burden fall;—could you make the people who are supplied make good any shortage? The Act would have to be altered to enable the managing authority to strike a higher rate to balance the accounts. The scheme, however, passes through more than one village, and if the scheme came under the Board's control, we should rate all properties within 150 feet of the main, provided that they could connect. Of course, in the case of a tunnel they could not connect. From the outlet of the tunnel, right into the town of Wollongong, all properties on the pipe-line would be liable for rates.

404. *Mr. Shepherd.*] Do the Board find any difficulty in controlling the water supplies to which you have referred outside the city of Sydney? Not the slightest.

405. The Board exercises the same control in those cases which it exercises in the city? Just the same.

406. Are you acquainted with the proposed scheme? Fairly well. I know the locality from which the water is to be taken.

407. Do you think it would provide an ample supply for the town of Wollongong? Yes.

408. Have you thoroughly inspected the catchment area? No; I merely know it from occasional visits. I know the site of the dam, and the immediate vicinity.

409. Have you studied the scheme? Only so far as it affects our watershed.

410. The catchment area is portion of the catchment area of the city supply? Yes.

411. Is the scheme likely to interfere with that supply to any extent? No.

412. *Dr. Garran.*] You lately had some damage done to one of your dams in the Cataract River by flood? Yes.

413. It was supposed to be due to battering by trees? Yes.

414. Such a cause of damage is hardly likely to arise in this case? No. The dam here is made of concrete; the other dam was of ashlar masonry.

415. What would be the effect of trees ramming into a concrete dam? It might take off a piece here and there, but it would not destroy the dam, assuming that the sections were sufficient.

416. A concrete dam is a stronger work than a dam of ashlar masonry? Yes; the dam to which you refer has been rebuilt in concrete.

417. It will stand the battering of trees better than it has done in the past? Yes.

418. In the limited area under consideration you are not likely to have trees washed down? No.

419. It is not forested country? No.

420. Concrete may be regarded as practically immortal? Yes.

421. It does not decay and the foundations do not become weaker? No. Assuming that it is well built in the first place, it is, as you say, everlasting.

422. The only important thing is to look well to the foundations? Yes.

423. It is the best kind of dam you could possibly put up in these cases? Yes; a concrete dam is practically a monolith.

424. The cost of concrete dams is pretty well known? Yes. Assuming that stone and sand are handy, you have only to cart the cement.

425. Upon such a simple basis the cost of the work can be calculated to a nicety? Yes.

426. You have done a good deal of sandstone work? Yes.

427. The cost of tunnelling in sandstone is pretty well determined? Yes; it depends on circumstances.

428. Is sandstone harder to go through than shale? In some cases you have to timber in shale.

429. Some of the proposed tunnel will be through shale? Yes. I have seen shale as hard as any rock; you would have to use dynamite to take it out. In other cases you have the timber. The more air that gets to the shale the more it disintegrates.

430. You cannot tell until you get to it what it is going to be? No.

431. Have you any pressure in your pipes equal to a height of 800 feet? No; the highest pressure I have is equal to 400 feet.

432. You have no trouble with that? No.

433. Do you think with a pressure of 800 feet there would be any trouble in the case of the proposed supply? The pressure does not matter; you have only to make your pipes strong enough. It is a question of thickness of pipe. The danger comes in with an inexperienced man filling the main. No matter how strong your pipes are they may be damaged by carelessness.

434. At the reservoir there is to be an automatic valve; there is to be no one there to tamper with the main—the pipes will fill themselves automatically? You might have to empty the pipes in order to make repairs.

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435. It would be only in case of repair that pipes would have to be emptied? Yes.
436. What does your reticulation cost you per mile? It varies, but we can generally lay 4-inch pipes in rock for about 7s. a yard.
437. I suppose most of your pipes in and about Sydney are laid in rock? No; we get a number of formations—clay, shale, and rock.
438. From your general view of the plan, do you think the scheme is a suitable one? I do not think you could get a better one. The site of the reservoir is well chosen, and you certainly will not want to pump any water.
439. The making of a tunnel is superior to pumping up the water, and making it go over the ridge? Yes; undoubtedly.
440. Capitalising the cost of the pumping, it would come to more than the cost of the tunnel? Yes, in the case of a small scheme like this, where you would not have large engines. Another good point about the scheme is this: that having such a head, in case of fire, all they have to do would be to attach a hose to the hydrant; they could do without a fire-engine.
441. A pressure of about 242 feet from the service reservoir is ample for a place like Wollongong? Yes; it is over 100 lb. to the square inch.
442. What is your pressure from Crown-street? We get 40 lb. in the city. Near Milson's Point we get 110 lb. to the square inch, but that water is supplied from Chatswood.
443. What does Waverley give you? That is not connected with the city.
444. You could not put the Waverley pressure on to any part of the city? No. We can get from 90 to 100 lb. from Woollahra, and that would mean about 130 feet.
445. *Chairman.*] The whole of the water supplies are constructed from loans? Yes.
446. In this scheme there is a repayment of principal extending over 100 years? Yes.
447. Have you a fund of that sort? No; our Act does not state that we shall keep it, but we are anxious to have our indebtedness fixed, because that is the only way in which a water and sewerage system can be commercially worked.
448. Is there a sinking fund in connection with the Richmond, Liverpool, and Campbelltown schemes? None at all. In our books we have an account for each place. We charge them interest on the money, a proportion of the working expenses and the collection of rates on the basis of the proportion of their revenue to the metropolitan revenue.
449. That arrangement works smoothly? Very smoothly.
450. There is no trouble? No; the people do not grumble, so I suppose they are satisfied.
451. You could take in half a dozen other schemes without greatly increasing the expense? Yes; at Richmond we have one man. He has to do all the pumping, to attend to the mains in the town, to collect rates, to look after matters generally, and he gets £3 10s. a week, and £35 a year as a forage allowance. I do not suppose you would want more than one man in connection with the Wollongong system.
452. What would you pay him? About £3 a week; I would also give him travelling allowance so that he could keep a horse. We have only one turncock for Liverpool and Campbelltown.
453. It would be to the advantage of the three municipalities concerned in this scheme to have it worked by your Board? Yes; if you set up an independent Board you would require new machinery. The scheme would be less expense to Wollongong, because the Board would have the power to collect revenue outside the boundaries or the town.
454. In your opinion it would be more economical and more satisfactory in every way if the Metropolitan Board were to take charge of the scheme? Yes, and I think the people down there would be satisfied.
455. *Mr. Watson.*] I understand you to say, in relation to the working of outside schemes, that you charge them with a certain percentage of expenses? Office expenses.
456. And you base that charge upon the proportion which their revenue bears to your general revenue? Yes.
457. How do you ascertain what it is necessary for them to contribute;—do you make a calculation of the cost of that particular scheme and lump it in with the metropolitan area generally? No.
458. Then do I understand that you charge 1s. in the £ whatever the cost of the work may have been? We have to go up to 1s. to make the thing pay. The charge is based upon the actual cost of bringing in the main from the canal and the reticulation.
459. In the cases to which you have referred the towns are served from the supply which comes on to Sydney? Yes.
460. But in the case of Wollongong, for instance, you have an entirely independent supply. Suppose it were determined to put the scheme under the control of the Metropolitan Board, would the people be charged to the full extent allowed by the Act, or would they be charged an amount sufficient to cover interest and sinking fund and working expenses? They would be charged interest on principal, working expenses, and a proportion of office expenses upon the basis of the proportion of their revenue to the metropolitan revenue.
461. But you would not put Wollongong, with an independent scheme, upon the same basis as Liverpool, for instance, which derives its supply from the Sydney supply? It would depend entirely upon what the expenses are.
462. I can quite understand that in the case of Liverpool and Campbelltown, which are supplied from the Sydney supply, you have a difficulty in fixing the charge, but in the case of Wollongong there is an independent scheme? Quite so.
463. Wollongong will be charged upon the basis of the expense of its own particular scheme, and will not be mixed up in any way with the metropolitan area? A separate account will be kept as is done in all these cases.
464. That is done in the case of Richmond? Yes; that scheme also stands on its own footing.
465. What does their rate come to? We charge them 1s. in the £.
466. What I want to get at is the advantage of handing this scheme over to the Metropolitan Board as compared with allowing it to be controlled by the municipality;—I want to know whether it would be cheaper for Wollongong to have the scheme under the control of your Board;—we are told that there ought to be a considerable margin as between the probable revenue and expenditure, allowing for the sinking fund and interest and working expenses;—we are told that that margin will be about £400 per annum;—under those circumstances, might it not be possible for you to make a less charge than 1s. in

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the £? The Board will not necessarily charge the maximum rate. If it is found that the scheme pays interest and sinking fund and office and working expenses, and leaves a margin with a charge of 1s. in the £, there will be a reduction of 1d. in the £, perhaps, in the following year, and so on.

467. That has not been done in the case of Richmond? In the case of the Richmond supply we are simply managing it for the Government until such times as the amending Act gives us power to rate outside the county of Cumberland. The source of supply of Richmond is the Nepean, near its junction with the Grose River, so that under the law the Board could not rate that. Directly we are able to get the amending Act passed, we shall be able to charge 1s. in the £.

468. Is the scheme paying expenses? No; I do not suppose above 25 per cent. of the people are paying rates.

469. The Richmond supply is in a tentative position? Yes. I may mention that we have been approached by the Windsor Council to connect their system with the Richmond supply, as managed by the Board. When we came to inquire into it, we found that the Borough Council could not make their own arrangement pay.

470. Has the Windsor Council a scheme of its own? Yes; they pump the water from the Nepean into a tank, which reticulates the town. As a matter of fact, it does not pay; they are losing money.

471. The position then is this: that you would not impose any extra charge upon the people of Wollongong if you were controlling their supply, and that the cost will probably be reduced? Yes; it will be much better to allow the Metropolitan Board to control the scheme than to bring into existence another Board.

Henry Chamberlaine Russell, C.M.G., Government Astronomer, sworn, and examined:—

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472. *Chairman.*] Can you give us any statistics as to the rainfall at the Cordeaux River? I have brought statistics of the monthly rainfall for all the stations in that district, but there are not many stations. Wollongong and Cordeaux give long records, but the other observers there have commenced more recently.

473. Could you give the Committee the average rainfall of the Cordeaux and of Wollongong for the past twenty years? I have not taken out the average of all the stations, because the long ones would not compare very well with the shorter ones; but the rainfall of the Cordeaux River amounts to 60½ inches; whereas Wollongong gives about 43 inches per annum. The rainfall at the Cordeaux has been as much as 104 inches. I have had prepared a diagram showing the oscillation in rainfall in the case of Wollongong and the Cordeaux for a long period. I thought it might be of interest and importance to the Committee. The diagram shows the quantity of rain which has fallen in each month since the record was commenced, and the rainfall has been so plotted on the diagram that one month commences at the top of the previous month, showing ultimately the total quantity of rainfall. You will see that in the year 1890 there was an exceptionally heavy rainfall in both Cordeaux and Wollongong.

474. What is the lowest rainfall recorded for the Cordeaux? Since 1871 about 31 inches. When the district was originally taken up for the supply of water for Sydney a rain-gauge was put there, and the records were sent to me from the first. There was some carelessness at Wollongong for some years, but since 1878 the returns have come in without interruption.

475. Can you locate the station at which the observations had been made in the case of the Cordeaux? I could not locate the exact position of the station, but I know that the observation is made at one of the dams. The records of the other stations in the district are comparatively recent. I have brought the figures with me, but I have not had time to plot them up in the form in which the others are given. The cause of the rainfall at the Cordeaux is the abrupt rise in the hills. All over the Colony you will find that that is the case. The rainfall, for instance, from Sydney to Parramatta, falls off 12 inches a year, and 5 inches more at Windsor, but when you get to the Kurragong the rainfall jumps up to 52½ inches higher than the rainfall at Sydney. The Cordeaux River being close to the sea, and there being an abrupt rise in the hills, the rainfall becomes much heavier. The heaviest rainfall we have in the Colony is at the Tweed River which runs along the foot of a very high range, which is the reason of the rainfall being so heavy.

476. The catchment area under consideration, by reason of its proximity to the sea and its high elevation, is sure to have a plentiful rainfall? Yes; in twenty-eight years the lowest record has been 31 inches.

477. Would there be any great variation in the rainfall at stations at the head of the Cordeaux approaching Picton? Yes; the rainfall at Picton is 30 inches, just one-half of the rainfall you get at the Cordeaux. It is just over the top of the range that the heavy rain falls. The quantity decreases rapidly as you get away from the crest.

478. Then the rainfall at the head of the Cordeaux is more likely to be heavy than it is lower down? Yes; I think you might be quite certain of that.

479. *Dr. Garran.*] The great point to notice is, that if you get 31 inches in a bad season at the Cordeaux Station you are likely in such a season to get more up at the head of the Cordeaux? Yes.

480. So that if we trust your figures they are really below the truth as regards the catchment area we are considering? Yes.

WEDNESDAY, 1 *FEBRUARY*, 1899.

Present:—

JOHN PERRY, Esq. (Chairman).

The Hon. Patrick Lindesay Crawford Shepherd.	William Thomas Dick, Esq.
The Hon. Andrew Garran, LL.D.	John Christian Watson, Esq.
The Hon. William Joseph Trickett.	Robert Henry Levien, Esq.

The Committee further considered the expediency of constructing Water Supply Works for the Borough of Wollongong.

John Moore Smail, Engineer-in-Chief, Metropolitan Board of Water Supply and Sewerage, sworn, and further examined:—

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481. *Mr Dick.*] Your Board already administer several subordinate waterworks? Yes; detached works.

482. Those waterworks tap the metropolitan supply, but they have reservoirs of their own? With the exception of the Richmond works.

483.

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483. In fixing the rate chargeable under these various systems, what expenditure do you take into consideration? We charge an amount including interest and principal, maintenance, and the head office expenses.
484. With reference to your head office expenses, how do you ascertain the proportion for which each supply is liable? We take the revenue of any particular place, and consider the ratio it bears to the metropolitan revenue. Of course, it is a small sum; still we think it is a fair charge.
485. Could you give the Committee a rough idea of the cost of administration in any particular case? I could not say from memory—the matter is in the accountant's branch—but I could furnish you with the particulars.
486. With respect to the legal expenses incurred in the collection of rates, how are they charged against these subsidiary systems? I think the people summoned generally have to pay the costs.
487. You do not find your experience like that of the Hunter River Board, where the Board themselves have to expend a large sum in legal expenses? Sometimes it is necessary to obtain an opinion, but apart from that the Board have a solicitor, whose salary is charged to general expenses.
488. With that exception the legal expenses in connection with these subsidiary systems are small? Yes.
489. I should be glad if you would give the Committee some information as to the average annual cost for repairs? If you take the towns of Liverpool and Campbelltown, the supply is administered by a man who receives a comparatively small remuneration. As to maintenance and repairs, the sum varies very much; it is difficult to state what it is.
490. Is it a fairly large sum per annum? No; unless there is a serious break you might say that the expenses are nominal apart from the man's wages.
491. What do you estimate is the life of cast-iron pipes? It is generally put down as thirty years; but we have in Sydney some pipes which have been down some forty years.
492. And what do you estimate to be the life of wrought-iron pipes? There are no wrought-iron pipes used now, they are all of steel.
493. It was proposed in the original scheme drawing a supply from the head of the Cataract River to use wrought-iron pipes? Yes; but steel pipes are used now. The life is a very doubtful quantity. In America pipes have been in use for over thirty years, and have been found to be almost as good as when they were put in.
494. Have you any evidence concerning the life of the welded steel pipes proposed to be used in this scheme? No. The only advantage in welded pipes is that there is not such a great liability to a leak as in the riveted pipes. On the other hand, if a leak does occur you cannot caulk it as you can in the case of a riveted pipe.
495. The scheme includes a tunnel in which 1¼ mile of cast-iron pipes are to be used;—suppose in the tunnel there is a slip or a fall of the roof? I presume steps would be taken to prevent that as far as possible.
496. Is not the tunnel through sandstone? Yes. If it were at all soft they might put in a timber hood. That is all we use in the case of the Sydney water supply.
497. Suppose there were a serious break in the pipes, if the supply were administered by the Metropolitan Board, you would be able to cope with the difficulty immediately, I presume? Yes. A man would be there in charge of the works, and with the local labour and tools with which he would be provided, he would be able to cope with any leak.
498. In the tunnel, for instance? There would be no leak in the tunnel.
499. But suppose there were a heavy fall from the roof, and that a serious leak resulted? It might break a pipe, but that is a simple matter. Our pipes in the city are very often breaking. The ordinary way of repairing them is to put two pieces of pipe in with a collar.
500. Of course, in the supplies you are already administering apart from the metropolitan supply there is no length of pipes as you have in the case of the Wollongong supply? There is no length of pipe, but at Richmond they have to pump the water up 150 feet, and that is where the expense comes in. In a gravitation scheme there is no danger to be apprehended if the pipes are well tested and are properly manipulated afterwards.
501. You think that the whole of the trouble which arose in Tamworth was due to unskilled labour? I would not like to express an opinion on that point, but the best pipes might be broken by a man who was ignorant of the working of pipes with a very heavy head. If a rush of water were permitted down the pipes with a head such as you have at Tamworth, it would be enough to burst any pipe. I do not say that that was the case there, but it is quite possible that it was.
502. You consider that for the local superintendence for such a scheme as that proposed one man would be quite sufficient? Yes.
503. He would be able to make frequent inspection of the pipes, and at the same time do the work of collection, and perform his other duties? Yes; one man does Liverpool and Campbelltown together, and he will also have Camden put on to him when we get the work, completed. One man, therefore, will be quite enough at Wollongong. We have one man at Richmond who pumps the water, who attends to the service in the town, and who is in short a general factotum.
504. As to the minor schemes administered by your Department, with the exception of Richmond, is any provision made for placing a certain portion of the capital cost of the main scheme, bringing the water from Prospect to Sydney, against those schemes? Yes; we charge them in proportion to population—3d. per 1,000 gallons.
505. That you consider is their proportion of the cost of bringing the water down from the Pheasant's Nest? Yes, as nearly as we can get it.
506. What are the main facts which guide you in thinking that it would be better for all concerned to have this scheme administered by the Metropolitan Board? The thing suggested itself to me when I saw the works mentioned in the newspapers, and as the Board have no objection, I myself see no difficulty in managing it. The chief advantage, of course, would be economy of management. The Board could not take over the works unless a special enactment were passed.
507. If the works were in the hands of local authorities the area for taxation purposes would be comparatively small, whereas if the Board took control the larger area of taxation would ensure economy in several ways? Yes.
508. You say that the life of a cast-iron pipe is approximately thirty years? We generally put down thirty years.

509.

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509. In the financial scheme in connection with all these water-supply works the period for repayment is 100 years? Yes.

510. Is there any provision made for renewal of the cast-iron pipes which would perish three times over before the 100-year period elapses? There is no such provision in the case of the metropolitan scheme, but we are anxious to have the matter dealt with in an amending Act.

511. There is a sinking fund, I understand, for the initial capital cost, but part of that initial capital cost would disappear at the end of thirty years in the case of cast-iron pipes;—is any provision made to meet that? No. But we expend a certain amount each year in keeping the permanent works in good repair, so that no sinking fund is required. There should be a sinking fund, however, for all the reticulation works.

512. *Chairman.*] Are the repairs paid out of revenue? Yes. When we take up a 3-inch pipe, for example, and put down a 9-inch pipe we charge the 9-inch pipe to loan, and put the other into stock, and charge it only a certain life. As a general rule, all reticulation works should be paid off within a certain time.

513. *Mr. Dick.*] I understand that you expend a certain amount every year in renewal of works? In keeping the main works in good order. Take all the permanent work: A sum is set apart every year for repairs and maintenance, so that they are kept, practically, in as good order as when we started.

514. How much money would it take to keep such a scheme as that proposed in order? The reservoir would be a permanent work, and you would not require a sinking fund for that. Any repairs which might be required would come out of revenue; but I presume, in connection with the scheme, provision has been made for a sinking fund for renewal work, such as reticulation, for example. There is no necessity for a sinking fund for a concrete dam or a reservoir. What we are aiming at in our amending Bill is to have a sinking fund for portions of the works which we have to renew, such as cast-iron pipes. When the Cataract dam was built originally it was paid for out of loan, but when it was damaged the cost of repairing it was paid for out of revenue. If the dam is not carried away again, it will last for hundreds of years.

515. In connection with this particular scheme, what sum of money, apart from wages and that sort of thing, do you think should be set apart for necessary renewals? Three and a half per cent upon whatever the reticulation costs should be the basis of the sinking fund.

516. *Mr. Watson.*] But what would be required each year, in addition to the wages of the men employed, for the up-keep of the whole scheme? I could not say at this moment. I presume you refer to maintenance. I could let you know what the cost of maintenance has been for the past two years in connection with the subsidiary schemes which the Board controls. Unless some unforeseen thing arises, the amount would be very small compared with the first cost.

517. *Mr. Dick.*] The administration by the Metropolitan Board, in this case, would entirely do away with the necessity for an expensive local reservoir? Yes.

518. Do you think there is likely to be any complaint from the local people against centralised control? I think that, as a rule, local bodies try to get all the trouble and responsibility off their shoulders. That is our experience. The Windsor people, for instance, are anxious that we should take over the management of their scheme.

519. I understand that some of the mines within a certain distance of the proposed scheme have themselves constructed large and extensive dams for the conservation of water. If they come within 150 feet of the pipe-line they will still have to pay their share of the rate levied? If the scheme is administered by the Metropolitan Board.

520. In that case, I suppose the basis of taxation would be similar to that in Newcastle,—the Board will tax the value of the whole property, so that in a large coal mine there will be a large amount to be paid annually? I do not think they would take the capital value of the coal into consideration, but merely the capital value of the land.

521. In the case of Newcastle the Board took the value as that of coal-bearing land? Perhaps it is all coal-bearing land. It may be in accordance with law to treat the land as coal-bearing land, but if there were coal upon one portion and no coal upon another, I think it would be unfair to treat the whole as coal-bearing land.

522. *Mr. Watson.*] You suggest that merely the surface value should be taken? Yes.

523. *Mr. Dick.*] If the practice followed in the northern districts were followed out, the whole value of the mine would be taxed? No doubt we should follow a precedent if we wanted to get revenue.

524. Would not the taxation be likely, in the case of a valuable mine, to seriously trench upon the profits of the mine. It might induce the mine-owners to look round for something to compensate themselves for the tax? They would be only taxed, I take it, in respect of vacant land.

525. Mine-owners who have already constructed large dams will not only lose the use of them, but will have to pay for other water besides? Yes; to some extent that will be the case.

526. *Chairman.*] I presume it would be quite possible to make special arrangements in such a case for the supply of water? Yes.

527. You have power under your Act to deal with such cases? Yes; there is a minimum charge.

528. That minimum charge would not be the same rate as is applicable to private houses? That would only apply to very small premises.

529. *Mr. Dick.*] The minimum in any particular case would be chargeable under the rate of 1s. in the £ on the assessed value? Yes.

530. Take the case of a property situated within 150 feet of the pipe-line, is it not likely that the owner will look round for some means of compensating himself for this new taxation? It is quite possible.

531. Under those circumstances, do you not think the tax is likely to lead to a reduction in the wages of employees? That is a matter of political economy into which I cannot enter. It is possible that the owner might build houses on the frontage to the pipe-line and receive rents which might help him to meet the tax.

532. I notice that in the northern districts it has been necessary to duplicate the pipe-line in connection with the supply;—do you think it is necessary to duplicate the pipes in the tunnel or in any part of the service? No.

533. *Mr. Trickett.*] I understand that you appear here, not only as Engineer to the Metropolitan Water and Sewerage Board, but also as representing the Board? Yes, I came with the sanction of the President. At the same time the Board is not bound by my opinions.

534.

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534. On a former occasion, there was some question about the Board not being consulted about some scheme. The President is aware that you are here to-day? Yes.
535. As there is a probability of the scheme, if constructed, being worked by your Board, have you consulted with the engineers, who are the constructing authorities, as to the stability of the work? No; the work is one totally outside the County of Cumberland. When the work is completed, if it is enacted that it is to be transferred to the Board, we shall take it over for whatever it is worth. That is the best way in which I can put it.
536. Seeing that there is a probability of the work being controlled by the Board, would it not be well if the constructing authorities had the advantage of your opinion as to the suitability of the pipes and so on? If there is any possibility of the work being transferred to us, that should be so.
537. You are acquainted with Mr. Darley's evidence in regard to the size of the pipes to be used in bringing the water from the storage reservoir to the town? Yes.
538. You think the pipes will be sufficient to convey the water without fear of their bursting or being damaged? It all depends upon the thickness. Size is not a matter of much consideration. The size regulates the quantity delivered. The thickness of the pipes determines the question of whether they are likely to burst.
539. What thickness of pipe do you consider is necessary in this case? I should not like to say without making a calculation. But I have sufficient knowledge of Mr. Darley to know that he would not put in a pipe unless it would resist the pressure. We have tested ⅜-inch pipes up to 600 lb. to the square inch. You might employ the best mechanical skill in making a pipe, but if you got hold of a man who did not understand the manipulation of pipes he might burst it.
540. That was the cause of the leakage in the Tamworth pipes? So I have been told.
541. In this case Mr. Darley proposes to remedy it by providing air-vessels; do you think they will be advantageous? We are pumping water from Chatswood up to Wahroonga. I found that a portion of the pipes were becoming fatigued as it is termed, and I put in a large air-vessel which took up the whole of the strain.
542. Will you kindly peruse Mr. Hickson's statement in regard to the size of the pipes in the proposed scheme, and give us your opinion as to their efficiency? If you wish it, but I have no doubt that Mr. Darley is perfectly correct. I have no doubt that in the light of experience he will make sufficient provision in the thickness of the pipes to stand any pressure against which they would have to work.
543. Having regard to your own practical knowledge in such matters, it would be well to have your opinion on record? I am quite willing to look into the matter.
544. In the case of some water supplies there are screening tanks;—what are the uses of such tanks? The screening tank is to intercept any floating matter.
545. It would not be necessary in this case? No. It is only where you take water from a river, such as the Hunter River, where there are farms and other places draining into the river; but with the pure supply of the Nepean or the Cordeaux such screening is not necessary. All the screening necessary could be fixed up in the service reservoir.
546. This supply is based upon a supply of 30 gallons per head per diem;—is that a fair calculation? Yes. In the case of my own house, where water is neither wasted nor economised to any great extent, I have a meter, and I find that the supply works out at between 25 and 26 gallons per head.
547. That is an ample allowance? Yes; we generally take 30 gallons for a country town.
548. Mr. Darley has provided a service reservoir containing four and a half days' supply;—having regard to the fact that the pipe-line passes through a mineral country, and that there is a constant liability to breakage, do you think that supply is sufficient? Yes; it would be a big break which could not be repaired in two days and two nights.
549. Therefore, four and a half days' supply is ample? Yes; you load your capital account too much if you go beyond that.
550. It is proposed to lay the pipe-line underground;—is that desirable? Yes.
551. It should be protected, you think? Yes.
552. The object of putting the pipe underground is to protect it from damage? Yes; but no doubt if there were any depressions the pipe would be put in as an aqueduct.
553. When pipes are likely to be interfered with by traffic they must be buried? Yes.
554. In the water supplies under the Board's control to which you have referred, have there been any breakdowns in the pipes? No, they are of very rare occurrence. Since I have been in charge I do not think we have spent £20 upon the three places I have mentioned.
555. Newcastle is in a somewhat similar position to Wollongong, as regards mining;—do you know whether there has been much expense in that direction, arising from the breakage of pipes? No. In that case there is the chemical action of the pipes to be coped with.
556. You do not think there are many breakages resulting from mining, blasting, and so forth? I saw the last report, and there is no special mention of that. The greatest trouble there is the chemical action.
557. In considering this scheme, and the possible expenditure, we need not estimate any large amount for unusual fracture of pipes? No.
558. As to the pipes, do you find that there is much corrosion from the water passing through them? We have had experience of two classes of waters. There is the peaty water from Botany, which used to fur or corrode the pipes up much more than does the Nepean water. The Nepean water leaves more of a mineral encrustation. It is merely oxide of iron and clay mixed up together. In the other case there are vegetable matter and other things.
559. Does not this accumulation in the pipes go on to a considerable extent in connection with the Sydney supply? Yes; but we clean out the pipes every eight or ten years.
560. The encrustation does not damage the pipes? No; but it decreases the flow.
561. *Mr. Watson.*] I suppose that in course of time it would eat the pipe away? The oxide of iron might have that effect.
562. *Mr. Trickett.*] As to the supply of the railway authorities with water from the scheme, I suppose that would be done by direct arrangement with the Railway Commissioners and the administering Board? Whoever administers the works must receive all moneys and make all contracts.
563. If the local council were administering the supply, they would have to collect from the Railway authorities? Yes. In the case of Campbelltown and Liverpool we supply the railway by meter.

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564. Have you sufficiently considered this and other schemes for the supply of water to Wollongong to say whether this scheme is the best and cheapest? No; beyond the fact that it touches upon our watershed, and that I know where the dam is going to be placed, and that there is plenty of water, I can say nothing about the scheme.
565. You have not compared the cost of the different schemes? No.
566. As far as you can see, the proposed scheme is feasible and desirable? It is quite feasible.
567. In the first place we know that the water is good—we know that it is the water supplied to Sydney? Yes.
568. The elevation is sufficient for the supply of Wollongong, Port Kembla, and the surrounding districts? Yes.
569. Then, as far as one can see, the reservoir is about as near as it is possible to get it to Wollongong? Yes; it is in almost a direct line.
570. You have visited the locality? I know the country well.
571. You think the catchment area is not likely to become deteriorated by settlement? No; the object of the Board is to buy out all settlers by degrees. One reason why we should welcome this scheme is that it would involve the buying out of Mr. Brown.
572. He is still residing upon the catchment area? Yes.
573. You regard it as one good feature in the scheme that it will get rid of him from your catchment area? Yes; that is a distinct benefit so far as the metropolitan scheme is concerned.
574. Mr. Brown has a large holding? Yes; he has one of the best farms there. As far as pollution is concerned, he has quite entered into what the Board wished in regard to that matter.
575. The resumption of that farm will be rather an expensive item? I believe it is provided for in the cost.
576. You have not gone into that matter? No.
577. Do you think it is in the interest of the public who are to use the water supply that this settlement should be got rid of? Yes; it is necessary. The works would flood Mr. Brown's land.
578. Therefore he will have to go? Yes. It will be a good thing for the public health when the whole of these alienations are resumed. Persons were settled there many years before the water area was proclaimed. But it would cost us too much to get rid of the whole settlement at once; it can be done only by degrees.
579. No water beyond that absolutely required at Wollongong will be diverted from the Sydney supply? No. The dam will fill up at the time of rainfall, and when the river stops running a certain quantity of water will be impounded; but the water which runs over, for all we know, may go into the sea. When the Prospect Reservoir is full, we have to shut down.
580. Mr. Russell yesterday gave us some information about the rainfall in this district;—have you more than one point of observation as regards the rainfall? Yes, we have one at the Cataract, one at the Cordeaux, and one at Sherbrooke.
581. Have you a rain-gauge near the site of the proposed reservoir? No.
582. How far would your nearest gauge be from the spot on which it is proposed to put the reservoir? It would be a good way off.
583. But owing to the elevated nature of the land the rainfall there would be general? Yes; they get more rain there than we get at Prospect.
584. You use a great many pipes in your Department? Yes.
585. Do you use all Colonial-made pipes? Yes.
586. Steel and iron? Yes.
587. How does it answer? Very well.
588. You get a good article? We see that we do that.
589. You have the advantage of personal supervision over the work in progress? Yes.
590. And the arrangement has proved satisfactory? Yes.
591. Is it satisfactory as regard prices also? In the last contract, the conditions being equal, the importers could not come anywhere near the local manufacturers. I think the average price was nearly 10s. a ton more.
592. Have you a standing contract for your pipes? The contract is for five years.
593. *Mr. Levien.*] Can the Metropolitan Board refuse to take over a particular supply? Yes.
594. It is optional with the Board whether they will take the responsibility or not? Yes; but I think the Board is always willing to help the Government or the local councils.
595. I suppose you would want to know whether the works were likely to be a paying concern before you took them over? Yes; we should have to see that the general revenue would not be loaded with a dead weight.
596. If the works are a paying concern, would it not be well to leave them under local control? I presume the suggestion for the transfer arises from the fact that the Board have trained men for this particular work, they have machinery for the collection of rates, and that portion of the expenses would be taken off the scheme.
597. What machinery do you refer to in regard to the collection of rates? A man to serve the first, second, and final notices. Then we have to make arrangements to collect money and remit it to Sydney, and to keep the books.
598. Could not the local people do that? Yes; but the general experience is that if local people administer these works the rates get into arrear; they are not collected as they should be. The Board on the other hand recognise no one in such matters.
599. The Board are more independent, and show neither fear nor favour in their duties to the ratepayers? Quite so.
600. They enforce payment where the local people might be inclined to give concessions? There is a probability of that. Another reason why the work might be taken over by the Board, I think, is that the water is derived from the same source as the metropolitan supply.
601. That gives you more control over the watershed than you would otherwise have? Yes.
602. The Windsor people have requested you to take over their supply? Yes.
603. They have probably taken that course, because they regard the Board as more independent in the enforcing of the payment of rates? That is one reason, but they have a loan they would be very glad to get

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get rid of for which they are paying 5 or 5½ per cent. Then, again, the quality of the water is not equal to that supplied in Richmond. Some people in Richmond have businesses in Windsor, and *vice versâ*, and they naturally make a comparison between the two supplies. When I went into the financial aspect of the Windsor scheme I found we could not take it over, because it is absolutely in debt.

604. If you took over the scheme all legal expenses would be paid from head-quarters? The legal expenses consist chiefly in the issue of summonses, the persons summoned generally having to pay the cost.

605. But as to opinions? They are very rarely asked for.

606. *Mr. Shepherd.*] I notice that it is proposed that the larger pipes should be of cast-iron and the smaller ones of welded steel;—the welded steel pipes, I presume, are not so liable to corrosion as are the cast-iron pipes? I think they are taking the 8-inch pipes because they happen to have some in stock. The corrosion in cast-iron pipes and in steel pipes is very much the same.

607. I saw some 4-inch cast-iron pipes taken up some years ago in Newtown, and they were found to be completely blocked—no supply could get through;—how long do you think these pipes would remain effective? Some of the pipes have not been cleaned out for thirty years.

608. You have been in your position for some length of time? I have been with the Board ever since its inception.

609. As to open cuttings, is there any particular objection to them where the nature of the country is suitable, in preference to pipes;—for example, there is a good deal of open cutting in connection with the Metropolitan supply? If you have an open cutting you lose your pressure. Pipes are under pressure.

610. In a small supply a canal would be more expensive than pipes? You could bring down, say, 50,000,000 gallons with a canal; but if you wanted a pipe it would cost you three times the cost of the canal.

611. *Chairman.*] What is your practice in regard to reticulation? In the case of extension, if a person wants the extension of a main along a street, we estimate the cost of the extension and we charge 8 per cent. interest, which has to be guaranteed. We take the available revenue, we credit that amount, and the persons served have to guarantee the deficiency. Every house erected after that is credited to the account, so that in a couple of years or so the deficiency is wiped out. If the Council would guarantee the levels of the roads we charge only 6 per cent. Two per cent. is put on for contingencies—that is in case the council want to cut the road down, or in case we have to lower our main, and so on.

612. I notice that the southern portion of Wollongong is unprovided with reticulation;—I presume the reason is that there is not sufficient population there? Yes.

613. As the population increased you could meet requirements? Yes.

614. As to the sinking fund, when you strike a rate you strike one sufficient to pay all the costs of repair or replacing? Under the present Act we do not, but I say that that is the proper thing to do.

615. As a matter of fact then your repairs are carried out from loan money? No; out of revenue.

616. Then is a rate struck sufficient to meet all payments in connection with repairs? Yes, but not for renewals. Renewals must come out of the sinking fund.

617. All pipes are paid for out of loan? Yes.

618. Suppose there were a burst pipe, would the cost of putting in a new pipe be paid for out of loan? No, out of revenue; it would come under the head of repairs.

619. It is proposed to erect a service reservoir containing 400,000 gallons at a cost of £1,189;—would it be expedient to do away with that, and to introduce pressure-reducing valves? Certainly not. The pressure-reducing valves are a good thing on paper, but they have a knack of sticking up.

620. The question cropped up when a former scheme was under consideration, but no decided answer was given upon this point? In some cases it is well to introduce pressure valves in branches to reduce the pressure, but in this case it would be inadvisable to eliminate the service reservoir.

621. One of the principal reasons of the Metropolitan Board having control would be the fact that you would have to deal with at least three municipalities? That is the salient point.

622. *Mr. Watson.*] You were not examined when a water supply scheme for Wollongong was under consideration in 1892? No.

623. You have not gone at any length into the question which is the better scheme for the supply of the town? No.

624. Looking at the two schemes upon the plan, it would appear that the one at the Cataract River would take water to Wollongong by a slightly shorter route? Yes.

625. It would afford a better opportunity for dealing with the more northern municipalities or settlements? Yes.

626. Upon the assumption that your Board were given control of the scheme eventually adopted, which do you think would be the preferable scheme, looking at them on the surface only;—there is a larger catchment area in the case of the Cataract scheme? No; I fancy the Cordeaux scheme has the better catchment area. The area at the Cataract is precipitous and confined. The Cordeaux scheme passes through a great deal of settlement, and could be extended to Corrimal and other places afterwards if it were wanted. I take it that the 8-inch pipe is calculated for the service of all the coast towns.

627. In case the pipes should be insufficient to serve a largely-increased population, they could be easily duplicated? Yes; and they could make a service reservoir at Corrimal and another towards Bulli. These reservoirs would fill during the night with sufficient water for the supply of the towns during the day.

628. From your knowledge of the rainfall on the catchment area, you think it would be enough to meet the wants of Corrimal, Bulli, and Port Kembla, in addition to Wollongong? The catchment area is sufficient if the dam is high enough. That is the point. It is a question of fixing the levels and getting the height of the dam.

629. *Mr. Levien.*] Immediately your Board take control the authority of the local council absolutely ceases? Yes.

630. So that the local people would not be in any way represented upon the controlling authority? No, except through the Minister. Of course the scheme might be extended. Liverpool and Campbelltown vote for the election of suburban municipalities.

631. If this scheme is taken over by the Board, do you not think the Wollongong Council ought to have a vote also? I do not see why they should not. As a matter of equity I think they ought to have it. They are just as much entitled to it as are Liverpool and Campbelltown.

Robert

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

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632. *Mr. Dick.*] Would there be any difficulty in extending this scheme so as to take in the northern townships, as proposed in the original scheme? There would not be any great difficulty, but it would be more economical to make the larger scheme in the first instance than to increase it afterwards.

633. A more comprehensive scheme including Bulli and other places would result in economy of administration and lower rates? Yes; it becomes a question from that point of view whether the original scheme should not be gone back to. It contemplated the inclusion of Bulli and other places.

634. Can you tell the Committee why that scheme was abandoned? Because the northern people did not want the scheme.

635. Is it a better scheme in view of its comprehensive nature than the present one? It is a question which requires careful consideration. If there is a probability of Bulli requiring a supply of water in the near future, it is questionable whether the Department should not go back into the original scheme. The matter ought to be gone into carefully.

636. What changes are necessary in the present scheme in order to make it available for townships as far north as Bulli;—would it mean an increase in the size of the dam and the storage reservoir? Yes, and laying the necessary pipes. You would require to have a larger pipe from the storage reservoir to the point of junction, wherever it might be, for the northern districts.

637. Do you know whether in connection with the proposed scheme any houses in Wollongong are above the level of the service reservoir? I do not think so, but Mr. Wade could tell you that.

638. Could you inform us what prompted the Works Department to prefer this scheme? It was brought about in this way: The original scheme for the supply of the northern townships as well as Wollongong was considered too big, and a modified scheme was suggested to supply Wollongong alone from the same storage reservoir, that is to say the Cataract; but when it came to be looked into, it was found by the late Mr. Price, I think, that a cheaper scheme, taking in Wollongong only, could be obtained from the Cordeaux.

639. Has the fact that Port Kembla is to have a breakwater been considered in connection with this scheme? Yes.

640. It would naturally follow that some of the population at Wollongong would drift down to Port Kembla if there were a harbour there? I think the population there would increase very much.

641. At the expense of Wollongong? I am not prepared to say that, but it will certainly increase very much.

642. If the port is shifted from Wollongong to Port Kembla, will that not have the effect of taking business from Wollongong? I think Wollongong will always be able to do the business it is doing now. I do not think its population is likely to decrease very much, but it is, after all, a matter of opinion.

643. What special advantage have welded steel pipes over the old cast-iron riveted pipes? You get over the difficulty in connection with riveting. It is exceedingly difficult to rivet small pipes so as to make them water-tight.

644. Is there a special kind of joint used in welded pipes? Yes.

645. Will there be more difficulty in keeping welded steel pipes in order than in keeping ordinary pipes in order? Much less, I think.

646. Why are cast-iron pipes to be used in the tunnel? A cast-iron pipe is a cheaper pipe than a steel pipe, and at the tunnel the pipes have not much work to do, because they are nearly up to the source of supply, and there is no great pressure. Then the pipes not being covered in they are liable to rust. Wrought-iron pipes would rust more quickly than cast-iron pipes; therefore it was thought more economical on the whole to put cast-iron pipes in the tunnel.

647. Do you anticipate anything like frequent breakages in the tunnel from falls or slips? No; the tunnel will be of a substantial character.

648. Is it in sandstone? Partly sandstone and partly shale.

649. The shale will require timbering, will it not? It depends upon the nature of the shale. Some shale would stand; other shale is soft and requires timbering.

650. Will it stand when the atmosphere gets on to it? I think so.

651. I find that in the last inquiry it was stated that the expense of running a pipe down to Port Kembla required serious consideration;—unless you can anticipate a large increase of population at Port Kembla that objection will hold good in the present scheme? Yes.

652. *Mr. Levien.*] You have had considerable experience in connection with the Metropolitan Board? Yes.

653. Suppose the Metropolitan Board took the scheme over, do you not think the local Council ought to be represented to the same extent as are Liverpool and other Councils? Certainly, but the Metropolitan Board cannot take over the works without a special Act of Parliament, because they would be outside the county of Cumberland. You would require much more than a clause in the Act dealing with the works. In my opinion, provision would be required in the Board's Act to enable them to take the works over.

654. A resolution must be passed by the Council asking the Minister to pass a special Act to enable the work to be put under the Metropolitan Board? Yes.

655. *Mr. Shepherd.*] The Cataract supply appears to be nearer to Wollongong than the Cordeaux supply? The Cordeaux is the more economical scheme if you are providing for Wollongong and Port Kembla, but it may be necessary, in the future, to supply Bulli and the northern villages; and if that is to be done, then the question must be carefully considered whether it is not cheaper to go back to the Cataract scheme. Although the Cataract scheme is nearer to Wollongong than the Cordeaux scheme, it is £8,000 dearer than the new scheme, because the dam is much more costly.

656. Do you recommend the use of pipes of less than 3 inches? In the city there is nothing less than 4-inch pipes; but in by-streets in country towns 3-inch pipes are found to be sufficient.

657. *Mr. Trickett.*] Do you know what time it is estimated will be required to carry out these works? About twelve months, I think.

658. I suppose that before any scheme could be really carried out some definite arrangement would have to be made with the Borough Council or the Metropolitan Board to undertake the responsibility? The Council would have to pass a resolution in favour of the works. The Board cannot take over the works without special legislation.

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659. That, I believe, is under contemplation? No; the Minister has not considered it, nor has he the slightest intention of doing it, and I do not know why it should be done.
660. Would it not be an economical arrangement? I do not know that there is any great economy. I was asked when I was last here to produce a list showing the position of all the different country towns water supplies. I have a statement here showing the different supplies, the total expenditure and interest, the net debt as gazetted, the annual amount payable, and showing also how the accounts stand up to the end of last month. Out of twenty-five, there are thirteen districts owing their yearly instalments; but, although strictly speaking, they were due last December, the districts have the whole of the year in which to pay them.
661. According to that return localism in administration of water supply appears to be fairly successful? I think so. It is not contemplated to remove the administration from the councils, and I do not see why it should be done. The following are the particulars to which I have referred:—

Waterworks constructed under the Country Towns Water and Sewerage Acts to 30th June, 1898.

Borough or Municipal District.	Total expenditure and interest.	Net debt as gazetted.	Annual instalment.		Amount outstanding 30 Jan., 1899.
			Amount.	Due date.	
	£	£	£		£
Manly	37,820	37,820	1,368	31 Dec.	1,368
Albury	57,244	41,000	1,483	31 ,,	1,483
Armidale	40,564	40,417	1,462	30 June	nil
Balranald	9,383	6,000	217	31 Dec.	768*
Bathurst	69,258	55,000	1,989	31 ,,	1,989
Bourke	17,308	13,436	486	31 ,,	474
Coonamble	6,946	6,742	244	30 June	nil
Cootamundra	12,540	10,896	394	31 Dec.	nil
Deniliquin	23,998	18,468	668	31 ,,	668
Dubbo	15,238	15,238	551	30 June	nil
Forbes	9,415	7,958	288	31 Dec.	nil
Goulburn	71,035	55,000	1,989	31 ,,	nil
Hay	8,341	7,691	278	31 ,,	278
Jerilderie	6,580	5,429	196	31 ,,	196
Lismore	10,975	10,016	362	31 ,,	nil
Lithgow	12,749	12,749	461	30 June	nil
Moama	7,653	7,601	275	31 Dec.	225
Moss Vale	18,801	13,000	470	30 June	nil
Nowra	12,593	12,593	455	30 ,,	455
Nyngan	11,754	9,000	325	31 Dec.	nil
Orange	35,712	32,688	1,182	31 ,,	1,182
Wagga Wagga	48,318	38,500	1,392	31 ,,	nil
Wentworth	11,539	4,000	145	31 ,,	358*
Wilcannia	9,588	8,381	303	31 ,,	383*
Totals £	565,352	469,623	16,983	.....	9,827

* These towns are in arrears in respect of instalments due before 1898, as follows:—Balranald, £551; Wentworth, £213; Wilcannia, £80.

662. The Committee have considered the question in relation to the more economical or advantageous method;—if, for instance, the Board could administer the works more cheaply than could the local council, there is no reason why the Board should not administer them? That is the whole question. At all events, the Councils are paying up the amounts they owe. We had some trouble at first, but the matter was not then on a proper footing. It has since been altered, and people are paying up their instalments without any trouble.
663. Does the return include everything chargeable to each water supply—repairs, sinking fund, cost of collection, and so forth? Yes.
664. Notwithstanding the reports from time to time as to country water supplies being a failure, the return you have produced is a contradiction of those reports? Yes.
665. In this proposed scheme there is some little difficulty by reason of part of the supply being in incorporated areas, and part of it applying to localities which are not incorporated? We are providing for that by an amendment in the Country Towns Water Supply Act. The difficulty in some country towns has been that they cannot go outside their own boundaries.
666. You can imagine a uniform rate in a concentrated area, such as the town of Wollongong, but when you come to outlying, scattered, and sparsely-populated areas, would the same rate be a fair one to charge for the supply of water? Of course in any special case water can be supplied through meter. There is a regulation or by-law in connection with the Country Towns Water Supply Act which I think meets all cases of that kind.
667. In populated areas the number supplied reduces the cost, but in outlying districts would you charge the same rate? I think so. We would not lay a pipe in the first instance unless we had a sufficient number of people in a locality to give us a reasonable return for our outlay.
668. You would not supply any locality unless there were enough people there to make the reticulation fairly remunerative? Certainly.
669. And the difficulty of which you have spoken is to be cured by legislation? Yes.
670. Has this difficulty cropped up in any other locality? No; we have had only one application to extend the water supply outside the boundaries of the municipalities, and it was to meet that one case, and possibly other cases which may crop up, that an amending clause has been prepared in the Country Towns Water Supply Act.
671. Seeing that we have no universal system of local government, that is absolutely necessary? Yes.
672. *Mr. Levien.*] Suppose I am resident a quarter of a mile from the main, and you are asked to carry a pipe to my residence, suppose I pay half the cost, would that arrangement be satisfactory? What would be done in a case of that kind would be this: You would be furnished with a statement showing the total

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cost of the work and the total revenue required. You would be asked if you were prepared to give that revenue or not. You would have to pay a revenue which would yield a fair amount of interest on the outlay.

673. *Mr. Trickett.*] Are not the Works Department and the Metropolitan Board in close touch with regard to certain works, and do you not think that where there is a probability of such works being administered by the Water and Sewerage Board we should get the benefit of the advice of the two Departments as regards sufficiency of piping and other details? Yes.

674. When a work is carried out it is handed over as a going concern to the Water and Sewerage Board if they are to have control? Yes.

675. *Chairman.*] Has the control by the Board of the Campbelltown, Richmond, and Liverpool works been satisfactory as compared with their control by the municipalities? The Metropolitan Board have control of the Campbelltown and Liverpool works because they are within the county of Cumberland. They obtained control of the Camden works by a special Act passed last Session, at the request of the Camden people, the reason being that one half of Camden is within the metropolitan area in the county of Cumberland, the other half being outside. The Board control Richmond simply for the Minister for Works. They have no responsibility whatsoever in connection with the matter. The council asked to be relieved of the responsibility, and the Secretary for Public Works having no machinery asked the Metropolitan Board to administer the works for him, but they have no responsibility in the way in which they have responsibility over the metropolitan area. Since the works have been under their control, however, everything has been very satisfactory.

676. Do you not think it would be well in the amendment of the Act to provide for the control by the Metropolitan Board of such schemes as that at Wollongong? It is a matter of opinion. I do not see why the Wollongong Council cannot administer the supply.

677. Seeing that there are three municipalities to be dealt with, would it not be more economical and satisfactory to give the Board control? It is wholly a matter for the Council. If they ask for it, I am sure the Minister would give the request every consideration.

678. *Dr. Garran.*] Is not the fact that the water to be taken is part of the water at present under the control of the Metropolitan Board one reason why they should take charge of this scheme? I do not think it is any reason at all.

679. You do not think that affects the question? Not in the slightest degree.

680. Could you, under the present Metropolitan Water Supply Act, take over these works without any further legislation? No.

681. Is it not a fact that the Government have been trying to get an amended Act through Parliament? Yes.

682. They failed in the last Session but one in doing so? Yes.

683. It will always be difficult to get such an Act through? I can hardly express an opinion upon that point.

684. The reason I ask the question is that if the present Act cannot be made to work, and if there is difficulty in getting an amending Act through, it might be better to include the necessary provision in the Act for the construction of these works than to wait for an amendment of the Principal Act? I do not think that would be sufficient. You would require an amendment of the Metropolitan Act, giving the Board control over these works.

685. You do not think a clause could be included in the Wollongong Waterworks Act? I scarcely think so; but it is a legal question. If it were decided to give the Board control, an Act might be passed similar to the Camden Act which was passed last Session.

686. In that case you would require two small Bills? Yes. If you ask me whether it should be done, I do not think it should. I do not see any difficulty in the Wollongong people managing their own water supply.

687. Have not the Metropolitan Board much more experience in managing water supplies than any local council would be likely to have? We have no trouble with the twenty-five country towns which are managing their own supplies.

688. But has there not been a good deal of squeezing necessary in order to get them up to their present condition in regard to payment? There was some difficulty at first, but the machinery works without any friction now.

689. Although in the past local management has not been successful, it is working satisfactorily now? Yes. The taking of the works over by the Board is really a matter of policy. I merely express my personal view.

690. Is not the Government trying to get an amending Act through Parliament dealing with all local water enterprises? Yes.

691. We might have to wait some time for that Bill? Yes.

692. There are two amendments, then, awaiting the consent of Parliament? Yes.

693. Do you not think that the Metropolitan Board, having more practised talent at its command than any municipality could possibly have, should be the controlling authority in such a case as this? There is not very much talent required in managing a water supply like this, where the pipes are all laid down, and where the whole thing is handed over in first-class running order.

694. You said that at Tamworth a difficulty arose through an inexperienced man being put in charge? Mr. Darley thinks so.

695–6. Did you appoint him? He was nominated by the Council and worked under our foreman for two months to obtain the necessary experience.

697. Can the Municipal Council command the requisite ability in cases of this kind as easily as can the Metropolitan Board? When a scheme is handed over in perfect working order very little management is required.

698. Still in the main the Board, with all its work to do, is in command of more experienced servants than are Municipal Councils? Yes.

699. Is not that a very good reason for handing this scheme over to the Board rather than to the Council? If you argue that way it would apply to every Municipality in the Colony. We should have to take them all over, and I question whether the Minister would be prepared to do that.

700.

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700. Still, when the Board can take the works over without difficulty,—when the water, for instance, is in the Board's domain, and when there is no objection on the ground of distance, it might be done. I can see no advantage in this particular case.
701. In your statement you mentioned two schemes—one impounding 65,000,000 gallons, and the other impounding 168,000,000 gallons;—which of those schemes do you recommend? I cannot help thinking that in the near future Bulli and the northern villages will have to be supplied with water, and I think it would be a pity to put down a scheme which would be ineffective for that purpose.
702. I understand that the extra expense of the large scheme was not much more than about £3,000? Quite so.
703. And in consideration of that additional expenditure you could impound nearly three times as much water? Yes.
704. Do you not think that money will be well expended? I do.
705. On the whole, your advice would be to go on at once with the larger scheme? I think so.
706. Although you seem to have a strong leaning to municipal control, you would not force this scheme upon the Wollongong people if they did not wish to take it? Certainly not.
707. If they preferred to leave the matter in the hands of the Board, you would acquiesce? I do not know what the Minister's views may be, but if the local people were strongly in favour of handing the scheme over to the Board I do not think he would be against it.
708. As an advising officer, that is what you would advise? Yes.
709. *Mr. Watson.*] One of the main reasons for the proposal that the Board should take over the scheme was that it would be difficult for the Municipal Council to deal with the selling of water outside its own boundaries, and that it might lead to an economical working of the whole scheme if the Board were put in a position to control it, and to charge persons along the pipe-line;—from that point of view, do you not think it would be wise to have some body other than the Municipal Council to control the scheme? I do not think so, because in either case you would require an amending bill, and it is as easy to get it in one case as in the other.
710. Do you think the people outside the boundaries of Wollongong would be content to buy their water from the Borough Council, having no voice whatever in the control of the works? That I cannot say.
711. The probability is that they would ask to have erected a local board in the election of the members of which they would have some voice? They would have no voice so far as the Metropolitan Board was concerned.
712. But supposing provision were made for the election of a municipal representative? Then you would require a still further amendment of the Act, rendering the matter even more difficult.
713. In the case of Camden, is there any provision for the election of a suburban representative upon the Board? No, because only one-half of Camden is outside the county of Cumberland. One-half of the town had to be regulated by the Board in any case, and it was easier to have it all so regulated.
714. As to your suggestion about provision being made for Port Kembla, supposing that scheme is taken in hand, that portion of the cost of construction represented by the Port Kembla addition would lie idle until population came there? It would have to lie idle for some time.
715. The Government would therefore lose interest upon that portion of the cost of construction? Yes; but it is hardly likely to be the case long, because we hope to make a start with the Port Kembla works shortly, and that will bring the population there immediately. By the time the works were finished there would be a fair population at Port Kembla.
716. Out of the cost of the complete scheme, it is proposed to charge Wollongong £16,000, leaving £7,000 to be debited to Port Kembla? Yes.
717. Would it not be well in the meantime to charge Wollongong with a slightly greater proportion than that named, pending the bringing into use of the Port Kembla portion of the scheme? It would be hardly fair to charge Wollongong with more than its just proportion of the cost.
718. But it would be in no worse position than if the scheme were made for Wollongong alone? Quite so. You might charge them the cost of a scheme for themselves, namely, £21,000.
719. If the Port Kembla scheme were never utilised they would still have a storage capacity of 168,000,000 gallons? Yes.
720. And it would not be wise to contemplate the loss of interest upon £7,000 or £8,000 per annum if it could be avoided? No; but by the time this water scheme is complete and ready for the distribution of water there ought to be a fair population at Port Kembla, so that we shall begin to get revenue immediately.
721. *Chairman.*] You say that it will take about twelve months to complete this scheme, and you state that by that time there will be a large population at Port Kembla? I think so.
722. Suppose there were any trouble with regard to the land proposed to be resumed at Port Kembla, and suppose the Government could not get control within a reasonable time;—would you go on with the Port Kembla harbour scheme? That is specially provided for in the Act. We can make arrangements at once to get the land.
723. You do not anticipate any trouble? No; we have such powers that we can get the land under favourable circumstances.
724. *Dr. Garran.*] Can you commence the Port Kembla work until the resumption is agreed upon? No, but it will not be long.
725. *Chairman.*] After it is complete the only population would be the workmen on the works? Yes, and the shipping.
726. You think that the works would be so far advanced that it would be justifiable to carry on water-works in that direction? Yes; they will require water for the engines and cranes, and it would be a great advantage to have it available.
727. How long do you anticipate it would take to complete the work at Port Kembla? Somewhere about four or five years.
728. And before they are completed it is possible that a larger class of shipping will trade there? Yes.
729. Long before they are finished? Yes.
730. You expect an improvement in shipping shortly after the works commence? I should say that within two years of the commencement of the works there ought to be a considerable improvement in the shipping.

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731. Vessels have taken large cargoes there lately? Yes, good-sized vessels are going there.
732. Do you anticipate in the near future the supply of a larger quantity of water to Port Kembla than that supplied to Wollongong? That will be a good long time ahead.
733. But it would be quite natural that population should drift from Wollongong down to Port Kembla? There will, no doubt, be a large population at Port Kembla in course of time.

FRIDAY, 3 FEBRUARY, 1899.

[*The Committee met at the Court-house, Wollongong, at 2 p.m.*]

Present:—

JOHN PERRY, Esq. (CHAIRMAN).

The Hon. PATRICK LINDESAY CRAWFORD SHEPHERD.
The Hon. ANDREW GARRAN, LL.D.
The Hon. WILLIAM JOSEPH TRICKETT.
WILLIAM THOMAS DICK, Esq.
JOHN CHRISTIAN WATSON, Esq.
ROBERT HENRY LEVIEN, Esq.

The Committee further considered the expediency of constructing Water Supply Works for the Borough of Wollongong.

Henry Osborne MacCabe, Mayor of Wollongong, sworn, and examined:—

H. O. MacCabe. 3 Feb., 1899.

734. *Chairman.*] What is your position? I am mayor of Wollongong and manager of the Mount Keira Coal-mining Company.
735. As mayor of the borough have you had any communication in connection with the proposal before the Committee from the Government? Yes; the question of water supply for Wollongong has been agitated now for a great many years, and a variety of schemes have been put forward. I, myself, surveyed the Cataract scheme, under instructions from the Engineer-in-Chief for Harbours and Rivers. The Cataract scheme was placed before the Public Works Committee some years ago, and they recommended a modification of it. It was found that the scheme would cost so much money that the Borough of Wollongong itself would not be in a position to guarantee the interest upon it; and the adjoining boroughs were not in a position to guarantee any portion of the cost. The question resolved itself into the adoption of a modified scheme, so far as Wollongong was concerned, and finally the scheme before the Committee was put forward. I do not know whether the Committee wish me to enter into the question of the necessity of a water supply for Wollongong.
736. The presumption is that no action would have been taken by the people of Wollongong had they not required a supply of water; I do not think there is very much doubt upon that point? I feel in the position here of a special pleader in this matter, and, of course, if the question of the necessity for a supply were admitted there would be no need for me to go into that question. As to the history of the movement after the Public Works Committee had recommended the Cataract scheme as applied to Wollongong itself, it was discovered that the borough could not afford the necessary money, and we then began to look about for another scheme. The Cordeaux scheme was suggested to the Government as being a practicable scheme, and it was discovered that a good supply of water could be obtained from that source at a cost of about £21,000. I, as mayor, with the consent of the council, then referred the question of water supply, at a cost of about £20,000, to a plebiscite of the municipality. That was taken in August, 1897, with the result that 411 ratepayers voted in favour of obtaining the supply from the Cordeaux River, as against 109 who voted in the negative. The municipal franchise was adopted, and ratepayers gave two, three, or four votes, as the case might be. The whole matter was thoroughly explained to the ratepayers. A public meeting was held, at which the whole details of the scheme were clearly explained.
737. Could you give us the number of ratepayers who actually voted? I am afraid I could not do that; it is hardly possible now; the papers were all put away, and it would involve much work to furnish you with the particulars. As a matter of fact, some of the cumulative votes were cast against the project. I should certainly say that the majority represented a majority of the individual votes. The Committee will themselves find the best evidence of the want of a water supply to-morrow morning at their hotel, where they will find that they cannot obtain a bath. The need of a water supply for the extinction of fire is also very urgent. If a fire were to break out in the town to-night, we should have no water whatever to cope with it. Then the drains are very much in need of flushing. You can hardly walk along the front streets without meeting a stink almost enough to knock you down, and the back streets are in a worse condition. The Government Medical Officer, who will give evidence to you on Monday, told me just now that some of the deaths which had occurred in town within the last few weeks had been simply through the want of water for the flushing of drains. The collieries as you know are the main industry of the district, and some of those also are very much in want of water. As to my own colliery, the Mount Keira colliery, I can speak positively on that point. I am only able to work for half-a-day. It takes us the remaining part of the day to draw the necessary water. Last Tuesday we had an order for forty waggons, and we had to stop before the loading was completed, entirely owing to the want of water. The Mount Pleasant colliery has been obtaining water from Sydney in its steamers for over six weeks. I was talking last night to one of the officials of the Mount Kembla mine, and he told me that they had enough water to keep their locomotives going until the end of this week.
738. Are these collieries in the borough? No; Mount Keira is within the borough of North Illawarra, and is partly on unincorporated land. Mount Pleasant is in the borough of North Illawarra, and is on land which is not incorporated. Mount Kembla is in the Borough of Central Illawarra, but is on the proposed pipe-line from the Cordeaux River.
739. Have you studied the proposal sufficiently to be able to say whether it is better than the one formerly submitted to the Committee? Without having absolutely going into the whole of the details of the scheme, I may say that I have examined the sites in both cases. I think the Cordeaux scheme is quite practicable, and is very well suited to our requirements. Wherever you put a dam upon the river it would be necessary to bring a tunnel out to this side of the mountain, and to run the supply thence to the town. The Cordeaux is also one of the stations at which the largest rainfall is recorded. The Cordeaux station,

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station, I think, is generally second to only one other in the Colony. I believe Kiandra. The recording station is 1½ mile distant from the proposed storage reservoir.

740. I understand that there was at one time some opposition to the scheme;—can you inform the Committee whether that opposition has increased or diminished? It is decreasing at the present time. The most prominent opponent of the Cordeaux scheme was Mr. Wiseman, but I think his opinion has changed, and that he is now in favour of the scheme.

741. I suppose that you, as mayor, have gone thoroughly into the question whether the scheme now submitted is too expensive, or whether it is within the means of the borough? The council have gone into the scheme very carefully, and have been very particular not to undertake any scheme in connection with which they cannot see their way to pay interest. We decided that we could afford to pay interest upon any scheme at the cost of about £20,000. A resolution was passed at a public meeting of ratepayers on the 18th August, approving of the scheme at a cost of not more than £20,000. We wanted to protect ourselves to that extent. The Government could not come to any agreement upon the terms suggested, but they said their estimate would be between £21,000 and £22,000, and that any tenders should be submitted to us for our approval before they were let. We are quite prepared to pay interest on £22,000, but we would rather the amount were £20,000.

742–3. The proposal provides for a supply to Port Kembla, but in order to give that supply the cost of the storage reservoir would be considerably increased;—a storage reservoir would be provided impounding 168,000,000 gallons, and from that reservoir we are told that it would be practicable to suppy not only Port Kembla but also boroughs to the north of Wollongong. Seeing that the water supply is not intended exclusively for the supply at Wollongong, have you considered the advisableness of handing over the control of the supply to the Metropolitan Board of Water and Sewerage? We have not considered that matter. The first I knew about that question was from what I saw in the newspapers this morning. Speaking personally, and I think I may speak also for the Council, the more I think about the proposal the less I like it. We applied that the works should be carried out under the Country Water Supply and Sewerage Act. We could see our way to meet the requirements of that Act, and I think we should be making a mistake in allowing the control of the water supply to pass out of our hands. I do not see how we are to have any control over the works if they are put into the hands of the Metropolitan Board of Water Supply and Sewerage. We think that the scheme will be a profitable scheme, and that being a profitable scheme it will increase the assets of the borough. We are not able to sell the works, but they may so increase in value as to enable us to borrow money upon them for the construction of other works in the borough. It seems to us that if we hand the works over to the Metropolitan Board, we should be depriving ourselves of any advantage that might accrue from the prosperity of our own town.

744. Port Kembla is outside your municipal boundary? Yes.

745. How would you propose to deal with a water supply to any Municipality in such a position? It seems to me that we should be in the same position in which any public company would be. If you supply water under such circumstances you have your common law right. You make a certain arrangement with the persons to whom you supplied water, and you would collect your money from them under your agreement. If we agreed to sell water to any persons other than our own ratepayers we should still have our common law right, and I presume could proceed under the Small Debts Act or some other Act of Parliament.

746. *Dr. Garran.*] When you decided that you could not stand an outlay of £30,000, did you make any representations to the Government to the effect that they were not to proceed with such costly works? No; I think the Public Works Committee pointed out that the Municipality of Wollongong could not possibly meet such an expenditure, and this municipality, if I recollect rightly, was at that time the only one which was prepared to give any security. Other people would have been glad to get the water, but they could give no security. The Government themselves determined that they could not advance us the money.

747. I understand that the Committee recommended a scheme to cost £30,000 for Wollongong alone, but that the town came to the conclusion that they could not meet that expenditure;—what I wanted to know is whether the town took steps to influence the Government not to carry out these works? I do not recollect exactly what occurred. My impression is that we said we could not pay the necessary amount, and the Government quite realising that dropped the works.

748. That was in 1892? Yes.

749. We are now in 1899;—during that interval how has the township got along without a water supply of the kind proposed? We have been drawing water, and have been depending upon our own tanks. At the present time we are drawing from a very inferior source of supply between this point and the showground. The principal source of supply at the present time is from roof catchment.

750. How long a supply would that mean upon the average? I should say, on the average, two months.

751. A large number of people here would not have more than a two months' supply of water? From what I can gather.

752. They are then dependent upon a very inferior quality of water? Yes.

753. Which they have to cart at considerable expense? Yes.

754. Would not the expense of carting the water be greater than the expense of putting up additional tanks? It is a question of capital; many of them cannot afford the necessary capital.

755. But if they could afford it it would pay better to put up tanks than to cart water? Yes; during the time we are short.

756. So far as your experience goes, has the pressure on the population been greater during the last few years than it was seven years ago? I think so. We have had more dry weather during the last four years.

757. People have felt the pinch? Yes.

758. Do you think that has moved public opinion in this matter? I think all thoughtful men in the town recognise the fact that unless a decent water supply is provided, there will be no chance of any industries being established. I know that as a matter of fact it was proposed to start a small coke industry here, but one of the chief reasons for not starting it is that we do not know where to get the water, and we should not want a great deal of it.

759. The scheme prepared by the Engineer-in-Chief is in a sense a twofold scheme. There is a scheme at a cost of £21,000 to impound 65,000,000 gallons, and another scheme at £24,710 to impound nearly

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nearly three times that quantity of water. Have you considered which of those two schemes would be the better for Wollongong? If the Wollongong Council would get the revenue from the larger scheme, they would be quite prepared to accept it, and to speculate the extra few thousand pounds. Of course the permission to sell water to other people depends upon our right to lay pipes in other municipalities. The collection of the money I do not think is a very serious matter, because if any person supplies a commodity to another, he has a common law right to recover.

760. It will probably rest largely with the people themselves whether they take charge of the scheme, or whether it is controlled by the Metropolitan Board. But assuming that the Council took charge of the scheme, would you, as mayor, advocate the larger scheme? If I had the assurance that we could lay pipes down to Port Kembla, and charge rates there, I would vote for the larger scheme, but if the taking of the scheme elsewhere than Wollongong involved the taking the matter out of the control of the Wollongong Council, I should advocate the smaller scheme. I do not at all like the idea of handing the control of the scheme over to the Board.

761. We will assume that the Council are willing to manage the scheme;—it appears from the engineers that if we afterwards increased the size of the dam, it would be done at a largely increased cost, and that if we want to provide for a larger supply, the cheaper way is to do it in the first instance. Under those circumstances would you be willing to pledge the Council to the larger scheme costing £25,000? I admit there would be some difference in the cost of putting up a big dam now, and increasing the size of it afterwards. But you might build a dam now, say, 20 feet in height, and at the same time put in such foundations that it could be afterwards increased to 40 feet.

762. You would have to make the dam broader at once? That dam would have to be built broader in view of the contingency of its height being one day increased. I do not think the increased cost of doing that will be a matter for very serious consideration.

763. Would you rather have the smaller scheme limited to Wollongong, or the larger scheme supplying other municipalities as well as Wollongong? I think the work should be started in view of the contingency of one day carrying out the larger scheme. Suppose the larger scheme required 40 feet of dam. I suppose that less than 30 feet would do at the present time. I do not think there would be any objection to making the foundations of the dam substantial enough to admit of its being carried up to 40 feet if that were afterwards required.

764. You are aware that that would involve a larger expenditure than £21,000? If it is necessary to go 30 feet to impound 65,000,000, you might go to only 20 feet and still impound the necessary quantity of water. You might economise in that way. That would probably meet our requirements for a long time.

765. Although £21,000 is quite enough to start the smaller scheme for the supply of Wollongong, it is not enough to start a scheme for the supply of all those living in the outlying districts;—you quite understand that? Yes.

766. If the Council took over the scheme upon its own responsibility, there would be unsupplied streets to be afterwards taken into consideration;—according to the present map of reticulation, certain streets are not to be supplied with water at present;—if you supply those streets you will have to increase your reticulation? They could be supplied with standpipes from which they could cart their water. If we found that it would not pay to take water to certain houses we should not do so. The revenue collected would be only from those supplied, and not from outlying dwellings in unreticulated streets. There are 643 dwellings in the borough, and seventy-three other buildings.

767. Have you studied the question of reticulation sufficiently to know how many streets are covered with pipes, and how many are not? I studied the question some time ago, and I know that the figures with which Mr. Hickson supplied you were furnished by his own officer, in connection with officers of the Council. Without absolutely knowing what are the figures I know that they are correct.

768. Mr. Hickson said that they proposed to lay the mains where they thought they would pay, and stop short at places where they thought the expense would be more than the income? The people outside the streets whom it is proposed to supply with pipes could obtain water from stand-pipes. I quite realise that it will not pay to lay the pipes in a number of our streets.

769. Your feeling at present is decidedly in favour of the smaller scheme? I would not say that. If the Wollongong Municipality could get the right, as I understand we could, to supply adjoining municipalities, I would advocate the bigger scheme; but if the supply at Wollongong is all that we should control, then let us have the smaller scheme, and let Port Kembla and the other places go. I hope, however, that some arrangement will be made under which we could supply Port Kembla.

770. At the present time there is no great demand at Port Kembla? No; but there will be when the harbour is constructed.

771. That will be some years hence? Three years we hope.

772. You would not propose laying the pipes to Port Kembla at present for reticulation? I am not at all sure about that. As soon as the work is started there there will be a considerable population of workingmen and a corresponding demand for water—some for steam and some for general purposes.

773. What population at Port Kembla would justify the Council in laying pipes there? It all depends what size pipes you put in; you can carry water a long distance in small pipes. It must be borne in mind that you would have a good head of water.

774. You would take the water from some point above the service reservoir? Yes; you must get a pressure.

775. But would you not make a second service reservoir at Port Kembla? Not for their present purposes. I do not think it would be necessary to do so.

776. Would you let the full pressure of your head of 800 feet go into all the reticulation pipes? If that would not do you could have a relieving tank. When you talk of a service reservoir it means something big, costing a lot of money, and I am not at all sure that we want as big a service reservoir for Wollongong as is provided.

777. A service reservoir is to be provided for Wollongong at a cost of £1,189;—you would not want a larger one than that? Certainly not. A relieving tank would probably serve all the purposes of Port Kembla for a long time to come.

778. Do you think the revenue from the proposed supply has been over-estimated or under-estimated by the Government? I have not gone into the question myself, but accepting the figures taken from our own books by the Government officer and our own officers the revenue expected to be derived from the reticulated area would be about £900.

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779. You understand that it is of great importance at the present time that the Committee should be assured that the local authorities thoroughly understand the nature of the liability they are incurring? They understand it perfectly.
780. The figures have really been given by you to the Government? They have been taken from our books by a Government officer. If we had gone into the question ourselves we should have arrived at the same conclusion.
781. You have no doubt then about the figures? No doubt whatever. I think the Government officer and our own clerks have been perfectly honest in the matter.
782. You think the margin allowed makes the work perfectly safe as far as the Council are concerned? Yes.
783. You would not be afraid to take it over? No.
784. If the Government carried out the work for, say, £22,000, you would be content? Yes.
785. The Government engineers tell us that the only element of doubt in their estimate consists in the foundation of the dam? That would seem to show that they are cautious men.
786. The cost of reticulation is a matter of accurate calculation;—you quite agree with that? Yes.
787. You yourself have done a great deal of that kind of work, and you see that there is not much margin for doubt in regard to that item? Yes; as far as I can see the only item in regard to which there can be any doubt is the foundation of the dam.
788. It is proposed to put the foundations of the dam upon a dyke of blue stone; that would make it stronger, I presume? As long as they keep on the basalt they are right. Of course something depends upon the nature of the joint between the basalt and the other strata.
789. But if it were basalt all through you could not have a better foundation? No; I should be quite satisfied with that.
790. So far as the smaller scheme is concerned, your present feeling is that the Council would be quite justified in taking it over at a cost of £22,000? Yes.
791. You would rather do that than go into the more ambitious scheme? Yes; especially if we had not control of that scheme.
792. You would not like to see the full-sized scheme carried out at once? Not immediately; but as soon as Port Kembla commences to go ahead we might be allowed, I think, to put in pipes and supply them.
793. You would suggest that you should find your own men to lay the pipes? Yes.
794. You would like to have the whole speculation under your control? Yes.
795. But for the present you are quite prepared to take the smaller scheme for £22,000? Yes; if the Government could give us the scheme to-morrow I would willingly sign the documents on behalf of the Council.
796. And you think that is the general feeling in Wollongong in regard to the matter? Yes.
797. *Mr. Trickett.*] What rate are your ratepayers paying? One shilling general rate, 4d. lighting rate, library, 1d.; cesspits, 4d. per cubic yard; pans, 1s. 6d. for the first, and for every additional one, 1s.; the lastnamed is a weekly service.
798. If this scheme is carried out the ratepayers will be asked to pay another 1s. in the £? Yes.
799. That will bring the rates pretty well up to 3s.? It will bring them up to 2s. 5d. in the £.
800. But cesspits involve a necessary charge? Yes.
801. It really amounts to a rate? Yes. So far as the rates are concerned, I do not think the arrears since 1892 would be more than £100. My experience is that if a mayor makes up his mind that he is going to get in rates, he can get them. As a matter of fact, when I came into the Council some two years ago there were arrears of rates to the extent of £700 or £800, but I managed to get in the whole lot, and no one is injured in consequence.
802. What I wanted to know was whether the ratepayers would be prepared to pay as much as 2s. 6d. in the £? Most certainly. They would be glad to have the opportunity; they would be very glad to pay 1s. rate for water. There is a great deal of discomfort and absolute danger to life arising from the want of water at the present time.
803. You are quite satisfied as to the financial aspect of the scheme? Yes.
804. The Government estimate of revenue is £900 for a 5-per cent. rate; £75 upon public buildings, and for the supply of water by meter, £50, making a total of £1,025;—you think there is no doubt that revenue would be collected? There is no doubt about that. I think the Government have underestimated the revenue from meters.
805. You look upon Wollongong as a progressive town? When we get the Port Kembla harbour, Wollongong will undoubtedly progress. It has been a progressive town. When I came to live here in 1883 it was comparatively a small place; it increased rapidly for eight or nine years, and it has since practically stood still, as have nearly all country towns in New South Wales. When we get the Port Kembla Harbour, I think I am quite right in saying that the mines will be kept going certainly more than half as much again as they are now. The increased wages which are paid will be distributed in the town, and that of itself will make a great difference.
806. You do not think the effect of the Port Kembla breakwater will be to take away your population? I do not anticipate that for one moment. I daresay a large population will gather around Port Kembla, but the providing of ships, and that kind of thing, will go on from here. In my opinion, Port Kembla will be to Wollongong what Port Adelaide has been to Adelaide.
807. Even if your population does go on to Port Kembla, to some degree this water scheme would not suffer, because the water would be supplied in a greater quantity there than it is here? The water scheme is safe enough.
808. Even if Port Kembla drew people from Wollongong? Yes; even if the whole of Wollongong went to Port Kembla, if you could imagine such an absurdity.
809. You think the proposed reticulation is satisfactory? Yes.
810. You think it will sufficiently supply the thickly-populated parts of the town? It seems to go as far as we should be justified in going at the present time, I think.
811. In their estimate of revenue of £900 the Government has allowed for properties outside reticulation area? I am told by the Council clerk that the £900 consists of properties within 50 yards of the reticulation; but I do not know that of my own knowledge.
812. Why do you think that Wollongong is likely to remain always a centre, seeing that you have at Port

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Port Kembla a harbour which is already patronised to a small extent;—assuming that Port Kembla draws people away from Wollongong, what is to make Wollongong progressive? In the first place, it is the centre of the administration of justice, and it would be the main post office, and the Banks have business establishments here. There are several large business firms established here, who, if they found it necessary to go to Port Kembla, would have only branch establishments here. This is an old-established place, and there are means of amusement here. People get into a settled habit of coming to this centre, which is also a centre for railway communication. People come here from the north and from the south for amusement and general business. It is mere pessimism to think that anything else is likely to happen. People are not likely to go down on a branch line to Port Kembla for the purposes I have indicated.

813. It has been stated that some of the coal-mines at Bulli are being worked out? It is true to an extent with respect to one of the mines—the Bellambi mine—which has a dyke across its workings. That mine will not long be working on the Bulli seams; but the statement is not true as regards other mines.

814. As to the Mount Pleasant and the Mount Keira mines, is there a large quantity of coal in them? There is a large quantity of coal. The whole of the area which both Keira and the Mount Pleasant mine have unworked is excellent coal. The same may be said as regards Mount Kembla and South Bulli.

815. You do not think the district is likely to suffer from a diminution of the coal output? I forget what the estimated quantity of coal here is; but any talk of the seam working out in a particular time is so much nonsense.

816. If the water-supply tanks here get empty, what do the people do? They send down to some holes which we have here, where they have to pump the water; but when the water has been standing for a while it is not at all good. People have to take their turn with the horse and cart. If some one has been immediately ahead of you, you have to wait until more water makes. The water is very hard. We cannot dig in the sand here and get fresh water; the water comes through clay, and it makes rather slowly. The whole of the water which people use is taken from the flats, and the flats are the main receptacle for the whole of the sewage of the town. After a few weeks of dry weather the complaints made of stinking drains are very great. The drainage matter is pushed further and further away, and when the rain comes it washes it down on to the flats.

817. When the tanks are exhausted the lagoon water is totally unfit for drinking? It used to be good, but it is now so bad that people will not send horses there to drink. We obtain our supply now from the south-eastern side of the town.

818. There is no doubt as to the necessity for the supply? No.

819. You know the source of the proposed supply? Yes; I have never examined it carefully, but I am quite prepared to take the reports of the Government engineer who had time to go into the whole of the details. The scheme is perfectly feasible.

820. The water is similar to that supplied to Sydney? Yes.

821. The fall is good? Yes.

822. And the scheme is in every way practicable? Yes; and the water area is fairly free from occupation. There is a little occupation, but not enough to contaminate the water. The Board have powers under their Act of Parliament to prevent pollution.

823. The catchment area is at present under occupation? A small portion of it.

824. One of the advantages of this scheme is that it would give you an abundance of supply free from local contamination; that is to say, the land will be resumed? I am not sure that the whole of it will be resumed, but sufficient will be resumed to ensure that no contamination of the supply will take place. I do not pay any attention to the fact that people are in occupation to some extent of the catchment area.

825. You yourself suggested a scheme for the supply of the district with water? Yes.

826. You do not advance it now? I do not advance it at the present time at all. My idea was that it could be put into operation in a few weeks, whereas other schemes might take months.

827. Have you considered this scheme in connection with the supply of other districts beyond Port Kembla? My idea is that, even if you are going to supply the northern areas, the Cordeaux scheme is the most central scheme, taking the district as a whole; you have Bulli to the north, and Port Kembla to the east, and Dapto to the south-east; in relation to those places the Cordeaux is centrally situated. I know the Cataract scheme intimately, and I know that the river just at the point where it was proposed to put the dam is often dry when the Cordeaux River is running.

828. Do you think North Illawarra and the other places which have been mentioned are of sufficient magnitude to undertake the scheme? I do not. The population of North Illawarra is a fairly large one in the aggregate, but it is scattered. First of all there is Bellambi, where there may be twenty or thirty houses; then there is Corrimal with perhaps seventy or eighty; then we come to Balgownie with 150 or 200; Fairy Meadow with perhaps twenty-five or thirty; Keira with forty or fifty; Paradise with thirty; and Zlotkowski with thirty. All these places are at a considerable distance from the other. The distance from Keira to Zlotkowski is half-a-mile; from Keira to Balgownie is 3 miles; from Balgownie to Fairy Meadow 2 miles; from Fairy Meadow to Corrimal 1½ mile; from Corrimal to Bellambi 1¼ mile; and so on.

829. You do not think it would be reasonable, at the present time, to afford a supply to these scattered districts? It would not be practicable as a paying concern.

830. What is the municipal debt of Wollongong? At the present time we owe £8,000 in debentures; we have an overdraft of £700 in the old Bank account, and about £30 on the current account.

831. You are paying interest on these various amounts; the revenue derived from the water supply would be sufficient to enable you to pay your way, over and above the interest on these loans? Yes. At the present time we are just making both ends meet; but we are not keeping the streets in very good order.

832. You just manage to keep things going? Yes.

833. Rents are low? They cannot very well be lower. Persons would be very glad to let me have now for £20 a house for which five years ago I was paying £80.

834. Almost any change would mean an improvement in the revenue? Yes.

835. *Mr. Dick.*] You are very definite in your objection to putting the administration of the proposed water supply in the hands of the Metropolitan Board? Yes.

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836. I am not misunderstanding you when I say that one of your reasons for objecting to the Board having control is, that you anticipate that the water supply will become a valuable asset in the hands of the Council? I think so.
837. Have you considered what time would elapse before that would take place? I do not think it would be more than four or five years; we shall have the Port Kembla harbour within that time, and if we have a right to supply water there there will be a big revenue in that direction.
838. I suppose you know that these works cannot become the property of any borough until the Government have been repaid the capital cost? Yes.
839. You know that the period allowed for that is 100 years? Yes. Then until 100 years have elapsed the works will not become an asset of the Council. If you have a property with ninety-nine years' lease, or anything like that, as time runs out so does the value of the lease become less. If, on the other hand, you have a property which, if you comply with certain conditions, will at the end of ninety-nine years become yours, every year tends to bring the property into the position of an asset. It is possible that you may be able to borrow money finally, and so make the arrangement complete.
840. You think it would be possible for you to go to the money market, and borrow upon the strength of the agreement you would have with the Government? Yes.
841. Do you think you are likely to get a good offer for such a security? It is just as good a security as those upon which we are borrowing at the present time—the security of the rates.
842. *Mr. Levien.*] The rates will be included in the asset? Yes.
843. *Mr. Dick.*] In this case 4 per cent. of your water-rates will be mortgaged for 100 years? Yes.
844. That does not give you much margin upon which to go to the money market? I regard the whole works as being a good asset. I wish I had the money to go in for the speculation myself.
845. In your calculations have you taken into consideration the possibility of supplying the extra municipal area? Yes.
846. That would necessitate a Bill? I am not sure that that would be necessary.
847. You have no power to rate outside your municipal boundaries? No; but I take it that I have a perfect right to bargain with any occupier on the road, to supply him with water at a certain price. If he does not pay me I have my rights at common law.
848. That would be a voluntary agreement between the governing body and the people outside the municipality? Yes. Of course it would be desirable to have a certain means of recovering; but I think you could recover under common law.
849. Would it not be better for the Council to have a Bill empowering them absolutely to rate these people, rather than there should be a voluntary agreement which may be set aside at any moment? I should think so; but there are many people upon the road near the pipe line, who would be only too glad to get the water. I have documents from which that can be proved.
850. Are not these people likely to take water when there is a scarcity of water, and to leave it alone when they have a plentiful supply themselves? I think that when once they get the pipes to their houses, the convenience will be found to be so great that they will use that water only. The life of a galvanised iron tank is comparatively short, and its supply is dear in proportion to the volume of water held.
851. You spoke of some of the back streets being in a more insanitary condition than are some of the main streets? Yes.
852. You propose to exclude some of those back streets from the reticulation? The back streets which I had in my mind were Burelli-street and Stewart-street.
853. You said in reply to Mr. Trickett that the coal mines in this district are not likely to be exhausted within a reasonable period? Yes.
854. Do you think 100 years will be a reasonable period? I do not think they will be exhausted in eighty years.
855. One hundred years would elapse under ordinary circumstances before these works became the property of the Council. I was talking just now of the top seam. When the top seam is worked out, we shall have to use the lower seam. We shall probably have to resort to special methods for cleaning the coal, but there is any amount of coal in the district, which will be used when the top seam is no longer available.
856. We understand from you that you think it desirable that the whole control of this scheme, whether it be limited to Wollongong, or whether it be a more comprehensive scheme supplying Port Kembla and other places, should be entirely in the hands of the Wollongong Council? There might be a local Board.
857. But you know that local Boards are notoriously expensive concerns? I was thinking of a body properly constituted and organised.
858. Could you give us some idea of what machinery such a Board as you have in view would be likely to require? I think you might have a Board of three good business men, with fees, and with a minimum number of sittings per annum. I would allow them to appoint their own staff to carry out the business.
859. Have you a rough idea of what such an establishment would cost? I take it that the proposed works could be looked after thoroughly well by a man who would perform the duties of turncock, and who would also travel along the works, at a salary of about £3 a week. He would also collect. In one municipality in this district the Council clerk receives £60 a year, looks after all the rates, collecting all the money from Wollongong down to Albion Park.
860. How many members would you allow for the Board? I should think three good men would be enough, and their fees might amount to £70 a year.
861. You would also require an office—you would allow £20 a year rent? Yes.
862. That would be over £400 per annum, as a minimum charge for local control? Yes.
863. As against that we are assured by Mr. Smail that the control of the Metropolitan Board would amount to about £3 per week, with a charge of £50 per annum for office expenses? If the Board will guarantee that, and if we are to get the works, at the end of one hundred years I should say that would be the best arrangement; but under no conditions would I accept outside control unless eventually the works were to become the property of the Council.
864. Even if the Metropolitan Board took control the Council would eventually gain possession of the works;—if we are led to believe by Mr. Smail the cost of the Board's administration would be small, your objection to their administration would be considerably modified? Yes.

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865. But there should be a distinct understanding first of all that their cost will not exceed the estimate? Yes.

866. You do not fear that the construction of a harbour at Port Kembla will draw the population from Wollongong to any serious extent? On the contrary, I think it will increase our population.

867. Could you give us any idea of the amount of revenue from pans and cesspits which the borough receives? Not from memory. The Council-clerk will give you that information.

868. Some of the collieries of the district, which are not within the municipal area, have water supplies of their own? They have supplies which are sufficient for their present purposes in ordinary seasons, with the limited amount of work they are doing; but they have not water supplies which even in ordinary seasons would keep them going if they were working full time. I speak now with regard to Mount Keira and Mount Pleasant. I am now spending a lot of money in the storage of water, but I should stop that at once if these works were carried out, because I think we are getting to the end of the drought.

869. *Mr. Shepherd.*] I suppose you are thoroughly acquainted with the site of the reservoir? I have not been over the whole of it, but I know the character of the country. It is sandstone, with stunted timber and scrub upon it.

870. And it is not fit for cultivation? No. With the exception of a few acres immediately on the creek.

871. So that we are not likely to have such a population settling there as would be likely to pollute the water? No; it is on the Sydney water reserve No. 57. No land can be alienated there at all. There have been no sales there for a long time.

872. Is the river there generally running, or have you known it to be dry? Only on one occasion have I ever heard of it being dry. An old hand there says that he saw it dry once. The Cordeaux is now running, whereas the Cataract is dry.

873. What was the population of Wollongong in 1892? About 3,000.

874. What is the present population? According to the latest returns, 3,180. That return was made in February last.

875. So that there has really been very little increase within the last seven years? Quite so.

876. Do you see any prospect of the population increasing rapidly? There is no reasonable expectation of it increasing very rapidly, but I think it is likely to increase to some extent, and that property is likely to increase in value as the result of the construction of the Port Kembla harbour. One result will be to give the miners more constant work than they have at present, and they will therefore have more money to spend in the district.

877. You do not think the harbour being made at Port Kembla would be likely to prejudice the progress of Wollongong in any way? Not in any way. I do not see what ground there is for that assumption.

878. Were you consulted in reference to the plan of reticulation, which has been adopted? I was not mayor at the time, but it seems to me that the reticulation might very well be left to the engineer in charge of the works. So far as I can judge, the Department appear to have put the pipes where they are wanted. The whole scheme seems to me to be a very sensible one.

879. You do not think the portion, which has been omitted, is likely to require a water supply? It certainly does not require it to-day, and is not likely to do so for a long time; it would be a waste of money to put pipes down in some of those streets.

880. *Mr. Watson.*] You stated just now that the population had increased only a little over 100 within the last seven years? Yes.

881. Have the rates increased or decreased within that period? They are lower, owing to the reduction in the value of properties.

882. You say that you are able only to make ends meet in the borough at the present time? Yes.

883. Have you any prospect of revenue, which will enable you to provide a sinking fund to reduce your debenture indebtedness? We are not now reducing our debenture indebtedness, but we are reducing our overdraft.

884. Of course that represents a higher interest than that on debentures? Yes; debentures carry 5 per cent, but the other indebtedness carried 7 per cent., and we got it reduced to 6 per cent. At any time the current account is in credit it goes to the credit of the other account, and interest is charged only on the balance.

885. Though you are nominally only making both ends meet you are coming out a little bit to the good? We are actually paying £200 a year off the old debt.

886. With regard to the prospect of the scheme paying, do you anticipate any revenue from persons adjacent to the pipe-line and outside the municipality—I refer to persons residing between the outlet of the proposed tunnel and the service reservoir? Yes; the people at Kembla Heights, about 1½ mile from the tunnel, would be very glad of the water. Then the people in the direction of Figtree would be also very glad of it.

887. Do you think these persons would submit to be rated for the purposes of their water supply, or that they would prefer to take the water only as they might require it? I think they would be willing to allow the Wollongong Council, for example, to apply to them the same provisions which their own Council would apply to them in similar circumstances. I think the people living at Zlotkowski would be also glad to take the water.

888. They would be on the north-west side of the town? Yes; the Keira people tell me the same thing.

889. Would you supply these persons with water only when they required it, or what arrangement would you make? I think I could promise this for my own colliery and for the Mount Pleasant colliery, that we would be only too glad to take the whole of our supply for locomotive purposes from the town supply. We would not guarantee to take the whole supply for pit purposes from the town supply. Our trouble is that all the water below the coal seams in this district does not suit for locomotive purposes at all. It has to be brought down from sources above the coal measures.

890. What do you estimate to be the revenue from the two collieries to which you have referred, say, at the rate of 1s. per 1,000 gallons? I suppose that in a day's work we might use 2,000 gallons in our locomotives, and we should be working about 250 days in the year.

891. That would be about £25 a year? Yes; I should be very glad to get water for my locomotives at that price.

892. As to the control of the scheme, is it not likely that those persons who reside outside the borough of Wollongong, but who want to use the water would object to be rated by a body in whose election they had

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had no voice or control;—if the scheme pays as well as you anticipate, it is possible that in a few years you might be able to run it at 2½ per cent. or 3 per cent. rate; but the borough of Wollongong might be anxious to put on the 5 per cent. rate; would not that be likely to lead to friction if the whole of the persons supplied had not a voice in the control? I do not see that those persons outside who are not speculators in the scheme should have any objection to paying Wollongong a reasonable rate for water. They would not object to pay a reasonable rate to a private company having the right of supply. No doubt the borough of Wollongong having obtained the supply would want to make a fair thing out of it. I should work the scheme as an alderman of the borough in just the same way as I would work a private enterprise which I was assisting to conduct.

893. You know that persons, as a rule, wish some voice in the control of affairs in which they have a proportionate liability? That would be very reasonable, but it would not be the case here.

894. Suppose the Metropolitan Board continued to control the work after the initial cost had been paid off by the Council, could there not be a reduction of rates to a point sufficient to keep the management alive? I presume that whether the Council or the Board controlled the works the broad results would be exactly the same; but there again the Wollongong ratepayers would have to pay a rate for management by a body in whose election they have no voice.

895. Is it not a fact, taking the experience of the London County Council, that, given a reasonable distance over which to work, a central authority having command of engineering skill can succeed in carrying out works in a more economical way as far as the liability of the unit is concerned? I admit that, but what I do not like is the inflicting of rates upon us by people in the election of whom we have had no voice whatever. As mayor of the borough I am inclined to protest against that.

896. You would require to be given some share in the representation on the Board if your works were handed over to them? Would there be any guarantee that our own scheme would stand on its merits? If our scheme were a profitable scheme, might we not have to carry on our backs some schemes which were unprofitable.

897. You would be debited with the office expenses incidental to the management of your own scheme;—you would be charged in the proportion which your revenue would bear to the metropolitan revenue? If we had an assurance to that effect a great many of my objections would disappear.

898. After the period of 100 years had expired, and the initial cost had been returned to the Government, I presume the authority of the Water and Sewerage Board would be withdrawn, and the scheme would be handed over to the complete control of the municipality;—would that meet your objection to the immediate handing over of the control of the scheme to the Board? I am inclined to stipulate that we should have some voice in the election of members of the Board, and also some guarantee that our scheme would not have to carry on its back losses upon other schemes. There should also be some guarantee that no elaborate work would at any time be undertaken in connection with the scheme.

899. You must admit that it would be rather difficult to deal with the water supply of Wollongong in conjunction with the villages surrounding it unless some authority embracing the whole area were created? That appears to be the case; but if the question of supplying any district other than Wollongong itself has the effect of delaying our supply, then I should say let us have a supply for Wollongong itself, and let the other places wait.

900. It is estimated that a supply for Wollongong itself would cost £21,219, with a storage of 65,000,000 gallons, with a 6-in. and 4-in. supply main; the enlargement of that scheme would provide for a supply to Mount Kembla and other places; there would be a larger reservoir and larger pipes, bringing the total cost up to £24,711; it is, however, proposed to debit Wollongong with £16,000 only;—what I want to ascertain is whether, in the event of the Committee considering it desirable to provide for Wollongong and other places by making a larger reservoir and laying larger pipes, you would be willing, between the time of the completion of the work and the date when it might be expedient to start a supply for Port Kembla, to pay interest on the cost of a supply to yourselves alone, viz., on £21,000? That does not seem to me to be at all unfair.

901. Wollongong would be no worse off, because it would have a larger reservoir and a larger pipe-line? I do not think there would be anything unreasonable in the Government asking us to do that.

902. *Mr. Dick.*] Are there any houses in the borough above the level of the service reservoir? I should say there was not one.

903. You have in your mind the possibility of the scheme returning more than is required for the expenditure? Yes; my idea would be to use any profit we have over and above working expenses on the basis of 1s. rate in reduction of the principal. If I had control of the scheme that is how I should use the money.

William John Wiseman, Alderman of Wollongong, sworn, and examined:—

W. J. Wiseman. 3 Feb., 1899.

904. *Mr. Trickett.*] You are an alderman of Wollongong? Yes. I have been living here constantly for about thirty-seven years, and I have been acquainted with the district for forty-two years.

905. You are thoroughly conversant with the wants of the district? Yes.

906. You are acquainted with the proposal to bring water from the Cordeaux at a cost of £21,219? Yes, if it is the same scheme as the late Mr. Price submitted to the council.

907. Do you approve of that scheme? Yes.

908. You were formerly an advocate of another scheme? I was an advocate of the Cataract scheme, for reasons which I will lay before you. My first reason was that upon the watershed in connection with the Cataract scheme there was no settlement whatever. In connection with the Cordeaux scheme there are several farms on the catchment, and I thought it possible that the water draining from those farms might contaminate the supply. In the second place, the distance from the Cataract to Wollongong is 5½ miles, whereas the distance from Cordeaux to Wollongong would be 8¾ miles. Then, again, the Cataract scheme would deliver 780,000 gallons per diem, while the Cordeaux scheme would deliver only 204,000 gallons. That is according to a report by Mr. Davis. Then, fourthly, I consider that there is more solid country at the Cataract. You can go a greater depth there in solid sandstone, and there is a tunnel three-quarters of a mile long—the same length as at Kembla—in which you would require no masonry. In the case of this Kembla scheme there is a sort of conglomerate; the country is not so sound, and my idea is that the tunnel might require lining. The estimate given in connection with the Cataract was for

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25,674 yards of tunnel, costing £5,064, or at the rate of £3 10s. per yard. It is well known that the tunnelling can be done for about 30s. a yard, and that error in the estimate would largely reduce the price. Mr. Josephson, an officer of the Government for twenty-four years, stated that the catchment area was of such a nature that 1 inch of water would give a supply to Wollongong for twelve months; and I think there are about 50 inches at the Cataract and about 65 inches at the Cordeaux. So that, even supposing the Cataract dried up a little at times, and there was not quite so much rain as at the Cordeaux, yet we should never be without a supply. Those were some of my principal reasons for advocating the Cataract scheme; but I have since visited the site of the reservoir on the Cordeaux, and as far as I can hear there will always be a good supply of water. A public meeting in Wollongong, moreover, was in favour of that scheme; and I, therefore, was willing to knuckle down and fall in with the general opinion. I suppose I have more houses under my control than has any one man in the town, and on that account I ought to know something about the requirements of a water supply. In five or six weeks of dry weather, as a rule, people run short of water, and have to be very sparing, even if they do not run completely short. They have not enough water for a good bath or for other requirements. You will find that if you want a good bath you must go to the sea for it. It is impossible for the town and district to go ahead unless we have a really good water supply.

909. What would be the supply available for Wollongong by the Cataract scheme? 780,000 gallons a day. The storage capacity would be 17,000,000.

910. The Department estimate the storage at the Cordeaux at 168,000,000 gallons;—is not that preferable to a storage of 17,000,000 gallons? Yes; it ought to be more than a year's supply. I understand also that it is possible to obtain at the Cordeaux storage for the supply of the whole district.

911. What is the general duration of a dry season here? It might last three months.

912. Your rainfall is fairly good? Yes.

913. Having regard to storage and rainfall, you think the Cordeaux is in every way desirable as a source of supply? Yes.

914. Having inspected the scheme recently adopted, you think better of it than of the scheme which you formerly advocated? There is more water, and you can get a larger reservoir; but I still have doubts as to the solidity of the country.

915. Do you think £5,000 is a fair estimate for a tunnel, even supposing it is necessary to do some lining? It is about equal to the proposed expenditure in connection with the Cataract scheme.

916. And you thought the proposed tunnel expenditure in connection with that scheme was excessive? Yes.

917. In that case there will be a surplus in the estimate before the Committee to provide for lining? Yes. I was informed by the late underground manager at Mount Pleasant that he would like to get the contract for the Cataract tunnel at 30s. a yard. He said he would put down £500 as a guarantee, and would carry it through; he is a thoroughly practical man.

918. Have you any other objections to the proposed scheme? My idea is that the Government, in providing a scheme for this district, should contemplate the erection of a dam which will be eventually sufficient to supply the whole district, including Bulli and other places to the north, as well as Dapto.

919. You are aware that the storage capacity proposed is sufficiently great to admit of a supply to Bulli if required? That is another reason why I think the scheme might be adopted.

920. Do you think that you and your tenants in Wollongong would be willing to pay a rate of 1s. in the £ for the proposed supply? Yes; they would be all perfectly satisfied to do so. I think we certainly ought to be able to pay for a scheme costing £21,000; but it might be a different matter if the cost ran up to £30,000. Only recently a water supply scheme was completed at Parkes which was to cost £13,000, but the cost has run up to £35,000, and when the works were opened it was found that the pipes leaked from end to end. Those are matters which would have to be looked into. If there was any likelihood of our having to pay for a scheme of that sort I would not vote for one at all.

921. You were in the Court-house when the mayor gave his evidence? Yes.

922. Do you agree in the main with the evidence he gave? Yes.

923. What do you say upon the question of the control of the works? I think it would be better if the control were local. Still if the Metropolitan Board could compel the whole district to take the supply, perhaps the work would be better in their hands.

924. You think that in the long run they could administer it more cheaply? Yes; but if the people outside cannot be compelled to take the water I think the entire control should be left in the hands of the Wollongong Council, because we could do it for less cost than the Metropolitan Board. Our clerk and inspector of works could look after the water supply.

925. You would not approve of a local Board independently of the Council? According to your estimate it would cost £200 a year more to administer the scheme by a local Board, and I do not think we should be justified in incurring that expenditure.

926. You would not be in favour of that? No; I think the scheme ought to be carried out in the cheapest manner possible, so that the rating may be as small as practicable.

SATURDAY,

SATURDAY, 4 FEBRUARY, 1899.

[*The Committee met at the Brighton Hotel, Wollongong, at 4 p.m.*]

Present:—

JOHN PERRY, Esq. (Chairman).

The Hon. Patrick Lindesay Crawford Shepherd.
The Hon. Andrew Garran, LL.D.
The Hon. William Joseph Trickett.
William Thomas Dick, Esq.
John Christian Watson, Esq.
Robert Henry Levien, Esq.

The Committee further considered the expediency of constructing Water Supply Works for the Borough of Wollongong.

Leslie Augustus Burton Wade, Inspecting Engineer, Department of Public Works, sworn, and examined:—

L. A. B. Wade. 4 Feb., 1899.

927. *Chairman.*] You are engineer in charge of the proposed works? I am in charge of the survey and estimate.
928. The catchment area pointed out by you to-day will be the source of supply in connection with the proposed scheme? Yes.
929. At the site of the proposed dam have you ever seen a less flow of water than we saw there to-day? No.
930. In making your preliminary investigations, I presume you interviewed the residents on the catchment area? Yes.
931. Did you examine them as to the flow of water? I interviewed Stafford, who lives immediately alongside the site of the proposed dam. He told me that he had never seen the river absolutely stop running in any season. He has been there a great many years. He told me, I think, that he had been there over twenty years.
932. You noticed the flow of water to-day? Yes.
933. That is after an exceptional drought? Yes.
934. Although that is the case the flow of water to-day would be sufficient for the requirements of Wollongong? I think the flow to-day, without any storage would be equal to about half the supply of Wollongong.
935. How long would it take in an ordinary season to fill the proposed dam? It would take 3 inches of rain running off the catchment to fill the big dam.
936. Before water started to run into the dam, how much rain would have to fall to provide for the soakage? It would depend a good deal upon what the season had been previously, and also how the rain fell—whether in a thunderstorm, say, at the rate of an inch an hour, or whether slowly.
937. If it fell at the rate of an inch an hour, you would get most of it? Yes; the average rainfall up there is 60 inches a year. With 3 inches filling the dam, you would require only a twentieth part of your annual rainfall to fill it. The lowest rainfall recorded on the Cordeaux is 45 inches, and the greatest over 100 inches.
938. Suppose that instead of six months' drought you had had three years' drought, and that the reservoir was full, do you think the supply would still hold good? The smallest supply we have provided for—65,000,000 gallons—would supply the whole of the present population for twelve months. If you allow for the small flow in the creek which we saw to-day it would counterbalance the evaporation.
939. You are contemplating a supply at the rate of 30 gallons per head per day? Yes.
940. We noticed at the site of the dam, on one side of the creek, that there was a basaltic formation, and on the other side, a little further up, that there was a sandstone formation;—you have examined the site of the dam with sufficient care to enable you to say definitely it would hold the water? Yes.
941. You have put down trial shafts, I believe? Yes; I do not think there is any danger at all of soakage.
942. The basalt at the site of the proposed dam extends on both sides of the creek? On the spur, at the left-hand side, there are basalt boulders, but in between the boulders there is a tight red clay.
943. And it is quite impervious? Yes; it is decomposed basalt.
944. It will give you good holding-ground? Yes; there is no fear at all about the dam holding.
945. There would be no getaway for the water in any other direction? No.
946. Have you allowed for evaporation in your estimates? As we saw to-day, you can always rely on a small volume of water in a creek, even in a dry season; that would be enough to counterbalance all evaporation and leave the storage free.
947. It would be twelve hours collecting, and twelve hours using? Twenty-four hours collecting, and about twelve hours using.
948. You have no doubt whatever as to the efficiency of the dam? No.
949. You propose to construct an arched dam? Yes; in all recent supplies we have constructed arched dams in preference to straight dams; they are much more economical.
950. The perpendicular would be on the up-stream side? Yes.
951. The Wollongong Council are fearful lest your estimate may be exceeded;—could the dam be constructed, as regards foundations, on the basis of a larger storage capacity, and be carried up higher, if necessary, so that it might do for the present supply of Wollongong only? Yes.
952. What amount could you save? It would depend upon the height to which you take the dam. I can submit to you a statement showing the different heights and accompanying storage capacities. I will take every 5 feet, giving you the storage capacity and cost, and taking also as a basis the big dam.
953. With the same thickness? Yes.
954. How do you propose to take the water from the dam into the tunnel? We have a shaft at the end of the tunnel, just clear of the high-water mark. The tunnel runs parallel with the water up the gully. In that shaft we drive at right angles until we tap the water in the creek. The shaft is lined with brickwork and concrete. The tunnel also is lined for 10 or 20 feet down, so as to make it quite watertight, and the pipe is taken through the brickwork of the shaft, down into the water underneath a timber stage, and at the end of the timber stage there will be a flexible joint in the pipe which will enable the water to be drawn off about 3 feet below the surface.

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955. I suppose the usual precautions have been taken to prevent anything from getting in? There will be a wire gauze round the end of the pipe.
956. How do you propose to fix the flexible pipe? With a trunnion joint; we use them in connection with all our supplies.
957. So that there will be no danger of interference with the flow of water? No.
958. There will be no necessity for a man to be constantly on the spot? No; there will be a buoy attached to the end of the floating-pipe which will keep it about 3 feet below the surface; except for occasional hauling up to clear the dirt off the gauze, the action will be automatic.
959. So that the labour required will be reduced to a minimum? Yes.
960. Could one man attend to the whole thing? After the connections are made in the town one man could look after the whole thing if he had a horse. At Parkes the dam is 11 miles out of town. One man looks after the whole thing. He attends in the town on a special day in the week if any connections are to be made.
961. You are sure your estimate will not be exceeded? I do not think it will be.
962. Do you think it would be advisable, on the score of economy, to put down smaller pipes first? I do not think so; it is not like the dam which can be raised afterwards without interference with the supply. To afterwards increase the supply would mean a duplication of the pipe.
963. What would be the difference in cost between a 4-inch pipe and a 3-inch pipe? The pipes we propose to lay are 4-inch and 6-inch. For the more complete scheme we should lay 8-inch and 6-inch pipes to the junction.
964. Would the difference in the initial cost be reduced by the adoption of 4-inch instead of 6-inch pipes? I can give you the difference in cost later on; but the difference in the discharging capacity between a 4-inch and a 6-inch pipe is not represented by the proportion of 4 to 6 as would be the cost; it is more nearly in proportion to the square—that is, 16 to 36. It would be poor economy to put in a small pipe in the first instance.
965. If it were contemplated afterwards to put in a larger one? Yes.
966. You have sunk a sufficient number of trial shafts along the line of tunnel to form a pretty accurate idea of the formation there? Yes.
967. What is the formation? Down at the dam end it is shale; we anticipate getting into soft sandstone at this end.
968. Have you anticipated getting into faults which will require the introduction of supports? I have made provision in my estimates for timbering of the same class that you put into mines.
969. Every provision has been made to secure the tunnel;—you have no fear about the roof coming in and injuring the pipes? No; the pipes will be laid underground. We have allowed for timbering the tunnel, and providing for the safety of anyone going through it for inspection.
970. As the work is proceeded with you will secure the tunnel with proper timbering? Yes.
971. How far below the surface of the tunnel do you propose to sink the pipes? We should give them about a foot of covering.
972. Enough to prevent any damage being done in case of the falling in of rock? There will be a trench in the shale; the force of any fall will be taken by the floor.
973. No fall from the roof would interfere with the supply? No.
974. Have you much driving to do through basalt? No.
975. It is all through sandstone? It is all through sandstone or shale.
976. What have you allowed per lineal foot? 22s. 6d. per lineal foot. The tunnel will be 5 ft. 6 in. x 3 ft.
977. You have made a liberal allowance for such work? A very liberal allowance. We went into the tunnel estimate very carefully, because it is a big item in the work.
978. The tunnel will be 5 ft. 6 in. from the floor to the roof? Yes.
979. If anything, your estimate is likely to be under rather than over the actual cost? Yes; we have made a very liberal estimate for the tunnel.
980. You have allowed more than you anticipate having to pay? Yes.
981. You do not think, therefore, that there is any ground for thinking the estimated cost will be exceeded? I think not; the estimate in the case of these works is a very liberal one; it is more liberal than the estimate made in connection with any of our recent water supplies.
982. Has your experience always been that your estimates have not been exceeded in connection with these works? Our estimates have been exceeded sometimes, but upon this occasion the Engineer-in-Chief determined that the estimate should not be exceeded if he could help it. He gave me instructions to make a liberal estimate, particularly as the town was in a favourable position to pay for the work.
983. You think that in all probability the cost would be under the estimate? We do not anticipate that it will be over the estimate.
984. Do you think it would be safe to proceed with the dam as suggested by the Mayor of Wollongong yesterday—on the assumption that it would be carried up higher later on? Yes; I think in view of future necessities, it would be well to construct the dam with a wide base.
985. You propose to sink the whole of the pipes from the tunnel to the service reservoir? Yes; there will be 18 inches of cover.
986. How do you arrive at the cost of the pipe-line? By taking the cost of the pipes, which we can gauge accurately, since we have received tenders lately for the same style of pipes—welded steel pipes. We know the exact cost of laying them and jointing them.
987. In no part of the pipe-line will the pipes be less than 18 inches from the surface? They may be deeper at the creek crossing and the gullies; we should go underneath the creeks and gullies. We should dip down to get an easy curve underneath. On the banks we might run for a short length to 5 or 6 feet of depth.
988. Assuming that the pipes are 18 inches below the surface in a cultivation paddock, they would not interfere in any way with the working of the land? I do not think so. In taking the pipe-line through private land, we consult the owners, and if they wish the pipe taken deeper, we take it deeper. I am speaking of land now upon which we get easement. If we resume the land, we can take the pipes to any depth we please.
989. Have you consulted any farmers in reference to this matter? No; but we have found no difficulty in previous works in getting easement through private land. The other day, at Kiama, we got easement through about 2½ miles, without any trouble whatever.

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990. In no case would the surface be injured at all? No; except when the pipe is being laid.
991. You stated that the whole of the proposed works had been under your supervision, and that you made the estimate? Yes; under the direction of the Engineer-in-Chief.
992. You are quite certain that you have allowed an ample sum for the whole of the work? I am satisfied that the estimate in this case will not be exceeded.
993. I think you mentioned just now that other works of a similar nature had been constructed under you? Yes.
994. Have you ever constructed any of these works by day-labour? Yes.
995. How does the employment of day-labour compare with contract work? Our custom in water supply works has been to construct the concrete dams by day-labour because they are an important part of the works, and we consider that they can be done in that way just as cheaply as by contract.
996. You exercise constant supervision of course? Yes. As to other portions of the work, the pipe-line and service reservoir, we always consult the councils as to whether they wish the work done by contract or day-labour. If they wish it done by day-labour we do it by day-labour. With the exception of the storage dam, we do not do anything by day-labour without consulting the councils interested.
997. I presume the work is purely mechanical work; you do not require skilled labour for any portion of it? Of course you have to keep a certain number of mechanics on the job, such as carpenters and engine-drivers. Pipe-laying requires special men.
998. You know where to put your hands upon special men for that work? Yes. As a rule they follow us round from job to job. We have a certain number of men, for instance, who have been employed upon storage dams, and they follow us from dam to dam.
999. You give them a preference? Yes, for special work.
1000. The men you employ would, therefore, be men of experience, and they would have an interest in doing good work, otherwise they would not be employed again? Yes; the same gang have come to us from job to job.
1001. Are you satisfied that the 3-in. reticulation pipe is large enough for the town of Wollongong? We have 4-in. and 3-in. pipes, according to the street. There is a 6-in. main down the main street, and off that 6-in. main there are 4-in. mains for the minor streets, and between those 3-in. mains.
1002. What proportion of the town will remain unreticulated at present? I could not say what the proportion would be. It would be chiefly unpopulated streets, and where there are scattered houses. We have not provided for streets which would not pay interest on the bare cost of the pipes without bearing any of the burden of the dam and main. As long as the streets can pay interest on the cost of the pipes we lay them, and as population increases those streets are able to bear their share of the cost of the dam and other portions of the work. If a street cannot bear the simple cost of the pipes we do not lay them, unless the residents come to the Council and guarantee the interest.
1003. Supposing the Wollongong Council had charge of the works altogether when you had completed them: could they take the water off from the pipes outside their own Municipality? They could not levy rates; they could make a private agreement with an owner to supply them with water. The water can be supplied, but there is a difficulty in regard to payment.
1004. Assuming the supply to be controlled by the Metropolitan Board, there would be no difficulty of that kind? No; all that the Board would require would be a short Act extending the metropolitan area so as to take in this particular borough. They would levy a rate along the whole pipe-line. They would also have money with which to make extensions, which the Wollongong Council might not have.
1005. Would there be any difficulty in drawing water from the main between the service reservoir and the tunnel? No difficulty at all.
1006. Water could be sent, for instance, to Port Kembla without any trouble? Yes, that has been gone into thoroughly. A pipe-line to Bulli would be in a similar position. It would be a question, supposing the Board controlled the scheme, whether it would pay them to extend the mains in those directions.
1007. Could you take water from the main for the supply of Port Kembla without constructing a balance reservoir? It depends upon the population. If there were a large population we should put in a service reservoir. If there were only a small population a small balance tank at a cost of about £200 would be quite enough.
1008. There would be no difficulty in providing a service reservoir if it were afterwards required? None at all.
1009. Are there any residences in the town above the proposed reservoir at Wollongong? None.
1010. Could you take water from the main to the mines? Yes; to all of them. The outlet at the tunnel is considerably higher than Kembla, which is the highest.
1011. Would you have enough pressure to deliver water to Bulli in case it is wanted? There will be ample pressure for that. All these places are comparatively low-lying.
1012. The whole of the country, in fact, between Bulli and Port Kembla, would be served by the proposed scheme? The whole of it would be under the command of this scheme.
1013. Would there be enough water stored in the dam to supply the whole of those places? Yes.
1014. Have you any idea of the population between Bulli and Port Kembla? No.
1015. Is Bulli as far north as you could go? I think that is about the furthest town north to which we could go. After Bulli there is a big gap before you strike Clifton. It would not pay, I think, to extend the service to Clifton.
1016. Did you go into the Cataract scheme as formerly proposed? I have never been on the ground in connection with that scheme, but I have gone into the merits of the two schemes, and I consider that in the scheme before the Committee there is a much superior source of supply to that which you have in the Cataract scheme. The Cataract, I am informed, has now stopped running, whereas the Cordeaux is still running. As a rule there would be a much better stream down the Cordeaux.
1017. In your opinion the scheme under consideration is far superior to that previously placed before the Public Works Committee? Yes.
1018. It is a more economical scheme? Yes; there is a much more economical storage. You can dam a large quantity of water for less money, and you would have a more permanent stream to rely upon.
1019. What population would the proposed scheme serve? The large scheme would cover a twelve months' supply of water to 15,000 people, at 30 gallons per head.
1020. You do not anticipate having to put any brick or concrete work in the tunnel? Only at the inlet.

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1021. You do not anticipate finding any faults which would require anything beyond timber supports? Nothing which would require anything beyond timber. The tunnel, after the pipes are laid, will be seldom entered, and the pipes are under cover of the floor. It is only occasionally that any one would go through for inspection or repair.
1022. I suppose the outlet will be secured by a gate? Yes; to stop people from going in.
1023. *Mr. Watson.*] Will the storage be sufficient for the supply of the whole population from Bulli down to Dapto? It would be ample, I think.
1024. *Dr. Garran.*] Will the depth to which you propose to lay the pipes be enough in the case of the main roads? Yes. In country towns we always lay them to a depth of 18 inches.
1025. That is considered sufficient. Yes.
1026. *Chairman.*] Will the proposed pipe-line be above any of the coal workings. There are no workings at present near the pipe line, but coal exists beneath the whole of the line.
1027. Has there been any subsidence in connection with any of these mines? I have not heard of any.
1028. How far do you think the coal would be below the service reservoir? I could not say exactly, but I think quite 300 or 400 feet.
1029. Have you put any trial shafts down to ascertain the strata covered by the service reservoir? Yes. We put down a trial shaft there; it was shale all the way down.
1030. How do you propose to make the reservoir water-tight? It will be lined with concrete.
1031. As far as you are aware, there is hardly any possibility of anything adding to your anticipated cost of the work? In all our estimates we allow 10 per cent. for engineering and contingencies. Engineering seldom amounts to more than 5 per cent., and that allows 5 per cent. for contingencies.
1032. The outlet of the storage reservoir is secured by brickwork I suppose? We shall go in with an open cutting until we get a solid face, and we shall drive from that to the inlet end of the tunnel.
1033. There will be no danger from rolling boulders coming on to the pipe-line? The pipe-line will be underground the whole way.
1034. From end to end sufficient precaution has been taken to secure it from damage? Yes.
1035. You are satisfied that the welded pipes will stand the pressure? Yes; in the specification occasional pipes are to be tested up to 2,000 lb. to the square inch.
1036. What pressure will there be upon the pipes? The greatest pressure will be about 450 lb.
1037. *Dr. Garran.*] What length of pipe are you proposing to use? Pipes 18 feet long.
1038. Will you have a special apparatus to effect the junction? There will be a spigot and socket joint.
1039. *Mr. Watson.*] You say that on the site of the dam you have sunk trial shafts? Yes.
1040. Do they indicate the possibility of your striking soft ground or pockets which may cause increased expenditure? On the left-hand side we have had to go through a certain depth of granite boulder before we struck what we considered was solid rock, and at these points we are quite confident about the foundation; but in between the shafts possibly we may get a pocket. In taking out the quantities for the concrete we have allowed a good margin for contingencies of that sort.
1041. At the worst such a contingency could not add a great deal to your estimate? No; we have allowed a very fair margin.

MONDAY, 6 *FEBRUARY*, 1899.

[*The Committee met at the Court-house, Wollongong, at* 10 *a.m.*]

Present:—

JOHN PERRY, Esq. (Chairman).

The Hon. Patrick Lindesay Crawford Shepherd,	William Thomas Dick, Esq.
The Hon. Andrew Garran, LL.D.	John Christian Watson, Esq.
The Hon. William Joseph Trickett.	Robert Henry Levien, Esq.

The Committee further considered the expediency of constructing Water Supply Works for the Borough of Wollongong.

James Kirby, Alderman of Wollongong, sworn, and examined:—

J. Kirby. 6 Feb. 1899.

1042. *Chairman.*] What is your occupation? I am a bootmaker.
1043. You are an alderman of the borough? Yes.
1044. Have you any idea of the proposed scheme? I have been to the site of the dam several times.
1045. Do you think it will give a very suitable supply? Yes; the river is a good one, and it is always flowing. I have been there ten or eleven times, and it has always had a good flow of water. I think there will be a supply quite sufficient for the town of Wollongong. If provision is made for increasing the size of the dam later on the work will supply our requirements for many years to come.
1046. *Mr. Watson.*] You know something of the rainfall of the district? I am not very well acquainted with it; but I believe that at the Cordeaux it is greater than in any other part of the district.
1047. The Borough Council has gone into the scheme, and approves of it? Yes.
1048. You have heard of the suggestion to place the works under the control of the Metropolitan Board? Yes.
1049. Have you any opinion to offer upon that suggestion? In some respects I rather favour the idea; but there are certain conditions which the Council would like to see imposed.
1050. Provided that you are able to ensure a charge against your borough for only the expenditure in connection with this water supply, and provided also you have some representation on the Board? It is not so much a question of representation on the Board as giving the Council power to audit the accounts.
1051. I suppose you know that the Board's accounts are audited very accurately by the Treasury officials? Yes. What the Council fear is this: Supposing our scheme is a good paying one, and the Board thought it advisable to construct works, which we thought were not necessary, I think we should have the power to give effect to our views.
1052. But even if you had a local board representative of the different municipalities interested, it would be necessary to invest them with complete control as regards the carrying out of desirable work? Yes.
1053. Would not precisely the same conditions apply to the Metropolitan Board? We think that for many

many years to come no considerable works will be required, but if they are contemplated we think we should at least have some say as to whether they are necessary, because they will mean an addition to the practical cost of the work. J. Kirby. 6 Feb., 1899.

1054. You would not reserve power to veto the extension of the pipe area for the supply of towns and other villages? No.

1055. The effect of such an extension might be to reduce the cost to yourselves? Yes. With regard to the flushing and watering of the streets and drains we should like to know what power we should have, that is to say, whether we could use the water without cost.

1056. Even supposing you had to pay for that water, as would probably be the case, you might get compensation in another direction, for example, the Water and Sewerage Board with their larger opportunities might be able to let the taxpayers off with a 2½ or 3 per cent. rate, whereas the Council with their limited opportunities might have to charge a 5 per cent. rate. You might get compensation in that way? I am in favour of the Board having control if the works are to be extended outside the town; but if there is to be any delay in the construction of the work through opposition from outside, I should not be in favour of the Board's control. We have been agitating for a supply for a long time, and there is a very urgent necessity for it. If the putting of the matter in the hands of the Board would involve any delay, I certainly think the Council should be invested with control at once.

1057. The proposal as far as Wollongong is concerned will entail a cost of £22,000;—do you think Wollongong will be able to pay interest upon that amount with a 5 per cent. rate? I think so.

1058. You have no doubt about the town meeting that obligation? I quite believe we can do so.

1059. You have no doubt of the willingness of the townspeople to incur the liability? We took a vote upon the question, and the townspeople decided in its favour by a great majority.

1060. You do not know of any serious opposition to the works in the town? I do not think there is any opposition whatever.

1061. Was the former opposition directed against any scheme whatever or against this particular scheme in relation to another? I know of only one person who opposed the scheme at all, and that was on the ground that it was not as good as a certain other scheme.

1062. He was not against a scheme of water supply generally? No.

1063. The town is unanimously in favour of a scheme of water supply? That is quite evident from the vote taken. I should like to mention that the fire brigade are hampered greatly from the want of water. We have a fire brigade here, but the water has to be pumped from a well. The water is full of all sorts of matter, and there is a loss of 8 ft. or 10 ft. before it gets to the engine. You can imagine how far that could be thrown even with a large engine. It could not reach any of the two-storey buildings in the town. In 1895 buildings estimated to the value of £10,000 were destroyed by fire. If there had been a good water supply £5,000 or £6,000 of that amount might have been saved.

1064. That emphasises the necessity for a good water-supply? Yes; if you go into the town to-day, I do not suppose you would get more than half-a-dozen wells sufficient to put out a fire in the smallest building in town.

1065. What you are afraid of is that people from outside the borough whom it is contemplated to supply with water might object to being brought under the rating operations of the Board, and that their objection to that might delay the commencement of the work,—that is what you want to avoid? Yes. I understand that the Board will have power to charge all those along the pipe-line, and the pipe-line runs through a number of farms.

Timothy Wood Lee, M.R.C.S., Government Medical Officer, Wollongong, sworn, and examined:—

1066. *Chairman.*] You are a legally-qualified medical practitioner and Government Medical Officer for this district? Yes. T. W. Lee, M.R.C.S. 6 Feb., 1899.

1067. How long have you resided here? A little more that fifteen years.

1068. You have a good knowledge of the health of the district? Yes.

1069. The general health, excepting when we are visited by epidemics, is good? Yes.

1070. From what epidemics have you suffered most? Recently we have been suffering from measles, whooping-cough, enteric fever, and diphtheria.

1071. What is your opinion of the water supply? As far as the health of the town is concerned, it is absolutely essential that we should have a good supply of water. I consider that some of the epidemics we have had, and certainly the epidemic of typhoid last year, were caused by the shortness of water. All the cases of typhoid of last year were attributed by the people to one particular spot in the district.

1072. You think it is an absolute necessity that the town should be given a supply of water? I do, indeed.

1073. Have you any knowledge of the catchment area? I know the country, that is all.

1074. You have not tested the quality of the water? No.

1075. I suppose your practice has disclosed to you the want of a water supply? Yes: I know that at the present time I am using my bath water over twice, and that is proof that we want some more water. I am only one among many who are doing the same thing.

1076. *Dr. Garran.*] Do you think that there are many cases here in which well-water has been poisoned by cesspits? I do not think so.

1077. In what way do you think the insanitary conditions have given rise to typhoid? Simply through our not having the drains thoroughly flushed, and through drinking water which has remained in tanks month after month without being freshened in any way.

1078. I suppose the water from the roofs goes bad after a certain lapse of time? Yes.

1079. After how long? I could not say; it might be in a few days. At the present time the roof water is worse than useless. The roofs are so dirty that merely dirt is washed into the tanks. The best thing to do is to turn on the tap for the present and let the water run away.

1080. You think the first water collected ought to be allowed to run off? Yes.

1081. A good deal of the water you collect would not be fit for drinking purposes? No.

1082. The corrupted water and the rains account for some of the epidemics you think? Yes.

William Ashley, manager, Unanderra Coke Works, sworn, and examined:—

W. Ashley. 6 Feb., 1899.

1083. *Chairman.*] Have you a knowledge of the proposed scheme? I have a little knowledge of it; I have not studied it minutely.
1084. You know the position of the pipe-line? Not exactly.
1085. How far would your works be from it? I suppose about 1¼ mile.
1086. How much water do you think your company would require to use? We use from 2,500 to 3,000 gallons a day on the average.
1087. Have you had any meetings of your board with reference to this matter? No; I made them acquainted with the fact that the Committee were taking evidence, and they gave me permission to come as a witness.
1088. Do you know what your board would be prepared to pay in the shape of water rate? They would be prepared to pay £50 a year. Our present cost with the dam we have, I suppose, is about £40.
1089. For a certain supply you would be willing to give £50 a year? Yes.
1090. Do you know whether your works are situated inside or outside the borough? Our works are in Central Illawarra. I myself live in Wollongong. Personally I have made fair provision for water, but I think a supply is badly wanted for the town. I have been advocating it with other citizens for some time.
1091. You are in a position to know the opinion of the bulk of the Wollongong people upon this question? I think the biggest portion of the people are in favour of the proposed scheme. Some of them would like to see a cheaper scheme adopted; still they are in favour of the proposal.
1092. They would be all in favour of it, except that some think financial difficulties may crop up? Yes; I voted for it at the public meeting at the Town Hall, because I thought it would benefit the district.
1093. Is the opposition to the scheme strengthening or lessening? It is lessening.
1094. How long have you been in the district? Fifteen years.
1095. Is it progressing or going backwards? It is progressing, but not as we should like to see it progress.
1096. I suppose it has suffered like the rest of the Colony from the depression? Yes.
1097. You do not think the town is likely to go any further backward than it now is? No; I think it is likely to be the other way about.
1098. Are there indications of returning prosperity? Yes; I think the harbour at Port Kembla will be the means of opening up industries in the district.
1099. You think the municipality would be quite justified in incurring the liability attaching to this water supply? I do.
1100. *Mr. Trickett.*] There will be a large consumption of water outside the Borough of Wollongong? Yes.
1101. Have you formed any opinion as to the control of the scheme? I have not studied the question, but as far as I have thought it out I think the scheme should be in the hands of the Municipal Council.
1102. Although the large proportion of the water will be consumed by persons outside the Municipality? Yes.
1103. But you have not given the subject much study? No.
1104. Is Central Illawarra incorporated? Yes.
1105. Do you think the Corporation would object to their supply of water being managed by the Wollongong Council? I do not think so.
1106. Not if it were properly and economically managed? Quite so.

William McKenzie, butcher, Wollongong, sworn, and examined:—

W. McKenzie. 6 Feb., 1899.

1107. *Chairman.*] Have you any knowledge of the proposed scheme of water supply? Yes; I have been over the catchment area. I brought the Cordeaux scheme before the Council, in the first instance.
1108. You made the suggestion? Yes; I thought it was the better scheme of the two.
1109. Did you thoroughly examine the other scheme? Yes; I examined them both in one day to ascertain whether there was any perceptible difference in the flow of water.
1110. Did you do that recently? No; in the drought of last year.
1111. Was that drought as severe as the present drought? I think it was.
1112. Have you been to the Cordeaux this year? No.
1113. After carefully examining these schemes you have come to the conclusion that the Cordeaux is the better one of the two? Very much better. I was at the Cordeaux in the morning, and at the Cataract in the evening. The Cordeaux was running, but there was practically no water at all in the Cataract.
1114. I suppose you mix pretty well with the people about town? Yes; I live a little off the main street.
1115. How long have you been living in the borough? About twelve years.
1116. Then you have had plenty of opportunity of knowing the feelings of the inhabitants in reference to a water supply? Yes.
1117. Have you heard any doubt expressed as to the ability of the town to bear the proposed liability? Not in connection with the scheme to Wollongong itself; but the townspeople object to the liability attaching to a larger scheme.
1118. There is no objection to a scheme costing £22,000? I heard no opposition to that at all. We took a vote upon the question, and there were 4 to 1 in favour of proceeding with it.
1119. Was the vote taken on the merits of the question, or was any personal element introduced? The vote was taken purely on the merits of the question.
1120. *Mr. Shepherd.*] What rainfall do you suppose would thoroughly supply the town of Wollongong and the neighbouring villages? I could not say; there is a big population between here and Bulli. I understand that the proposed catchment area is 3½ miles. There is generally a big flow of water in the Cordeaux. I believe there is enough running there now, even in the present dry season, for the supply of Wollongong alone.
1121. Have you known any drought in this district as severe as the present one? Some years ago there was one equally as severe; but during the last three or four years there have been severe droughts. It was, I think, the year before last, that I visited the two rivers on the one day.
1122. That was in 1897, you think? Yes.
1123. You are an alderman of the borough? Yes.

W. McKenzie. 6 Feb., 1899.

1124. Have you formed an opinion whether the people of Wollongong would object to, or be favourable to, the Metropolitan Board taking control of the works? I have had no opportunity of forming an opinion on that question. The subject was not mooted until Friday last; but I do not think there would be any objection, provided we could get as cheap a water supply.
1125. If other municipalities come in, you will either have to set up an independent board for this scheme, or put it under the control of the Metropolitan Board;—under those circumstances do you think the people of Wollongong would have any great objection to administration by the Metropolitan Board? No; I do not think so. I have spoken to several persons on the subject, and they do not appear to have any objection. In fact they rather favour the idea, providing they can get by that means a cheaper water supply.

Jacob Carlos Jones, Chairman, Progress Association, Corrimal, sworn, and examined:—

J. C. Jones. 6 Feb., 1899.

1126. *Chairman.*] Do you come here in a representative capacity? I represent the Progress Association at Corrimal. I am also mining manager of the South Bulli Colliery.
1127. They have had a meeting to discuss this matter? Yes. When it was intimated to us that the Public Works Committee would visit Wollongong we had a meeting, and it was decided that I should come in to advocate the extension of the scheme into Corrimal, which is to the north of Wollongong.
1128. How far to the north are you? About 3 miles. I do not know the exact pipe-line proposed, but we are in the adjoining municipality, about 2 miles from the northern boundary of Wollongong.
1129. Will you state to the Committee the result of the meeting you held in connection with the proposed water supply? We did not go into any calculations. The association trusted to me to make out a case for it.
1130. Was the meeting in favour of obtaining a supply? Yes.
1131. Was there any opposition at all? Not the slightest. It was not a largely attended meeting. It was called together in a hurry.
1132. Will you give us your own opinion as to the necessity for a water supply at Corrimal? Yes; I am fully conversant with the wants of people out there. They have no place to store a great deal of water and every summer have to cart it long distances. Horses and cattle have to be taken long distances to water. All the creeks on the roadside between Corrimal and Wollongong are dry. The collieries are also in great need of water. The South Bulli Colliery is using pit water for its locomotives, and it is very destructive to them.
1133. What is the height of your pit mouth above sea-level? 550 feet.
1134. How far above sea-level do your locomotives run? About 180 feet.
1135. You would want the water at that height? Yes.
1136. Could you take it off the proposed pipe-line? We could take it off the service reservoir.
1137. There would be ample pressure from the proposed reservoir for the supply of your locomotives, and also for the supply of the township? Yes; the township is lower still. I have estimated that we, i.e., Corrimal, Tarrawanna, and Belambi could pay interest on £5,000 as the cost of a scheme for us.
1138. If you could get a supply of water, you think the people of Corrimal and the other places named would be able to pay interest on that outlay? Yes; Corrimal and the collieries.
1139. Do you think they would be willing to pay it? I do indeed.
1140. Have you been asked to come here by the principal residents? By the Progress Association of which I am chairman.
1141. Were you here when a former Committee visited the district in 1892? Yes; I have been here for about fourteen years.
1142. I believe at that time the Corrimal people objected to the proposed water supply? I do not think so. The Bulli people objected; but Corrimal is a rapidly increasing township. During the last few years, I suppose 150 houses have been built at and around Corrimal.
1143. You objected previously on behalf of the northern towns to a scheme taken from the Cataract? Yes; I remember something about the agitation at the time; but the people of Bulli could not even agree to incorporate, and there is a similar opposition to a water supply scheme. The fact of the matter is, they object to pay rates.
1144. Do you think a scheme of this sort would be better under local control, or under the control of the Metropolitan Board of Water Supply and Sewerage? I think it would be better under the control of a local Board, and I believe it would pay well. The local Board would have an interest in making the scheme a success, whereas it would be a trifling thing to a body like the Metropolitan Board.
1145. The Metropolitan Board would have the same interest which you would have in making the scheme pay? I assume that it would be kept separate from the other schemes.
1146. When you say a local Board, do you mean a Board composed of representatives of the districts which would be supplied with water? I mean a Board representing the ratepayers under the proposed scheme.
1147. You do not think the scheme should be controlled by the Municipal Council at Wollongong? No; I think there should be a Board separate from the Municipality.
1148. Could it not be run more cheaply by the Metropolitan Board than by the creation of a local body? I am not sure about that; but I should say there would be cheaper management. Of course some boards are very expensive, and it is hard to calculate what the exact cost will be.
1149. The Committee are informed that the cost of administration by the Metropolitan Board would amount to about £150 a year;—you do not think that an excessive sum? No.

John Payne, Mayor of North Illawarra, sworn, and examined:—

J. Payne. 6 Feb., 1899.

1150. *Chairman.*] You are a wheelwright and the Mayor of North Illawarra? Yes.
1151. The proposal before the Committee has been brought under your notice? Yes; although I have not had very much to do with the matter since it was determined to remove the supply from the Cataract to the Cordeaux; but I know the country well.
1152. Your Municipality is entirely to the north of Wollongong? The bulk of it is.

1153.

J. Payne. 6 Feb., 1899.

1153. *Mr. Dick.*] The bulk of your population is to the north and west of Wollongong? The population is distributed, as nearly as I can judge, about equally over the municipal area.
1154. Of what occupation are the population generally? They are miners.
1155. In what mines are they employed? The Mount Keira mine, the Corrimal mine, and the South Bulli mine are in my district. The chief centres of population are at Keiraville, Gwynneville, Balgownie, Corrimal, Bellambi, and Tarrawanna. They are more or less small villages in the district.
1156. Can you give us any idea of the population of the borough of North Illawarra? It is now approaching 3,000. The population is in clusters in small villages or hamlets.
1157. The cost of reticulation under those circumstances would be larger than where the population is concentrated as in Wollongong? There is no doubt of that.
1158. I suppose the centres of population to which you have referred are some distance apart? Yes; but the population at the centres is pretty well concentrated.
1159. The reticulation would not be very costly within the villages themselves? I do not think so.
1160. Do you think it would pay to reticulate any of those villages, striking a rate of 1s. in the £? I think so, in the majority of them.
1161. What is the general average rental in the district? I may tell you that I have been chairman for the past fifteen years of the Illawarra Mutual Building Society, and such things as rent come under my notice. It is now at a very low ebb, but as a rule I think you might take the average rental to be from 4s. 6d. to 5s. a week.
1162. You are not merely quoting the cases in which houses are bought under the society's terms? No; that would be just the same as the other cases, but as a rule miners are not very particular about their residences, and they get them somewhat cheaper than do ordinary persons, but for a comfortable house a miner would pay about 5s. a week.
1163. The majority of houses are of that type? They are mostly wooden cottages.
1164. Have you made a calculation as to what rate could be collected in these villages on the basis of 1s. in the £? No.
1165. What is the total income of your borough? Between £600 and £700. We strike a shilling rate which covers everything.
1166. You have no special fees for cesspits or anything like that? No.
1167. Then the £600 is practically the whole product of the shilling rate? Yes, with the Government subsidy.
1168. Could you supply us later on with an estimate of the probable income which would be derived by your borough from a shilling rate, taking into consideration the houses which would be supplied by water? I will do so.
1169. What length of service-pipe would be required from the pipe-line to supply each of the villages you have mentioned? It is a mile from here to Keiraville and Gwynneville; from Keiraville to Balgownie it is a trifle over a couple of miles; from Balgownie to Tarrawanna another mile, and from Tarrawanna to Corrimal it is not quite a mile. I question the advisableness of attempting to go any further north as far as our Municipality is concerned.
1170. You mention the places which you think it most advisable to supply with water? Yes; I am expressing my individual opinion; I am not speaking as Mayor of the district. I think the places I have mentioned would be only too glad to take the water supply.
1171. You are pretty well acquainted with the proposed catchment area? I cannot say that I was ever on the Cordeaux Creek; but I know the country all round about there.
1172. Do you know of any unsatisfactory feature in connection with the proposed scheme? The only unsatisfactory feature in it that I can see is that, contrasted with the Cataract supply, the water would be brought from a slightly greater distance.
1173. You are aware of the difference in rainfall between the two places? Yes; I have been taking the rain-gauge myself now for ten or twelve years.
1174. Which do you think has the better rainfall? The Cordeaux, by a long way.
1175. Generally speaking, you think it is a more satisfactory scheme than the Cataract scheme? I would not like to express an opinion upon that point.
1176. I suppose you know that it is a considerably cheaper scheme for the supply of Wollongong? Yes.
1177. Have you considered whether it would be advisable to put the scheme under the control of a local authority or under the control of the Metropolitan Board? I think we have already too much centralisation, and that all these things should be conducted locally, providing always that care is taken in the selection of your Board.
1178. The general objection to centralisation is that local bodies do not participate sufficiently in the expenditure;—in this case we want to keep down the expenditure, and hence the proposed centralisation? My experience of centralisation is the very opposite. Take roads, and things of that kind. I have resided where I now live for the last forty-four years, and I have occupied in my time many official positions in connection with public matters, especially roads and that sort of thing. I find that the expenditure of the Government in making roads is most outrageous. The work generally could be done quite as well for a smaller sum by local management.
1179. If the local people had to pay rates upon all expenditure upon roads, do you think they would clamour so loudly for expenditure? I do not think we should have such a large expenditure if we maintained our own roads.
1180. You are aware that as a rule a minimum rate per annum for the supply of water would be 10s.? I was not aware of that; but I do not think that would be objected to.
1181. *Dr. Garran.*] You are a firm believer in greater economy in local works? Yes.
1182. Suppose the Government after all its surveying and planning were to say to the Municipality of North Illawarra, "Here is the scheme; now make it yourselves;"—do you think you would be able to make it cheaper than the sum mentioned in the engineer's estimate? No.
1183. So far as construction is concerned, then, you would be quite content to leave the matter to the Government? As a matter of course works of this kind require engineering skill, but once they have been made there are plenty of persons here capable of managing them.
1184. You would not carry your zeal for local work so far as to construct these works in the first instance? No; I should prefer that the Government should construct them.

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1185. You think the Government will construct these works through the Department of Public Works as cheaply as you could do them? Yes.
1186. You were referring to the small details? Yes.
1187. You would be quite willing to carry out all further reticulation which might be required? Yes.
1188. And to build a second service reservoir if it were wanted; in fact, to do all the minor work? Yes.
1189. As a practical man, have you anything to say against the proposed scheme? The only misgiving I have at all is as to whether we are capable of paying for it. I am inclined to think we are capable of doing so.
1190. By "we," do you mean the people of Wollongong? I mean the people of Wollongong and North Illawarra.
1191. Suppose the Municipality of Wollongong singlehanded took up the scheme under the Government, do you think they would be able to pay interest on £22,000? I am satisfied they could, if the Port Kembla harbour is proceeded with.
1192. Suppose Port Kembla and the little villages in your district are taken in, could the three combined pay interest upon an expenditure of £25,000? Yes.
1193. It will cost more per house to supply your scattered villages than to supply an equal number of people in a town like Wollongong? I should think it would cost a little more.
1194. If your district were annexed, it would not be such an economical thing to supply you with water as to supply Wollongong with water? No; not quite.
1195. Would it not be to your advantage then if you went into the scheme, paying only what the people of Wollongong pay? Yes.
1196. The Cataract scheme would be nearer to your northern townships? Yes.
1197. You do not think it would be desirable to look to that scheme for your supply, and to leave Wollongong and Port Kembla to depend upon the Cordeaux scheme? No.
1198. You would rather come under the Cordeaux scheme? Yes.
1199. The reason for that being partly because the Cataract scheme is so much more expensive? Yes.
1200. This scheme is estimated upon the basis of 30 gallons per day;—do you think that would be an ample allowance? Yes.
1201. You would be glad to get 30 gallons a day just now? Many persons would be glad to get 3 gallons.
1202. What is the general quality of the water on this side of the range? As a rule, it is not good.
1203. It is affected by the mineral constituents of the soil? Some of the water is so affected, and some of it is not.
1204. Do you mean that it is bad from the point of view of health, or that it is merely hard water for washing? I think that a great deal of the water is bad for health under any circumstances. The people who drink it must suffer from it, but they have to drink it now because they have no other water.
1205. Have they no means of filtering it? We always filter the water ourselves.
1206. That circumstance would make people more willing to pay for a pure supply? I am satisfied they will be quite willing to pay for it.
1207. The dry weather of the last few years has had the effect of converting a good many people to a water supply? There is no doubt of that.
1208. Four years ago, when you were at the end of good seasons, you were not quite so willing to pay for it? I think persons are actuated by present circumstances a good deal.
1209. Suppose you had, when this work is completed, a magnificent rainy season and all your tanks were filled and overflowing, do you think people in your district would be as willing to pay the 1s. rate as they are now? No.
1210. *Mr. Watson.*] You said you would prefer the administration of this scheme by a local Board rather than by a Metropolitan Board;—when you referred to a local Board, you were thinking of a body to represent the different ratepayers under the scheme? Yes.
1211. You did not contemplate the control of the scheme by the Borough of Wollongong alone? No.
1212. Have you formed any estimate of the cost of running such a Board, taking into consideration members' fees, clerical expenses, rent, and so forth? I received a communication from Mr. Lyne, your Secretary, a few days ago, asking whether I thought the Council would like to give evidence, and in reply to that I said I did not think the Borough of North Illawarra would care to give any evidence, as it was outside of the proposed scheme. After speaking to the Mayor of Wollongong, I consented to come here and give any information that I could. I am equally interested in Wollongong as I am in the place where I reside.
1213. Briefly, as I understand you, you think a water scheme for Wollongong is required? Yes.
1214. And you think it would be cheaper to all concerned if it were extended to a number of the small towns outside the Borough? Yes, it would be very acceptable to them.
1215. You also think they would also agree to pay any reasonable interest on the cost of construction? Yes.
1216. *Mr. Trickett.*] Will you, within a short time, by public meeting or otherwise, ascertain the views of your ratepayers on the subject, so that the Committee may hear from them as a body rather than from you as a private citizen? I have no objection to call a public meeting, providing I am still Mayor.
1217. As a public man you think the question is of such importance as to warrant you to call a public meeting? Yes.
1218. Will you communicate the results of the meeting to the Secretary of the Committee? Yes.
1219. *Mr. Shepherd.*] You say your population is now about 3,000? Yes.
1220. Has it increased lately? It has been growing from the time we were incorporated up to the present time.
1221. It is still increasing? Yes.
1222. You have every confidence in your population being permanent? It cannot be otherwise while the coal lasts.
1223. There is no appearance of the coal giving out? Not the slightest to my knowledge.
1224. The population are freeholders as a rule? Yes.
1225. The majority of places are worth from 4s. 6d. to 5s. a week? Yes; that is about as much rent as a workman can pay.
1226. I suppose the houses are built mostly of wood? Yes; with one or two exceptions.

Jacob

Jacob Carlos Jones, Chairman, Progress Association, Corrimal, sworn, and further examined:—

J. C. Jones. 6 Feb., 1899.

1227. *Chairman.*] As far as your colliery requirements are concerned, could you give us an estimate of the value of water you would require to use per annum? We have three locomotives and two boilers, and we consume from 12,000 to 15,000 gallons a day.
1228. Then it would amount to about 14s. a day? Yes.
1229. How many days a year approximately would you work? 250. Of course we have gone to an enormous expense ourselves for the supply of water.
1230. Would there not be a liability on the part of your company to take the water by meter rather than by assessment, in which case you would only use the proposed supply when your own dam gave out? That would probably be the case. Still we are increasing our consumption. We are consuming double the quantity of water which we consumed a few years ago from natural expansion of our trade, and our dam would be able to supply only part of our requirements. It would supply the higher levels and the water-works would supply the lower levels.
1231. Are you speaking now of an ordinary season or such a season as we have just had? Every season we get short of water, although we increased our dam last year.
1232. It would pay you to give £100 a year for the use of water from the proposed supply? Yes.
1233. By that means you would obtain better water for your locomotives and boilers? Yes.

Walter Evans, shipping manager, Southern Coal Company, sworn, and examined:—

W. Evans. 6 Feb., 1899.

1234. *Chairman.*] You are shipping manager for the Southern Coal Company? Yes; we ship at Port Kembla. I should like to make a short statement to the Committee. I do not wish to go into the merits of the scheme. Our water is costing us now from £25 to £30 a year, and we are prepared to pay that amount to anyone who would give us a similar supply to that which we now have.
1235. Do you think there would be much demand for the water if the supply were taken on to Port Kembla? We run in conjunction with the Coke Company, particulars of whose requirements have already been given to you by the manager. The two works are practically one. The £20 or £30 which we should pay would be exclusive of the £50 spoken of by Mr. Ashley.
1236. Are there any other probable sources of revenue in Port Kembla? There are about ten houses down there now, and of course when the harbour works are proceeded with there will be a great many more.
1237. Are those houses close together; could they be readily supplied? Five of them are at one jetty and five at the other.
1238. What distance are they apart? The two jetties are about ¾ mile apart.
1239. Have you heard the people there express a desire to obtain a water supply? I have not heard them do so; but I know they are always complaining of being short of water. Frequently we had to run a special tank down to give them water.
1240. What is the source of your present supply? We have a dam across Allan's Creek retaining the fresh water there. We have a month's supply now.
1241. You do not consider that supply satisfactory? No; we should like a better one.
1242. You anticipate that when the harbour scheme is carried out there will be a large increase of shipping at Port Kembla? Yes.
1243. Do you think the shipping would be likely to increase the demand for water? Certainly; they often require it now.
1244. Can you form an idea of the quantity the shipping is likely to require? That is a difficult question to answer; it depends upon the last port from which a ship comes.
1245. Do you at present supply a large quantity for shipping? We give them enough to carry them on to the next port.
1246. They would take more if they could get it? Yes; but it is difficult to get it on board. A vessel coming from Sydney would have its tanks filled to start with, but West Australian ships would probably run short. Almost the first question they ask is, "Can you give us some water?"
1247. What is the tonnage of the shipping at Port Kembla? The total despatch of coke and coal last year from the Southern Coal Company's jetty was 215,000 tons. We have supplied very large vessels.
1248. You yourself are entirely in favour of the proposed scheme being carried out? Yes.
1249. *Mr. Watson.*] Are there many cottages near the Unanderra Coke Works? Yes; about 3 miles from Port Kembla in a direct line.
1250. The proposed pipe-line would pass through them? If it touched our works it would touch the cottages as well.
1251. Do you understand that the rate for the supply of water from Port Kembla would be about 1s. per 1,000 gallons? I did not know the rate.
1252. Will you take the water at that price? Yes.
1253. On the whole you think it would pay to take the water down there? Yes.
1254. You think the prospects of business are enough to warrant the laying of the pipes? Yes; I wish it to be understood that our requirements are practically 6,000 gallons a day, and it costs us about £30 a year for that supply. We are prepared to give that amount per annum to anyone who would give us as good a supply.
1255. You would give, perhaps, a little more to be sure of the supply? Yes.
1256. Is your demand for water at present principally for locomotives? Yes.
1257. Is it the quality of water at Allan's Creek that you do not like? It is good as a rule, but after it has been standing for any length of time it becomes brackish; it is not good just now.
1258. If it gets brackish it would not be good for purposes of household supply? It is scarcely fit for purposes of household supply at present, although, unfortunately, some people have to use it.
1259. It is not fit, either, for the supply of shipping? No.
1260. Can you supply the shipping, as a rule, from Allan's Creek? Yes.
1261. Is the supply upon your own land? No.
1262. You have a dam by permission? Yes.

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1263. There is no possible provision near Port Kembla for an adequate supply of water for the settlers there, and for the shipping? None whatever.
1264. If they want a supply of water they must depend upon some outside scheme? Yes.
1265. You know of nothing better than the provision of a supply in connection with the Wollongong scheme? I do not think you could possibly do better.
1266. When the harbour works begin there will be a certain quantity of labour gathered in the place, and therefore the demand for water will increase? Yes.
1267. At the present time you could not afford an adequate revenue from a branch pipe from the Wollongong pipe to Port Kembla? No; it would not pay upon the present basis of population.
1268. It would not pay to carry out a scheme which would take Port Kembla into consideration at once? Not with our present population; as the harbour works progress you might do so.
1269. What population would justify the taking of a supply to Port Kembla? I could not say.
1270. There is one other company, I believe, which runs locomotives down to the jetty at Port Kembla. Where do they get their supply from? From the same creek as ourselves, but higher up.
1271. The water is not so likely to be brackish as is the water that you yourselves use? Perhaps not; it is brackish now, but they have to use it. It is very salty.
1272. Does the salt come out of the soil? I suppose that would be so.
1273. Is the creek running now? No.
1274. Then at present they are not getting any water at all? There is always a little soakage; you cannot see any water on the surface.
1275. Is the supply enough for their purposes? They get enough. At the present time they are bringing water down from the mine for loco. purposes, although it is not good.
1276. If they dam the creek higher up than you are would it not affect your supply? Our supply naturally stops before theirs, but we have a larger dam.
1277. You rely upon the water which you store in good seasons? Yes.
1278. You have had no good season for the last three years? No; we have enough water to last us for another month yet for our locos.
1279. Suppose the proposed supply were furnished, and you had to pay 1s. per 1,000 gallons, you would still use all the water you could from the creek for your locos, and when that was exhausted you would go to the Government supply for water? Yes; it is quite possible that we should do that.
1280. In good seasons you would not want the Government water at all? No; at the same time we should be prepared to pay a certain price and do away with our own supply.
1281. You would guarantee the Government a certain revenue from your works? Yes.
1282. Would the other company do so? I could not say.
1283. Have you heard them complaining of want of water? I have heard them say they are short and so forth.

Frederick Augustus Franklin, M.I.C.E., Wollongong.

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1284. *Chairman.*] You are a Member of the Institute of Civil Engineers? Yes.
1285. Have you had an opportunity of judging of the feasibleness of the proposed water supply for Wollongong? Yes; I think I have a pretty general knowledge of the proposal.
1286. Will you give the Committee, as shortly as possible, your ideas in reference to it? The proposal to form the catchment area up at the back of Mount Kembla is, I think, an exceptionally practical one. I have examined the area generally with regard to its capabilities, and with regard to the interception of water in the creek. The physical formation of the creek itself offers unusual advantages. On the surface there is disintegrated shale, which appears to be lying indirectly over the coal measures; but on inspection I conclude that there has been nothing in the way of coal-mining beneath the area you propose to resume. I think on closer examination it will be discovered to be lying due west of the works of the Southern Company in the Kembla mountains, and south of the boundaries of the present workings on the Kembla mine. The catchment area, which I am told is 3¾ square miles, is somewhat limited, but from by observations of the rainfall for a period of fifteen years, I know the rainfall at the Cordeaux would be very much heavier than in the valley, or in any of the spots where it is registered on the South Coast within Illawarra. This is accounted for from the fact that when we have great humidity or vapour it impinges at an elevation of 1,000 feet on the mountain, quickly evaporates, and discharges on the top and a little way over from the top, making a very large rainfall. Having regard to the exceedingly large rainfall, I think the limited area of the catchment is ample for the purpose. With regard to the impermeability of the area, I think there is no doubt about it. On making several temporary water supplies in the same formation, we have never found any difficulty. The only trouble has been the ordinary evaporation of the surface. Therefore I think it is quite safe to assume that, after the first saturation, the whole of the area would be perfectly impermeable. I do not know exactly what quantity of water it is proposed to store, but it seems to me that our future is no longer speculative, with Port Kembla practically within our reach. It is hardly possible under those circumstances to over-estimate our future requirements in the matter of pure water. There is a large tonnage at Port Kembla at the present time, and the ships have to provide their tanks with water elsewhere. It has been told to me by owners of vessels that if pure mountain water could be procured for oversea voyages, conveyed by a short length of pipe, it would be taken in preference to a supply from a long length of pipe such as exists in the case of the metropolitan supply. Therefore we might reasonably expect that, when Port Kembla becomes an established port, vessels engaged in the oversea trade will fill their tanks there. With regard to the maximum charge of £25,000 for a water supply to Wollongong, it seems to me that, having regard to immediate possibilities, that would not be too great a burden to put upon the present population, supposing the scheme to be carried out to the total amount estimated, affording the fullest capacity in the storage reservoir. I am quite satisfied, from my twenty years' experience of this place, that when once we arrive at the solution of this question there will be a general clamour throughout the whole district for participation in the supply. For that reason I think the greatest capacity should be provided at the head works. I see that, according to the estimate of the engineers, the sum chargeable to Wollongong would be about £16,000, and that £7,840 has been provided for the inclusion of Port Kembla. That being so, I think all doubt is removed as to the capability of the town to bear the burden. I do not think it would be felt at all by the present population.

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population. Without taking into account the almost certain, immediate demand for water for locomotives and mining purposes, and for shipping in the present port of Wollongong, and for railway purposes, those supplies will lighten the cost to Wollongong proper still further. I see that it is estimated that the dam will impound 172,000,000 gallons of water. That seems a large quantity of water even for all our requirements, but I feel sure that the engineers have assumed a portion of the water from the off-take level to be dead water, and beyond our reach. This, I think, would reduce the quantity of actual service water to 65½ million gallons. In that watershed of 3¾ miles, with the area saturated, we could get, with its precipitous discharge into the reservation, 54 millions of gallons with 1 inch of rainfall; so that it is easy to see that when once the reserve was properly charged, and the strain upon it was confined to the consumption of Wollongong and probably Port Kembla, a very small rainfall would keep the dam supplied to overflowing. It is such an exceedingly small area of catchment, as compared with the great metropolitan watershed, that its appropriation could not be taken objection to as diminishing the Sydney supply. A very small proportion of the annual rainfall would keep the reservoir full to overflowing, and the overflowing water would continue in its natural course down the creek. As to the details of the work they are very simple, and can be clearly seen at a glance. The first proposal was for an ordinary masonry weir at right angles to the stream. This would require to have from its form a very large base and sectional area; but from my personal knowledge of arched dams as used in India, I think the one proposed to be used in this instance, having regard to the physical features of that particular point, will be satisfactory. A smaller quantity of material will be required, and a greater height of dam will be obtained with a larger proportion of stability. It is proposed to receive the water in an ordinary chamber provided with the necessary off-take valves, and to tunnel from whatever level may be determined according to the maximum service-level of the reservoir, conveying the water by tunnel some 1,300 yards in length, to an opening on the eastern side which exists on sideling ground near the main road. We are perfectly familiar with that mode of construction in this district. The pipe-line itself from the outlet of the tunnel is carried on sloping ground for a depth of about 450 feet. The land then becomes undulating and practically level until the proposed point of bifurcation to Kembla is reached. The pipe is carried thence to a service-reservoir at a point near the South Coast Road called the Cross Roads. That reservoir is at an elevation with the top water of 242 feet above sea-level. That will give a considerable pressure over all the thickly-inhabited parts of the town—probably 100 lb. to the square inch. The water will reach the highest point on which residences are to be found within the population area. With regard to the reticulation, I have not had time to examine it, but I believe the council are quite capable of laying out a payable reticulation in the town boundaries. I may mention that the site of the storage-reservoir is an exceedingly good one. It is unusually good with regard to the area of land covered by water. A great portion of it—I cannot determine the exact proportion now—is precipitous, stony, and valueless except as an approach to the water for stock. A small portion of the area will cover portion of an orchard very highly improved with trees in full bearing. That portion would bear a relatively high value compared with other portions. Another good portion of the land is partly under cultivation, and is about equal to what we call first-class farming land in this district. So that in estimating the resumption it would be fair to give a full orchard value to the portion under trees, and a fair market value for the agricultural portion. The value which applies to the slopes of the mountains would apply to that portion which comes within the slopes of the banks from the dam to the north-eastern extension of the reservoir itself. On the whole of the area, excepting in the cultivation portion, the element of betterment comes in. The approach of stock is very awkward at present. But in walking round the water-line yesterday I saw that for stock-watering and domestic purposes the water would be brought to a most convenient level. That really enhances the value of the surrounding land to a very great degree. On our way to the site of the reservoir, on Saturday, we were told by people along the road that we had better take water with us, as the Cordeaux was dry. On our arrival there I gauged the discharge—it was concentrated to one opening, so that I could take the velocity and discharge—which I reduced to 30 cubic feet per minute. That is after an exceedingly dry season of some six or seven months. It would represent a total of 259,200 gallons in twenty-four hours. That would be a supply for Wollongong for several days. I was engineer for the contractors for the Prospect Dam during its construction and completion, and I had an opportunity of seeing the water gradually make behind the dam, and I can therefore estimate with fair accuracy the percolation and absorption. We have the same formation here. The supply, in fact, would be derived from the same watershed. From the time I acted as mayor, in 1883, I have persistently worked—certainly in an intermittent way at times—to get this supply, and I think the townspeople are entitled to some consideration with regard to the future development and extension of the service, and that the town, so far as it is liable, should benefit from whatever additional income may be derived from extension, by way of a reduction of the charge made to themselves. I mention that for this reason—that immediately the Kembla Harbour works are commenced there will be a considerable gathering of people there, and even before the completion of the pipe-line the Government will find that there will be a strong demand for a service to Port Kembla. To supply them even in a moderately progressive way will be the means of producing some income, and I think that income should be credited to Wollongong for a period of four or five years. For the first two years it is possible that the increase of shipping at Port Kembla will be slow, but as the initial work of the breakwater runs out on a very shallow reef for about 1,300 feet, and will be constructed very rapidly, I estimate that within eighteen months the whole of the present port will be sheltered from the eastward. I am safe in saying that within two years there will be a demand for a large quantity of water at Port Kembla. Whatever system of management may be established I think that for some time afterwards Wollongong should be directly credited with any saving made upon its liability. With regard to the management of the scheme, it has been told me that the Metropolitan Board would undertake the management, that is, with regard to supervision and the collection of revenue and bookkeeping, and, after consideration, I think that is the most reasonable way of conducting these works. From the nature of the proposal as regards construction, from the great height of the water-level at the source of supply, and the precipitous nature of the pipe-line, and the manipulation of the supply into the town, the works would require to be placed in skilled hands. Whoever undertakes the management should be wholly responsible for anything happening to the work. The proposal for the pipe-line and connections are, of course, quite up to date as to the strength and stability of the materials used; but if the works are not properly attended to, and if by any error of judgment or accident the water were suddenly stopped

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stopped and suddenly turned on again damage must result to the pipe-line. For that reason, I think that for a long time the practical management of the works would be better placed in the hands of the Metropolitan Board, who are thoroughly acquainted with the details of management, and who have capable men at their command. I am quite sure that there will be a great clamour by people lying to the north of the pipe-line for the water, even before it is brought into Wollongong. Since the Cataract scheme was under consideration the people in that direction have increased greatly in numbers, and they have felt the want of water much more severely. With possibly only 2 miles of additional service pipes junctioning on to our main line as the only obstacle against their being placed in a good position relatively to a water supply, I am certain that they will take the water throughout the whole length of pipe-line up to Bulli some 7 miles away. The cost of the Cataract scheme as estimated was beyond the reach of all of us, but the taking of a small quantity from the large supply which we should have would make the charge to these people so comparatively small that I am sure that before we have completed our own supply there would be a great movement for its extension in the direction I have named. With the exception of the absolute cost of working that extension whatever profit might accrue should go for some time to reduce the charge against Wollongong under the management of the Metropolitan Board. I think it would be a great mistake to reduce the expenditure at the impounding headworks. I do not like to be too sanguine, but I am sure that you will want all the water you can get there. I think the dam should be constructed with a base sufficient to carry it up to the maximum height for full storage. Your off-take level must be there, but if you do not wish to use the full height of the dam you have an easy means of making an off-take near it.

1287. You would not carry the dam up to the maximum height at once, but you would make the base of sufficient thickness to provide for an increase in the height? Yes; I would design an arched dam to carry the whole head of water which may be ultimately required. I would not economise by reducing the area, but I would reduce the height. I think our future progress will demand all the water which can be impounded there by the proposed dam.

1288. *Mr. Watson.*] Did I understand you to say that although the Department in their statement in regard to the completed scheme for Port Kembla mentioned a storage of 168,000,000 gallons that quantity would not be available? They say that their large project would give us 168,000,000 gallons, but a portion would be dead water. If we can get the full scheme for £24,000 it seems to me that it would be better to take it with the possibility of having the charge reduced when the scheme is extended to Port Kembla.

1289. *Chairman.*] You said that you were very familiar with the tunnel construction proposed to be adopted? I was speaking then of the mining population.

1290. You think the estimate of £5,307 is ample for the tunnel and outlet works? I could not say unless I knew the sectional area of the tunnel.

1291. You have not checked the proposed expenditure? No.

1292. *Dr. Garran.*] I understand you to say that part of the surface of the watershed was chocolate soil which came from the disintegration of the flat rock? It is disintegrated Wainamatta shale. It is not a good farming soil, and it overlays red clay in places.

1293. Do you think that after a heavy rainfall the water is likely to become turbid from the washing of the surface? I do not think so. I think the ordinary storm discharge would send nothing but ordinary debris or detritus into the water. It would not affect a large area like that. With ordinary care in the clearing of the scrub there would be very little trouble.

1294. You do not think the water would be likely to become turbid after rain at all? Certainly not, with the small surface washing.

1295. As to the height of the dam, as an engineer you quite agree that if it were erected on the proposed base to a height of 30 feet for present purposes there would be no difficulty in putting on 20 feet more afterwards if it were wanted? Certainly not.

1296. It would make as good a work as if the whole dam were constructed at once? Yes.

1297. Concrete upon concrete is as good work as if it were made solid in the first instance? Yes.

1298. We might reduce the first expenditure by reducing the height of the dam slightly? I do not know that I would reduce it. I do not know the level of the off-take pipe; but as the level of the dam must regulate all the rest of the working, all I wish to say is that, if a reduced level can be made available for requirements, there can be no objection to leaving the dam at a lower level for the time.

1299. It is quite evident that the Government engineers would like to make the whole job complete at once; and it is equally evident, from Mr. MacCabe's evidence, that he would like to see the burden on the Council kept down to the lowest level to start with;—which would you, as an engineer and as an old resident of the district, recommend? The weir diminishes so rapidly towards the crest that at whatever point you might determine to stop it could represent only a small saving in the sectional area compared with the base. If it were found to be only a small saving to leave out 10 or 20 feet of the upper or thinner portion of the dam, I should recommend its completion to the full height at once.

1300. You have expressed the opinion that immediately Wollongong obtains its water supply it will be such an object lesson to the people in the neighbourhood that there will be an immediate clamour on their part for the extension of the supply to them? I am quite sure of it.

1301. In that case, even if the dam were not completed at first, it would have to be completed very quickly? Yes; for that reason I should urge that the full capacity estimated should be furnished at once.

1302. Suppose the Government made the dam to the full height, you think that many people outside Wollongong would want reticulation as soon as the water could be made available? Yes.

1303. Then the people of Wollongong could hardly be money out of pocket if the full scheme were at once completed? I do not think that on the score of economy the saving in interest effected by omitting a small part of the top of the dam should be considered. I believe it would be false economy.

1304. You would not object to the completion of a full scheme at once? No; there are other details which might be left. For instance, any bifurcation of the pipe-line might be left out until it was absolutely necessary. I do not think you could very well reduce the cost of the service reservoir, nor the dimension of the pipes for the service of the town. I do not know of any details in regard to which I could recommend the Committee to consider economy.

1305. Would the rush of water into the dam from the surrounding catchment intermix with the lower body of water in the dam? Yes; the lower water would clear itself.

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1306. Speaking generally with reference to the scheme, you approve of it? Yes.
1307. As an engineer, and as an old resident of the district, you can confidently recommend it? Although I think I am the only person in Wollongong who has an abundance of water, and who has never known what it is to be short of it, except for garden and such purposes, and as one who has been connected with the district for twenty years, and as a property owner liable to be taxed, I am quite willing to bear my share of the burden. I may say that we find the water on the eastern slope to be so highly mineralised as to be totally unfit for domestic purposes. As regards the present supply my conclusion is that the salubrity of the climate has been the only thing which has averted the most dreadful epidemic in the town. The streets have been formed for some years of a very friable sandstone, and ordinary traffic reduces it to dust almost immediately, and when westerly winds occur in March or April the whole town becomes enveloped in a thick red or yellow dust. This is showered down upon the roofs of the houses, and gravitates into the tanks. Not only is that the case, but there is an admixture of sweepings from the streets. The only local source is in the lowest part of the town. Three-fourths of the drainage from the streets gravitates into it, carrying a great quantity of rubbish and filth. That water is carted away, for what purposes I should not like to know. We find along the whole of this coast water at a certain depth on the flats; but contiguous to that source of supply in the case of Wollongong there is the old burial ground.
1308. With regard to the rateable value of the land, its value has gone down of late years? Yes; but I think the town will be able to bear the burden of the proposed supply. I was induced to become an alderman in 1882, and in 1883 I became Mayor. The Government of the day, the Stuart Government, told me that if I could get the Council to make themselves responsible for the interest on £16,000, nothing would be put in the way of our getting that amount in order to relieve the town of its sufferings, consequent upon the want of an adequate supply of water.
1309. You do not think the estimated rental is too high from present rating? No; I think it is exceedingly fair. The rentals have been reduced by fully 50 per cent. from the want of water. Visitors discover that we are not in a position for that reason to compete with ordinary tourist towns; we have suffered considerably in that respect. Many of those whose living has depended upon business arising from a visiting population have left the district altogether. If we do not obtain a good water supply, I do not know how the place can possibly progress.

Henry Osborne MacCabe, Mayor of Wollongong, sworn, and further examined:—

H. O. MacCabe.
6 Feb., 1899.

1310. *Mr. Trickett.*] You hand in a statement of the assets and liabilities of the Borough at the present time? Yes, with some other information, as supplied to me by the Council Clerk. It is as follows:—

ASSETS.	£ s. d.	LIABILITIES.	£ s. d.
Town Hall	8,000 0 0	Present indebtedness	8,828 0 0
Library books and furniture	70 0 0		
Working plant	25 0 0		
Furniture—Town Hall and Office	335 0 0		
Houses and Land Quarry £200			
Pound 100			
Council's Yard and Depôt 250			
	550 0 0		
Street lamps	300 0 0		
Credit Bank balances, Library account	15 15 4		
Outstanding rates	760 0 0		
Amount due for nuisances charges	20 0 0		
Other accounts due	8 10 0		
License fees	19 2 6		
£	10,103 7 10	£	8,828 0 0

Rate of interest on debentures at 5 per cent., over-draft 6½ per cent.
No sinking fund.
Debentures mature in 1903.
Revenue of that portion of town to be reticulated £874 5 4
Streets doubtful as to being remunerative 89 8 6
£963 13 10
Say—£900 0 0
Number of ratepayers on roll 796
On lines of reticulation 643
Total revenue of Borough including all sources of income £2,000 0 0

1311. Has your indebtedness increased of late years? No; we have been gradually paying off our overdraft.
1312. Your estimate of £900 as revenue from the proposed works is a little short of the Government estimate? Yes.
1313. The Government estimate that £150 per annum will be paid by the Railway Commissioners, and £100 by the wharfs;—do you think that is within the mark? I am nearly positive about that. We have an undertaking from the Railway Commissioners to take £150 worth of water.
1314. As far as you can see, the estimated revenue will be sufficient to pay interest, and provide a sinking fund for the expenditure? Yes, at 3·6160 per cent.
1315. What have you to say to-day with reference to the question of control? I spoke very forcibly upon the question the other day; but I have since given the matter more consideration, and looking at the question all round, it does seem to me that with certain reservations the control might very well be handed over to the Metropolitan Board. I see many advantages in that course. Certain reservations have occurred to me at the present time, and it is possible there may be more when the aldermen have had

had time to think over the matter. In the first place I should like to know what the Council would have to pay for water for flushing streets and drains. I should also like the power to be reserved to the Council to use any power in the mains for driving a turbine for the purposes of electric lighting. I think we are entitled to claim that without any payment whatever. We should also have the right to audit and the right to determine whether any profit on the whole scheme should be devoted to new works, or to the reduction of rates. We should also have the right to determine whether any proposed new works should be proceeded with or not, and the right to veto anything which may occur to us as extravagant. Another question upon which I should like information is this: I was assured the other day that if we were unable to meet in any particular year our indebtedness to the Government in respect of interest and sinking fund, the Board would find the money for us, and debit us with the amount. I should like to know at what rate of interest. I take it that it ought to be at the rate of 3·6160 per cent. In giving evidence the other day I said I thought it was a vital point that the Council should become owners of the property at some future time. Seeing that the scheme may be used for the supply of people in other localities, I can see that the water supply being the property of one body is not a practical suggestion; but I think that if you take away from us that right, at some future time you should charge us less than 3·6160 per cent. H. O. MacCabe. 6 Feb., 1899.

1316. You think you should not be charged more than interest on the outlay? Yes. I was also asked to consider the question of the appointment of a local Board. I have thought over that question, and my own opinion is that it would be better that the control of the works should be handed over to the Metropolitan Board. There might be some trouble in getting a local Board to work advantageously. If there were a local Board there should be a small Board, the members of which should have some qualification for the position. I think there should be three members, one a member of some recognised institute of engineers, and the other two business men of considerable capacity—men who have shown business capacity in their control of large businesses. In regard to representation on the Board, one representative would only have a voting power equivalent to one-tenth, and I would rather have the right to deal with the profits which may accrue in the way I have described.

1317. *Chairman.*] In making your estimate you have rated the properties as for ordinary municipal purposes? Yes, at 1s. in the £.

1318. In the city and suburbs of Sydney a special charge over and above the rate for municipal purposes is made for gardening, stabling, and that sort of thing;—that has been left out of your calculation? Yes.

1319. Then any charge for that purpose would be extra? Yes.

TUESDAY, 7 FEBRUARY, 1899.

Present:—

JOHN PERRY, Esq. (CHAIRMAN).

The Hon. PATRICK LINDESAY CRAWFORD SHEPHERD. | The Hon. WILLIAM JOSEPH TRICKETT.
The Hon. ANDREW GARRAN, LL.D. | WILLIAM THOMAS DICK, Esq.
JOHN CHRISTIAN WATSON, Esq.

The Committee further considered the expediency of constructing Water Supply Works for the Borough of Wollongong.

Leslie Augustus Burton Wade, Inspecting Engineer, Department of Public Works, sworn, and further examined:—

1320. *Chairman.*] In your former examination you were asked with reference to the construction of a dam, and you said you would produce some figures showing the probable cost of the storage of water at various heights? Yes; I have prepared a statement giving the information. I have taken out the cost for three heights—25 feet, 30 feet, and 40 feet. With a dam at a height of 25 feet, the total storage would be 39,000,000 gallons, and the net or available storage would be 34,000,000 gallons. That represents 378 days' supply for the present population of Wollongong; that is, 3,000 people at 30 gallons per head. The cost of the dam at that height would be £3,015. The future cost of raising it to the full height would be an additional £1,764, making a total cost of £4,779. For the 30-feet level the total storage would be 70,500,000 gallons, and the net storage 65,500,000 gallons, or a supply of 728 days for the present population of Wollongong. The cost up to that height would be £3,565. The future cost of raising it to the full height would be £1,214 additional, making a total cost of £4,779. The total storage at the 40-feet level—that is the full dam—would be 173,000,000 gallons, and the net storage 168,000,000, representing 1,870 days' supply for the present population. The full cost of that would be £4,380. It will be seen that I have made the total cost of completing the dam at a subsequent date to be £400 more than if it were completed straightaway. That is accounted for by the fact that we should have to take the whole of our plant over there again—the same plant, the same amount of timber. If you take it there in the first instance there is only the one cost, but if at any subsequent time you have to take the whole of the plant over there again—the stone-crushing machine, the engine and boiler, and fresh timber and fresh scaffolding, and re-erect them—this would mean an additional cost of £400. I have put down the cost of the completion at a subsequent date at £4,779, and the cost of the completion straightaway at £4,380. L. A. B. Wade. 7 Feb., 1899.

1321. *Mr. Watson.*] This is worked out on the idea of a broad dam, sufficient to carry the superstructure? Yes.

1322. *Chairman.*] On Saturday you saw the flow of water going down the creek, do you think it would be safe to leave the supply at 34,000,000 gallons, that is, twelve months' supply? I think 34,000,000 gallons would be sufficient with the present population, that is, with the flow I saw on Saturday.

1323. The next set of figures, based on a height of 30 feet, would give double the supply? Yes, practically.

1324. That means you could supply double the population? Yes.

1325.

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1325. And from what you have been able to ascertain with reference to the rainfall and the flow down the creek, do you think there is any danger of that supply ever giving out—I mean the 34,000,000 gallons? I do not think so. I think that flow we saw in the creek on Saturday would very nearly balance the evaporation, and you would have the stored water to draw on. I am speaking of a dry time, such as we have been having lately.

1326. The cost of carrying the dam up to the 30-feet level would increase the cost in the first set of figures by £1,200, making a total cost of £22,000? Yes; we could reduce the total by £800 by bringing it up to the 30-feet level.

1327. The cost of the storage dam alone in the scheme for Wollongong was £2,368? But that is the small section; that is not the broad base.

1328. To broaden the base dam it would cost £1,200 extra, taking it up to the 30-feet level? The £2,368 was for the small scheme; that cannot be raised.

1329. By putting in a scheme that can be raised at a cost of £1,200 more you get an available supply of 65,500,000? Yes.

1330. That is the same storage put down in your statement? Yes, for £1,200 more.

1331. That is two years' supply with the present population? Yes.

1332. And that would bring it within the reach of Wollongong? Yes; it would still be within the reach of Wollongong.

1333. I mean it would be such as would justify the Wollongong Council in going in for the scheme;—I think you heard it stated at Wollongong that they could pay interest on £22,000? Yes; the cost would amount to £22,400, and that would be practically within their means. I was asked as to the saving of cost by reducing the size of the pipes. By putting in a smaller pipe all through, the saving would amount to £1,164.

1334. *Mr. Watson.*] That would be from the storage reservoir to the supply reservoir? From the storage reservoir down to Port Kembla a 6-inch pipe is provided for, and from there to the service a 4-inch pipe. If, instead of that, you put down a 4-inch pipe the whole way there would be a saving of £1,164. But the discharge of that 4-inch pipe is only 180,000 gallons a day, and the discharge of the 6-inch pipe is 550,000 gallons a day. So that by an additional expenditure of £1,164 you would increase your discharge to 550,000 gallons; whereas if you put in the smaller pipe and duplicate the supply afterwards the duplication would cost £2,980, and you would only increase your discharging capacity by another 180,000 gallons, giving altogether a total discharge of 360,000 gallons.

1335. *Chairman.*] Would the smaller pipe have a discharging capacity sufficient to meet the requirements if some of the other municipalities came into the scheme? No; the smaller pipe would only have a discharging capacity sufficient for double the present population of Wollongong—that is, 180,000 gallons a day.

1336. Then it would be false economy to reduce the size of the pipe? I think so.

1337. *Mr. Watson.*] If it is likely that a considerable number of people to the north and south of Wollongong would take the water, would you then advise the completion of the dam to a height of only 30 feet, with a storage of 65,500,000 gallons? The present saving by completing the dam to a height of 30 feet would be £800, but when you came to take it to the full height afterwards it would cost you £400 more.

1338. Do you think it would be necessary eventually, supposing these different villages were supplied, to increase the dam to the full height of 40 feet? I think it would, undoubtedly.

1339. Within what time? It is difficult to say. It depends a good deal upon the development of Port Kembla. That would be a large factor in the matter.

1340. From the evidence taken yesterday, it would appear likely that there will be a fair demand for water to the north of Wollongong—that is, without taking Port Kembla into account;—under these circumstances, would you advise the building of a dam to the full height of 40 feet? As the saving is so small now, and the increased cost of completing the dam to the full height afterwards would be quite 50 per cent., I think it would be hardly worth while to leave it incomplete at the present time.

1341. There would be £800 saved? Yes; and it would cost you £1,200 afterwards to put it on.

1342. £800 saved now at 4 per cent. would only be £32 a year—that is all the saving there would be? Yes.

1343. *Dr. Garran.*] If I understand your figures rightly, the difference in the present cost between the 25 feet scheme and the 30 feet scheme is only £550? Yes.

1344. And with practically double the storage? Yes.

1345. So that the extra cost is a flea-bite compared with the gain? Yes.

1346. When you allow 30 gallons per head per day in Sydney, that includes all the water-closets and sewerage water used, does it not? Yes. I think Sydney uses more than 30 gallons per head per day. I think the last return showed about 34 gallons.

1347. Until Wollongong was supplied with a sewerage system, it would only require enough to flush the drains, and that would not be like anything so much per head as would be used under a system of water-closets? No.

1348. So that 30 gallons would be an extreme allowance now for a city without a sewerage system? Yes. Thirty gallons would be ample for the domestic supply of Wollongong. But if Port Kembla and the other places were supplied, they might use large quantities for manufacturing purposes.

1349. But I am speaking of Wollongong only? Yes.

1350. We were told at Wollongong, yesterday, that the North Illawarra district would really require a supply for five scattered villages, a mile or more apart from each other;—that would require a very much larger reticulation service than Wollongong has, would it not? Yes, I should think so.

1351. And the cost, per head, of supplying these people with their 30 gallons would be very much greater than the cost of supplying a compact population like that of Wollongong? Yes, it would.

1352. And if they paid at the same rate for the water, they would get comparatively more cheaply served, although a larger expense would be incurred in supplying their wants? Yes, they would for a start, unless the population afterwards increased.

1353. Taking the population as it is? Yes; they would at the start, anyway.

1354. If we were to look at it as a commercial speculation, it would not be so profitable to supply those five scattered villages, as to supply the town of Wollongong? No, not at the shilling rate.

L. A. B. Wade. 7 Feb., 1899.

1355. If we connected with Port Kembla there would probably be a compact population there? Yes.
1356. But very little on the road? Yes.
1357. There would only be the cost of four or five miles of pipes which we should have to consider there? Yes.
1358. So that the scheme would be relatively more costly to the people of Wollongong, as compared with the others? Yes.
1359. This additional cost would have to be added to the capital account of the whole scheme? Yes.
1360. Which would make it relatively heavier upon the Wollongong people? Yes; but perhaps the other people might be willing to come in and guarantee the interest.
1361. There would be room for a little negotiation on that point? Yes.
1362. But they certainly would, to some extent, be supplied at the cost of the Wollongong people, if they paid at the same rate? I do not know that it would be at the cost of the Wollongong people.
1363. Well, if Wollongong had to pay on the larger capital? It will probably take the Wollongong people their full rate of 1s. to pay their way.
1364. What I mean is this:—We make it first a Wollongong scheme. The Wollongong people say "We will pay for what we use." Now, the North Illawarra people come in, and say "Supply us too, and at the same cost for the water." Would there not be a danger ———? They will get the advantage of the headwork.
1365. And their reticulation being so much larger, it will cost much more to supply them? Yes.
1366. Is there not a danger that Wollongong will complain of that, and refuse to accept the scheme? As long as it is not a drag on Wollongong, I do not see why they should. For instance in Sydney, they will not reticulate a street until the street can pay interest on the cost of the pipe, and then it is not a drag. As the population increases, that helps to pay on the headworks.
1367. But is there the same probability that five small scattered villages will pay the cost of the scheme when it only just pays to supply the compact population of Wollongong? Not unless the population of those villages increases very considerably.
1368. With the present population there would be a difficulty? Yes, rather.
1369. *Mr. Trickett.*] If the portion north of Wollongong were to come in, as suggested yesterday by the mayor of North Illawarra, would that necessitate a larger supply main from the storage depôt? It would require a larger supply main from the Cross Roads? The 6-inch pipe would be ample for the north and south; but it is proposed now to put down a 4-inch pipe from the Kembla Coal Company's central station.
1370. Will that 4-inch pipe be sufficient? It will have to be increased.
1371. If those northern places come into the scheme will the reservoir at Wollongong be sufficient for the purpose? Yes. We should build two reservoirs. We should build one at the far end, and that one would fill during the night, and the two would be working both ways during the day time.
1372. So that there will have to be added to the cost of the scheme the increased pipe-line from where the 6-inch pipe ceases to the Wollongong reservoir, another service reservoir, and a pipe from the Wollongong reservoir to the northernmost service? Yes; of course, the other reservoir and the longer pipe will not be required until those villages come in.
1373. I mean if they do come in? If they do come in it will be required.
1374. All that expense would have to be added? Yes.
1375. I suppose you cannot tell, approximately, what it would amount to? No; the Department has made no estimate.
1376. It would be some thousands of pounds? Yes.
1377. So that if these portions do come in, they will have to be taken into consideration in the water rate? Yes; but if the scheme were placed under the Board I do not suppose they would make any extension out there until the rates were sufficient to pay for it.
1378. Still, if we are going to make provision for the northern municipalities, we should have to increase the size of the pipes from the junction to the service;—that would be absolutely necessary now? Yes.
1379. *Mr. Shepherd.*] Have you gauged the quantity of water at present running in the stream? No; but I gained a rough idea from the experience I have had in gauging water like that.
1380. We had one witness yesterday who gave an opinion that there was nearly enough running at present to supply Wollongong? I do not think there is enough for that.
1381. Have you any idea where the flow comes from;—have you noticed whether it comes from the head of the creek or from any particular point? No, I have not noticed; but I think it very probable that those springs come out of the basalt county—on the right hand side looking up.
1382. So that you have no idea at what level the creek would supply the dam. Of course, if the dam were above the level of supply the water would cease running? I think the springs break out a good way up the creek.
1383. What is the difference between the level of the dam and the level of the creek—the difference in elevation between the site of the dam and the head of the creek—is there much fall? I should say the highest point of the creek must be quite 300 feet above the dam.
1384. There is a considerable quantity of water flowing now, and in any case it would be of great assistance to the dam? Yes; the flow in a dry season like this would go a long way to counterbalance the evaporation. There would be a very big sheet of water, and considerable evaporation.
1385. Do you not think that 30 gallons per head per day is a very large allowance for the supply of a population like that of Wollongong? That is what we always allow for in these country towns.
1386. In your experience, do you think there is anything like that quantity consumed? I think that in some of the towns out in the dry parts of the country, they consume more than that, particularly when you take into account the watering of the gardens.
1387. *Chairman.*] If these other municipalities came in, the service you are providing now would meet their requirements, would it not—the storage and the service;—that is down to the Cross Roads? Yes; but from the Cross Roads to Wollongong, we should have to increase the size of our pipes.
1388. What means would you take to supply those northern municipalities? We could use the same service reservoir, and have a balance reservoir at the other end of the line at Bulli.
1389. *Mr. Watson.*] The cost of running a 6-inch pipe, instead of a 4-inch pipe, from the Cross Roads to the Wollongong service reservoir would not be very heavy, would it—so as to be ready to supply the northern municipalities? It would probably mean the increase of another £1,000.

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1390. The substitution of a 6-inch for a 4-inch pipe between those points? Yes; but I think a 5-inch pipe would do. I could go into the matter and see what sized pipe would be required, and what the additional cost would be.

1391. *Chairman.*] In supplying these northern municipalities, you would not take the water from the lower pipe-line, would you? No; we would take it from the service reservoir, and we would have to increase the pipe between the Cross Roads and the service reservoir.

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

C. W. Darley. 7 Feb., 1899.

1392. *Mr. Trickett.*] Yesterday, the mayor of North Illawarra attended before the Committee at Wollongong, and he seemed to think that all these boroughs to the north of Wollongong would be putting in a claim for a water supply;—in the scheme that has been put before the Committee are the pipes and service reservoirs, and other things, sufficiently extensive to supply all those portions to the north? They are sufficiently large.

1393. Except that the pipe would have to be a 6-inch pipe right into Wollongong, instead of only a 4-inch pipe to a certain point? It would have to be a 6-inch pipe down to the supply tank.

1394. And then the pipe-line from the reservoir to Wollongong, and right away up to Bulli;—would that be a 4-inch or a 6-inch pipe? A 6-inch pipe.

1395. And then you would want a service reservoir at Bulli? Yes.

1396. Would you want an intermediate reservoir between Wollongong and Bulli? I do not think so. I think a balance tank at each end would be sufficient. There is not a thickly-populated district between those two places.

1397. The Mayor told us that the population of all those places would be about 3,000? Yes. A very large portion of that would be at the far end of Bulli; they would have the tank there.

1398. Would that largely increase the cost of the scheme,—increasing the size of the pipe-line and the new reservoir? Under the scheme before the Committee, the pipe from the central station down to the service reservoir is only a 4-inch pipe. To substitute a 6-inch pipe would cost about £463. That was a thing I thought of doing, in any case, if the scheme were carried out. I thought it very likely that the pipe would be increased to a 6-inch pipe. In that case, the scheme would be ample to supply Bulli, Wollongong, and Port Kembla.

1399. I suppose you could not tell us what the cost of that would be;—the cost of the pipe-line, and the reticulation, and so on? The distance from the reservoir to Bulli would be about 7¾ miles. Roughly speaking, the cost would be about £5,000.

1400. And £500 for the extra thickness of pipe;—and then, I suppose, there would be another £1,000 for the reservoir at Bulli? You could get that from the report. It is really portion of the old scheme. The old service reservoir at Bulli in the estimate was put down at £5,000. I think very much less than that would be sufficient.

1401. In addition to that there would be the cost of reticulation at the various places required? Yes.

1402. If the scheme, as suggested to the Committee, is carried out as far as Wollongong, then its continuation to the northern places can be carried out without any further provision being made? It can. Approximately the supply of water from the 6-inch main would be about 550,000 gallons per day, whereas Wollongong, at the outside, would not require more than 175,000 gallons a day, and Bulli and district you might put down at 123,000 gallons. That leaves 250,000 for Port Kembla, which is abundant. I think the 6-inch pipe down to the reservoir would carry all the water required north and south of Wollongong

1403. *Mr. Watson.*] Was that £5,000 for a reservoir for the service of Bulli alone? Yes, that was for the Bulli reservoir alone, but a smaller one would do.

1404. *Mr. Trickett.*] Then I understand the total cost would be about £5,000 or £6,000 for the pipe-line, and something under £5,000 for the additional service reservoir? The pipe-line would be about £5,000 The amount required for the increase of the pipe from 4-inch to 6-inch would be £500. Of course, I am only giving these figures approximately. For a distance of 7¾ miles a 6-inch pipe would come to about £5,000.

1405. *Mr. Watson.*] Would it require a 6-inch pipe all that distance? It would.

1406. *Mr. Trickett.*] So that the total cost would be something like £14,000. I daresay you might take something off the reservoir? The reservoir would not cost any more than the one at Wollongong. It was put down at £2,300.

1407. Mr. Wade has handed in a statement as to the storage capacity of a dam to the height of 25 feet, 30 feet, and 40 feet, showing the cost, &c.;—have you seen that statement? Yes.

1408. You agree, I suppose, with the figures given? Yes.

1409. Could you say what you think would be the best thing to do at the present moment—what height to construct the reservoir? I should recommend the larger reservoir at once.

1410. Up to a height of how many feet? Forty feet. If Port Kembla and that district has to be supplied, as no doubt it will very soon, I think we ought to have a larger supply, and the first cost is cheaper than doing it in two divisions, because sending the plant there and taking it away, and bringing it back again would make the work more costly, besides the inconvenience of working on top of a wall which is holding up water.

1411. In view of the probability of an additional draw on the supply, you think it would be better to erect the complete dam at once? I do. It is only a matter of £1,300. I think it would be better to complete it out of hand.

1412. Would you kindly explain the difference between the total storage of 173,000,000 and the net storage of 168,000,000 gallons? The bottom 15 feet we cannot draw off, and that makes about 5,000,000 gallons less.

1413. *Chairman.*] There is a difference of 5,000,000 gallons between the total storage and the available storage? Yes.

1414. *Dr. Garran.*] If you would recommend the full-sized scheme, would you recommend also a full-sized pipe as far as the service reservoir at once? I would recommend a 6-inch instead of a 4-inch pipe.

1415. Right away to the reservoir? Yes, down to the reservoir. It is only a matter of £500.

THURSDAY,

THURSDAY, 9 *FEBRUARY*, 1899.

Present:—

JOHN PERRY, Esq. (CHAIRMAN).

The Hon. PATRICK LINDESAY CRAWFORD SHEPHERD.
The Hon. ANDREW GARRAN, LL.D.
The Hon. WILLIAM JOSEPH TRICKETT.
WILLIAM THOMAS DICK, Esq.
JOHN CHRISTIAN WATSON, Esq.
ROBERT HENRY LEVIEN, Esq.

The Committee further considered the expediency of constructing Water Supply Works for the Borough of Wollongong.

James Johnston, clerk, Department of Public Works, sworn, and examined :—

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1416. *Chairman.*] Have you charge of the particular branch of the Public Works Department dealing with water supply? Yes.

1417. Will you give some information to the Committee with reference to the repayments in connection with country water supplies;—is there any trouble now in getting in the moneys that have been agreed to be paid by the different municipalities? Practically there is no trouble now. To get a proper hang of the matter one would require to go back five or six years. The first Act—the Act of 1880—when providing for the construction of water-works in country towns, provided also that the repayment was to be made by a payment of 6 per cent. of the cost every year. That was looked upon as 4 per cent. payment of interest, and 2 per cent. repayment of capital. If these repayments had been carried out a country town could have paid off its indebtedness in the course of twenty-nine years. But no sooner were two or three of the works carried out, and the question of repayment brought up, than it was seen that it was utterly impossible for any country town to repay its indebtedness in the course of twenty-nine years. That was seen, I think, so far back as the year 1885, and steps were soon afterwards taken, I believe—I was not in the Department at the time—with a view to an amending Act being brought in, giving other terms to country towns. That amending Act did not come into force until the year 1894. In the meantime those country towns, including Albury, Wagga, Goulburn, Bathurst, Orange, Bourke, and two or three others that had had their waterworks constructed, were not called upon to pay anything at all, and the feeling appeared to have got abroad that they never would be called upon to pay anything towards the liquidation of their debt. I was instructed in the year 1893 to visit every town in the Colony that had a water supply, and I went into their finances, and into the question of their ability to repay their debts. But I found the feeling prevalent in almost every town—and I think I visited at that time thirteen or fourteen country towns—that, as so long a time had elapsed before they were called upon to make any repayment, they thought the Government would not be likely ever to call upon them. But after having exposed the state of affairs—for instance, I may mention the case of Albury: That municipality had £5,000 or £6,000, apparently, to the credit of the water account in their books, but when one came to look into the matter, one found that they had used this money for the other purposes of the borough, and that amount stands to this day to the debit of the borough and the credit of the water account. Other towns had done similar things, but not quite to the same extent; they had made use of the moneys they had collected in the form of water rates. After inquiring into the circumstances of every town which had a water supply, and reporting to the Minister, the Act of 1894 was passed, extending the period of repayment to 100 years, and charging interest at the rate of 3½ per cent. on the yearly balance; so that the amount a country town has to repay now is 3½ per cent. interest, and a sum which at 3½ per cent. interest, paid in every year, will liquidate their debt at the end of 100 years. The actual amount they have to pay per cent. is 3·6160, equal to about £3 12s. 4d. a year on every £100. When that Act was passed, and the Department fixed the debts of the country towns——

1418. *Mr. Watson.*] Had they not previously fixed them? The debts had not been previously fixed, but the Minister, on my report, fixed the various debts, and the principle on which he went was that the debt of a country town should be so fixed that it would be able to repay the debt in 100 years by levying a rate of not more than one shilling in the pound. That was decided, and the debts were fixed accordingly.

1419. Irrespective of the cost? Yes. I may say there is one thing that might be looked upon as a hardship on the country towns. In the original Act of 1880 there was no questions of the towns being debited with interest accruing during the construction of the works. In the original Act there was no mention made of interest being added to the debt. But under the 1894 Act, it was provided that while the country towns were given on the one hand 100 years within which to pay the debt with annual interest at 3½ per cent., they were to be debited with the interest that had accrued in the meantime from the date of commencing the construction of the work to the date of the fixing of the debt. In some instances you will find that the amount of interest debited to a country town is a very large sum. So, while they got relief in one direction apparently, their debt was burdened in another direction by this large amount of interest being added to capital.

1420. Was that calculated on the whole sum that was eventually expended, or only on the actual amount as it was expended. For instance, it might take twelve months to construct the work and put the scheme in working order, and the whole of the money might not be expended until the end of twelve months? We went into that point, and it was agreed that we should take the monthly expenditure—the expenditure month by month. We calculated the interest on the expenditure—say, in January—to the end of the year, and the expenditure from February to the end of the year, and so on. It would have been impossible to calculate the expenditure from the actual date of the expenditure, because our books would not show the actual date. Our books would show the date when the pay vouchers were sent on to the Treasury; but it was just possible that they might be kept at the Treasury a week or a fortnight before they were paid.

1421. You got it approximately? We got it approximately correct. We calculated it according to the monthly totals.

1422. *Dr. Garran.*] You say you charge every town for 100 years with 3·6160 per cent., and all they cannot pay in 100 years is practically forgiven them? No; that is not the way we look at it. We give the country towns 100 years within which to repay the debt, with interest at 3½ per cent. That is what

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we give them; but we charge them with the interest accruing during the course of the construction of the work. Say the works were constructed in 1884; we debit them with interest from that time up to the date on which their debt was gazetted—say the 31st December, 1893.

1423. Quite so; but if their shilling rate does not clear off the debt in 100 years, you have no provision for their paying anything more? We did not look at it in that light. The Minister looked at it in this light: that we should fix the debt at such an amount, which could be paid off by a shilling rate in 100 years.

1424. But suppose the shilling rate could not pay it off? Well, it might not; but we were very careful in these matters. The calculations were made very closely, and the investigations were pretty severe when we fixed the debts.

1425. *Mr. Watson.*] You reduced the capital sum so that it could be paid? Yes; according to the present circumstances, not allowing for expansion, nor on the other hand did we allow for the contraction of towns, where a town, for instance, might go down in population.

1426. *Dr. Garran.*] If you reduced the capital amount you forgave them some of the debt at once? In many cases we forgave a large amount of the debt, apparently.

1427. But adding the interest is no burden to them if you add it one way, and forgive it them in another;—you spoke of their being burdened with debt? Burdened with interest.

1428. But it is no burden if they do not pay it? That may be true. As I was saying, in 1894 the Act was passed, and the debts were gazetted. At the end of twelve months we called upon the country towns to pay the first instalment towards the repayment of their debt, and I have to confess that there was a considerable difficulty for the first year or two in getting certain towns to pay their instalments. They could not all at once get over the feeling that they should not be called upon to pay anything. But it is only a matter of education, and at the present moment, with the exception of one or two towns which really cannot pay, we have no difficulty at all in collecting our annual revenue in the shape of these instalments.

1429. *Mr. Watson.*] Has any exception been made with regard to those who apparently cannot pay? There are two towns just now which I have reported to the Minister are utterly unable to pay, and those are the two frontier towns of Wentworth and Balranald. It may be said that they have got waterworks far in advance of their requirements. They have a nice pumping station, but they have far too much reticulation. That was the fault of the earlier works—there was too much reticulation laid down. These works were constructed in the eighties, when there was plenty of loan money floating about, and perhaps it was thought advisable to give more than sufficient reticulation for the then existing wants, in the hope that the town would grow. But it has turned out that these towns are not growing, they are declining, and there are miles and miles of reticulation lying there that bring in no revenue at all.

1430. Did they pay any of the revenue they had received on that account? No, we have just that difficulty with these two towns. I have not been there for four years, and I cannot speak definitely as to their circumstances, but judging from the correspondence and the returns we get, it appears to me that certain towns, including those I have mentioned, will only gather in sufficient revenue to meet their current expenses, and if there is any difficulty about getting additional revenue to repay the Government they let the thing go. But that can only be said of two towns, or perhaps three at the most.

1431. *Mr. Trickett.*] Do they pay quarterly, half-yearly, or annually? Annually. There are one or two cases where the Railway Department takes water. For instance, in the case of Lithgow, its annual repayment instalment comes to £450, and we get £30 a month now direct from the Railway Department for the supply of water. That represents £360 a year out of the £450, or all but £90, which we get monthly. Junee, when the scheme comes into operation, will be in exactly the same position. We take care where the Railway Department pays a large amount to a municipal council for water that the municipal council does not have the handling of that money; it is paid directly into the Treasury.

1432. In a place like Wollongong, would the railway revenue for water be paid direct to your Department, or would it go to the Council? If it amounted to any substantial sum, it would be paid to the Department.

1433. About £150 a year? In that case we would request that the money should be paid direct to the Treasury. The Railway Department always likes to pay its accounts monthly, and so we get the money monthly, and it is not mixed up with the municipal funds.

1434. It is purely a municipal item, but it is trust money, not intended for general expenditure? It is purely a municipal item, but it is trust money until the Government liability is paid.

1435. If it were not paid into the Treasury, it ought, strictly speaking, to be paid into a trust account to credit of the Government? Yes, and that is what we propose in our amending Bill. There are no such provisions in the existing Act, but in our amending Bill, which we hope to get passed very soon, we have a clause providing that all moneys connected with water supply shall be paid into a separate account, and that nothing shall be paid out of that account, except for the purposes of water supply.

1436. But with regard to water supplied for shipping purposes, would that be on the same basis if the money amounted to a considerable sum? The only place where water is supplied for shipping purposes, which comes under our notice, is in the Hunter district, and, of course, the Board manage that themselves. The moneys received by the Board are remitted weekly to the Treasury; it is in fact a Government Department.

1437. In a place like Wollongong, and especially if the scheme is extended to Port Kembla, the water supplied to the ports will be a considerable item;—do you think, in that case, they should also pay the money regularly to you? No. I do not think we should ask the Treasury to deal with private people in that fashion. The Railway Commissioners being a Government body, we can, of course, approach them in a different fashion from what we could approach private consumers, such as shipowners.

1438. Then your evidence is, that every municipality in the Colony of any stability has kept fairly good faith as regards the water payments? Yes. We have now little difficulty. We have to write to one or two of them once or twice before we can get the remittances; but we may say we have no difficulty now in collecting the annual instalments.

1439. Are there any old arrears? No. The only towns with arrears are the two I mentioned—Balranald and Wentworth. There is also a small amount in arrear in the case of Wilcannia; but that is accounted for by an accident which took place some years ago when the Council Chambers were burnt down, and all the books were destroyed, and they did not know how they stood. Before that, Wilcannia had always paid beforehand, instead of being in arrears.

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1440. *Mr. Watson.*] With respect to the towns you speak of, is it contemplated that any action should be taken by the Department towards placing their accounts on a better footing? Not immediate action. I think the matter must be allowed to stand over until we get our amending Bill passed, in which we propose to give the municipal councils much greater powers than they have at present.
1441. That is in the way of rating? In the way of raising the revenue. We propose that the maximum rate of assessment should be taken up to 2s. At present it is 1s. Then we propose that the Councils shall have power to enter into agreements with private consumers, so that they will get much more revenue than they can raise now. In regard to these private agreements, we propose that a Council shall have power to pass along the street, and deal with a house—say, a boarding-house—with perhaps only five or six rooms, and assessed at £20 a year. On such a house, all the Council could collect under the present rating would be £1 a year. But there are, perhaps, twelve or fifteen people living in that house, and we propose to give the Council power to go to that householder and say: "Your rating, according to the present system, is only £1 a year. But it will not pay us to supply you with water for £1 a year. You have so many people living in this house that you must enter into an agreement with us to pay, say, £4, £5, or £6 a year, as the case may be, before we supply you with water." There are a great many instances like that in these country towns. There are houses, which, though mere hovels, have a great many people living in them, who consume an enormous quantity of water; whereas next door you might have a two-storey house with only three or four people living there, and the occupant would pay a far higher rate, though perhaps he might not consume a tenth of the quantity consumed by a house at a much lower assessment.
1442. That, I presume, would be an inducement for the Council to go in for a meter system? Well, it is a disputed point, and I am inclined to think that meters are, perhaps, a nuisance. In the first place, in these country towns, there is no one who could put up a meter under £4 or £5, and then there is the cost of supervision and repairing, and so forth. I think it would be much better to give the Council power to enter into an agreement to supply water for a fixed amount, irrespective of a meter—always on the understanding that the Council, for their own sake, would have an inspector to see that no waste or extravagance is carried on.
1443. As far as you can see there is nothing contemplated by the Department towards forcing the Councils which are in arrears to hand over a proportion of the amount they now receive in connection with their water supply;—they now receive a certain amount of revenue, and out of that they pay nothing to the Government? Except their own working expenses they pay nothing to the Government. I do not see, as far as I am aware, that there is any immediate action contemplated. It would be better for us to wait until we get our amending Bill through.
1444. Is not that a sort of inducement to other Councils to follow in the footsteps of these bad examples? It is no inducement, because if the Department thought there was any wilful withholding of money, it could at once move the Crown Solicitor to take action, and we should have no hesitation in doing so.
1445. But if they failed to collect rates that were due, or failed to impose a rate as high as the limit—in either of those cases it would be something akin to the wilful withholding of money? The Minister has always set his face against any by-law authorising a lower rate than a shilling. Every country town pays a shilling. So that the country towns cannot help themselves—they must levy the shilling rate.
1446. With regard to the fixing of the capital debt at such an amount as will allow of its being paid off within 100 years, if that has been done, the actual cost of the work has not entered into the question to any great extent. You would not fix an amount greater than the cost of the work, but in some cases, I presume, you would fix an amount less than the cost of the work? Yes, in some cases.
1447. Less than the actual cost of the work, or less than the cost with interest added up to the time of your fixing the debt? In very few cases have the debts been fixed at less than the actual cost of the work. The interest accrued so increased the capital debt that it was found necessary in some cases to reduce the debt. There is a return showing the cost of the works, the debts as gazetted, and the annual repayment of instalments. [*Vide Appendix.*]
1448. In that return, I notice, for instance, that in the case of Albury, the interest at 3½ per cent. accruing to the date of the gazetting of the debt amounted to £12,000? Yes, and the total cost of the works was £45,000, and the debt is gazetted at £41,000.
1449. So that in that case you have written off £4,000 below what the works cost? Yes.
1450. And the whole of the accrued interest up to the time of the gazetting of the debt? Yes, that is written off.
1451. The writing off of any part of the principal could not be caused by any deficiency in the original Act as to the question of the accrued interest? No; the remission is a matter left to the discretion of the Minister. The words are "the Governor-in-Council."
1452. The writing off then is quite voluntary on the part of the Minister? Yes. If you take the next item—the Wagga water supply—you will find that the cost of the works was £37,300, and in reduction thereof Wagga repaid £5,100, which would reduce the debt to £32,000, and yet the debt was gazetted at £38,500.
1453. Which includes a portion of the interest that accrued? It includes all the interest.
1454. It seem rather an arbitrary way of fixing the amount of debt;—was it fixed with reference to the ability of the people to pay? That was the principle on which the Minister went—the ability of the town to pay.
1455. So it would seem that Albury was much less able to pay than Wagga? Yes.
1456. Do you think the Minister was guided generally with respect to writing these sums off by a feeling that the construction branch had not done justice to the people of the town—that is, by exceeding the estimate of cost, and misleading the Council—do you think that feeling was present? That, of course, I cannot tell.
1457. I thought it might have come under your notice? No, not exactly. I may say that in my investigations in these different country towns there were great complaints as to the excessive expenditure that had taken place in connection with certain water supplies.
1458. The writing off of portions of the debts by the Minister, was possibly a recognition on his part that there was some justice in that complaint? It is quite possible. I remember that in the case of Albury, for instance, I had to bring under the notice of the Minister in my report that there were 8 miles of reticulation that only brought in a few pounds of revenue. The whole of the flats from the railway had been reticulated away down towards the river, and instead of the town growing towards the river, it is

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getting as far away from the river as possible, and accordingly the reticulation put down on the flats has become useless.

1459. Do you know which officer was in charge of the work of construction? No, I do not.

1460. Do you know whether the Municipal Council was consulted as to which streets the reticulation should follow. I suppose you would not be aware in that particular instance? I could only speak from hearsay.

1461. But I assume that in later instances, at any rate, care has been taken to see that the reticulation has been carried out on lines agreed to or suggested by the municipal council? It is all definitely settled between the engineers and the council before the reticulation is decided.

1462. Agreed to by them? Yes.

1463. Do you know in what year the Albury works were carried out? It was in the early eighties I think.

1464. Do you know if the Works Committee reported on the scheme? There was no Public Works Committee at that time.

1465. *Mr. Shepherd.*] You named several towns where a water supply had been granted, and where they had not been called upon to pay anything. How long did they enjoy the supply without being called upon to pay? You may say from the year 1884, 1885, or 1886, up to the year 1893 or 1894.

1466. Was reticulation carried out in all these places? Yes, and they enjoyed all the benefits of a water supply in the meantime.

1467. And they have now been called upon to pay up? Ever since 1894.

1468. Prior to that, they enjoyed a supply of water free? Yes. It was during that period—between the time when it was seen that the old Act was unworkable so far as regards the repayment, and the time when the new Act was passed fixing 100 years—it was during that eight or nine years that that feeling got abroad that the Councils should not be called upon to repay the cost of the waterworks. They did not expect to be called upon to repay.

1469. And the whole of these towns have now been brought under the regulation of 1894? Every one of them.

1470. And I think you said that they were all paying up regularly? Yes.

1471. Are any of these towns under the Metropolitan Board? No.

1472. So that they all pay direct to the Treasury? Yes, they all manage their own affairs.

1473. Do you know whether the estimates for the construction of these works have been exceeded, or whether in any case the cost has been below the estimate? In several instances of late the cost has been below the estimate. But formerly, of course, that was a grave cause of complaint. I used to hear all sorts of stories from the municipal councillors as I was going amongst them, but as I say, it was only hearsay, and I cannot say anything about it. The excessive cost of the works was a general complaint. But, as you know, when people are called upon to pay for any old debt, that is very often an argument—"the thing cost too much."

1474. I think you said in some cases the Councils were debited with less than the amount expended, and in other cases more than the amount expended;—how are these amounts arrived at? The cost of the works is taken, and the amount of accruing interest on that expenditure from month to month is added to the capital debt. Take the case of Albury. The actual cost of the works was £45,000, and added to that there was over £12,000 of interest, making a total debt of £57,000. But, as I say, it was seen that Albury could not repay a debt of £57,000 on a shilling rate, and, therefore, their debt was reduced to £41,000, the amount on which it was reported they would be able to pay. In that case a great deal of the actual expenditure is remitted. But in the next case, that of Wagga, the total cost of the works was £37,000, and the interest amounted to £11,000, making a total of £48,000. The Council repaid £5,000, and this added to the interest would make £16,000 to come off the total cost of £48,000, so that the actual cost of the works would be reduced to £32,000. The debt, however, is gazetted at £38,500. Apparently, it is a hardship upon Wagga from the mere fact of its being able to pay on that debt.

1475. *Mr. Watson.*] Still a portion of the interest is wiped out? Yes; but, of course, Wagga is one of the most honourable towns we have to deal with.

1476. *Chairman.*] You go on the principle that those who are able to pay shall be made to pay? Yes.

1477. *Mr. Trickett.*] I suppose the object was to give them all a fair start? That was the intention.

1478. *Mr. Shepherd.*] Then you say they are free as far as interest is concerned, until the works are completed? No; while the works are being constructed the interest is being added to their debt.

1479. *Mr. Levien.*] Suppose the towns north of Wollongong and Kembla want a water supply, outside of the borough of Wollongong, would you think it advisable that the scheme should come under the local Council of Wollongong, which should be the controlling power, or do you think the control should be in the hands of the Metropolitan Board? With regard to putting them under the Metropolitan Board, I think that would be a most retrograde step. We wish to encourage Councils to manage their own affairs. Amongst the whole of the country towns, I do not think there is one Council that would think of allowing the management of its affairs to pass into the hands of a metropolitan board. And it would not work properly. The Country Towns Act is quite different from the Metropolitan Water and Sewerage Act.

1480. But a difficulty crops up here, inasmuch as it is desired to give a supply of water to places outside of Wollongong, some of which are unincorporated? There might be a slight difficulty amongst the Councils of incorporated towns as to who is to have the supreme management.

1481. Suppose this scheme included a supply to Port Kembla, and also to towns to the north of Wollongong, some of which are incorporated, and others not incorporated, would you give the controlling power to the corporation of Wollongong, or some other local board established for the purpose; or, considering that the supply comes from the main Sydney source, would you give the control to the Metropolitan Board? I should be inclined to place the entire control in the hands of the Council of Wollongong, and let them make such arrangements with the outlying districts as they pleased. One point to be considered is this—that before they can supply water out of their own municipal district their water district must be specially enlarged. You must remember that the Country Towns Water Supply Act only provides for a supply of water to a water district, and the Act again provides that the water district shall be bounded by the limits of the municipal district.

1482. But they may make an amendment giving them power to supply outside? My idea would be to construct water-works for Wollongong; then enlarge the water district, and let Wollongong make its own terms with these outlying districts.

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1483. *Mr. Watson.*] Is it not likely that a Board, being more distinctly in the nature of a corporation, which has not a soul, would get the rates in? Of coure there is a feeling in the country towns that Councils are sometimes rather lax in collecting rates; they do not like to push things to extremes.
1484. *Mr. Levien.*] You would force that, because you would have to force these payments? That forces the Councils now, and we find no difficulty in the Councils getting any money they think necessary.
1485. You would have sufficient confidence in the corporation of Wollongong to believe that if the works were under their control, they would enforce these payments? Quite sufficient; and they could make the necessary arrangements with any of the outlying districts without any trouble.
1486. Then your absolute opinion is that it would be a retrograde step to allow this water supply to go into the hands of the Metropolitan Board? Decidedly.
1487. I take it that with your vast experience, you have given this matter every consideration, and have come unhesitatingly to the conclusion that the plan you suggest would be the better one? My own opinion is that it would be the better plan to make Wollongong the centre, and enlarge the water district, because it can only supply water within its own boundaries, unless there is a special enlargement. Then let it make its own arrangements with the outlying districts. The Country Towns Water Supply Act, under which they are going to work, is to be quite different from the Metropolitan Act. We are going to give the Councils much greater powers than we should think of entrusting to a Board.
1488. *Dr. Garran.*] You say you would give the Wollongong Council power to make its own arrangements;—in a case like that of Wollongong, which we are now considering, the Municipality of Wollongong having got possession of this water or the use of it, would you allow the Council to say to North Illawarra, "Well, you shall have the water, but you shall pay 1s. 6d. for it";—that would be making their own arrangements, would it not? No. I would make Wollongong the centre, and enlarge the water district, and then they must have one uniform rate over the whole.
1489. Where does the "must" come in? Because the water district must be under a uniform rating—they cannot help themselves.
1490. Would they have voting powers? The Act provides that any ratepayer in a water district can go to the Council at present and tender his three months' rate, or his half-yearly rate, and say, "I want the water laid on to my premises," and the Council must do it, if he is an inhabitant of the water district.
1491. Then the Council is not making its own arrangements? Subject to the Act it is.
1492. Then it is the Act that makes the arrangement? Yes; that is always understood. The Council make their own arrangements, subject to the Act.
1493. Will these people have any voting power—these people outside that are taxed? I cannot see how they can have voting power in unincorporated areas.
1494. But suppose North Illawarra, which is incorporated, wants the water, how is it to get it;—here are five or six little villages in North Illawarra which join the Wollongong municipality; they have not yet asked for the water, but the moment they see the advantage of its being supplied they may say "We want it";—how are they to get it;—are they to apply to be included in the water district? That is the first step they must take. They must become part and parcel of the water district, and then they can demand it.
1495. But suppose the Wollongong Council say "We do not want to include them"? But it would not be left in the hands of the Wollongong Council to say what size the water district would be. I presume the Government would decide that.
1496. If we make this scheme in the first instance, as it is proposed, purely a Wollongong scheme, will not the Wollongong people have the right to charge outside people, like the inhabitants of Kembla and North Illawarra, an extra amount? They would have the power to fix what charges they pleased outside their own boundaries. On the other hand, the Act gives them no power to go outside their own boundaries to supply water.
1497. But it gives them power to make bargains outside their own boundaries? No. A case came up recently in connection with the township of Nowra, which has a pretty abundant water supply. Across the river lies part of the Berry estate. Dr. Hay is anxious that part of his estate should be irrigated, and is desirous to come to terms with the Nowra Council for a supply of water. On going into the question, we found that the water supply is restricted to the inhabitants of the water district. Dr. Hay's farms are outside the water district. We have advised the Nowra Council to this effect,—that they had better consult their own solicitor in the matter. We can see they have no power to go outside their own district to supply water under the present Act; and, in the event of a very dry season, Dr. Hay might want a lot of water, just at the very time when the inhabitants of the district, for whom the works were specially constructed, also wanted a large supply of water, and they must have the first consideration.
1498. We are considering a scheme to be constructed for the supply of Wollongong only; the dam can be so built as to supply water enough for Kembla in the south, and the villages up as far as Bulli in the north, and this might be done in the first instance most economically;—the question then arises, if the Council, as you say, are to take control of the scheme, how is the local management to be conducted with regard to these outside people? According to the present Act, if Wollongong has sufficient water to spare, and if the Council are unanimous in providing water for outsiders the Wollongong Council can charge what they please for water.
1499. It must be unanimous? It must be unanimous. Then, if they are anxious that these other towns and villages shall be supplied, it will be necessary to get a change in the Act, and enlarge the area of the Wollongong water district. In that case the inhabitants of the water district will come under exactly the same rating and assessment as the inhabitants of Wollongong itself.
1500. It has come out in evidence before us that it would be a little more costly per head to supply these outlying places than to supply the compact population of Wollongong? Yes.
1501. A private company, looking solely to its expenditure, might say, "You must pay a little more;"—would the Council have the power to charge that little more? So far as I can see, the Council have no power to impose a differential rate in the water district. There must be the one uniform rate in the water district. But in our amending Bill we propose to give power to the Councils whereby they shall introduce differential agreements. The rate must remain the same, but they will have power to go to different householders, and say, "We cannot supply you with water for such and such a rate, we want more for it."

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1502. Take the case of the borough of Wollongong;—it would be necessary to have a pipe-line of 4 or 5 miles to serve the population in the first instance; you must see, at once, that it would cost more per head to supply the Port Kembla people than it would to supply the Wollongong people; well, are the Council of Wollongong to be taxed to that amount, or are they to get an indemnity? It is rather a difficult question.

1503. If they say, "We will not do it at the same rate," the Port Kembla people cannot get the water? Unless they pay more for it.

1504. But if they come into the water district, they cannot pay more for it under the Act? No; they would not be asked to pay more.

1505. Do you not see the difficulty? Yes; I see it is impossible for the Council to levy differential rates in a water district.

1506. In that case the Council would be tempted to refuse outside applications? Yes.

1507. Then we are practically giving them a monopoly of that water, although it is the only supply for the districts north and south of Wollongong? The way out of the difficulty is to enlarge the water district, and then everyone will be on the same footing.

1508. Every inhabitant of that district would be on the same footing as to rates? Yes.

1509. *Mr. Watson.*] But not as to control? Of course, if they were not in an incorporated area they would have no vote.

1510. But if they were in an incorporated area outside the borough of Wollongong, then they would not have any voice in the control of the scheme, because Wollongong would be supreme? Wollongong would be supreme no doubt; but no Council, even in these small places, would allow themselves to be snuffed out by another Council, such as Wollongong. They would demand a voice in the management.

1511. That would mean the creation of another board? Yes. A case such as this has never come under our notice. All our cases have been confined to individual municipalities. We have had no two municipalities getting the same water supply.

1512. *Dr. Garran.*] Your last remark implies that the remedy lies in the hands of the Government, which should extend the water district, and so bring these people within their rights; but if you did that you would compel the people of Wollongong to supply water at a greater cost per head than that at which they supplied their own people;—you would compel them to go into a losing business? On the other hand, where two or three towns join together like that, it is a difficult question to decide whether there should or should not be differential rates. They are all one body; they are dependent upon the same source of supply, and there is no reason why the whole district should not be made to pay an uniform rate that would meet the expenses and repayments, instead of having a heavy rate here and a lower rate there.

1513. I can quite understand that in the case of a large city like Sydney, where it might be more difficult to lay pipes in a rocky place, such as Balmain, than in another place, where the soil is easily worked; in Sydney we do not ask any questions; the Board supply everybody at the same rate; but where you have to cover a distance of 10 or 12 miles, and outsiders are coming in and asking for special privileges, the original ratepayers surely have ground for saying "Let us be protected"? But you cannot draw the line very conveniently. One street might cost £500 to reticulate, and another street only £50, and it might be said, "Why should the £50 street pay the same rating as the street in which the reticulation cost £500?" If it were attempted to adopt that principle, it would be impossible to arrive at finality.

1514. Suppose a private company entered into a commercial speculation for the supply of Wollongong, would they not make some difference of that sort? Very likely.

1515. Suppose you were the manager of a private water company, and a man in a rocky street, where it would cost £500 to lay down the pipes, came and said, "I want the water at the usual rate," what would you say to him? It is a thing that is done every day in North Sydney—a most expensive place to reticulate. A man at Chatswood, living 4 miles away, pays the same for his gas as I do, who live close alongside the gasworks. In that case there is one uniform rate.

1516. But in this case all the figures were calculated simply with regard to Wollongong;—we have a compact population here; we have a certain expenditure to go to in providing a water supply, and there is just a comfortable small margin of profit; but there is nothing to waste;—now, if you ask those ratepayers at Wollongong to take in all their neighbours 4 miles to the north and 4 miles to the south, all of whom would be supplied more expensively, you are putting a burden on this scheme which it would not carry? The question of differential rates has never cropped up in my experience in connection with country towns. This will be the first case.

1517. *Mr. Watson.*] The circumstances here are different? Yes; the only case in which we have been asked to supply water outside the district is that of Nowra, and in that case Dr. Hay was to lay the pipes himself, and pay all the expenses up to the Council's main.

1518. *Dr. Garran.*] Then he would simply buy the water? Yes.

1519. In this case the Council of Wollongong would be burdened with an additional debt? Of course, if there are 8 or 10 miles of main, that means a large increase on the capital at once.

1520. I want you to see that point? I see it clearly;—Wollongong itself should not be called upon to pay this increase.

1521. It might be? Yes; it might be.

1522. If you put this scheme under the management of the Metropolitan Board, they might do as the Gas Company does in town, and charge everybody alike; but the Wollongong people say, "We have comfortably got our little scheme, we are supplied, and can just pay; but we cannot supply all our neighbours at the same rate. We have got the water, but we cannot carry any more debt; the scheme would not pay interest on it"? Then it is for a higher authority to step in and enlarge the district, and strike such a rate as will pay.

1523. You mean a differential rate? No.

1524. But the same rate would not pay? I say it is for a higher authority—that is Parliament—to step in, constitute a large water district, and then instruct the Council that their debt is so much for the whole district, and they must levy such a rate as will pay.

1525. A shilling rate would not pay? They would not be allowed to levy a differential rate, so far as I can judge at present.

1526. And the people of Wollongong would have to pay a higher rate, in order that their neighbours might

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might come in? I see no reason why the Wollongong Council and any adjoining Council could not come to some working agreement, in regard to a water supply. It strikes me that no Council would like to be placed under an outside Board.

1527. *Chairman.*] Are you not aware that both Camden and Richmond come under the Metropolitan Board in regard to the water supply? The conditions are totally different. Those are insignificant little places which, unless they got water from the Metropolitan Board, would never get any at all. In the case of Camden we prepared a Bill of one clause, which went through Parliament the other day. It is just a question whether, if they had not got that Bill, and were not allowed to tap the main, they would ever have got a water supply from the Government. The water is flowing past their door, and there is to be no capital expenditure—no headworks in connection with the supply. They merely tap the main and put down the reticulation. That is an entirely different case to that of Wollongong.

1528. They have come under the control of the Metropolitan Board because it suited them—because they could not get the water otherwise—on account of a difficulty? Yes.

1529. Well, a difficulty arising, not of the same sort, but in a case where there are three distinct municipalities which wish to be supplied, and also an unincorporated area, do you not think that the Metropolitan Board could deal with that case much better than the local council? No. You might as well ask the Metropolitan Board to deal with the Hunter district. In this case follow the example of the Hunter district;—have your special Act for the Wollonging district as they have had for the Hunter district, and the difficulty is solved.

1530. Has the Hunter District Board been a success? Yes; it has been a fairly successful institution in raising the revenue.

1531. In this case there is a connection with the Metropolitan Board to start with—the source of supply is on the area of which the Metropolitan Board have charge? That is a most extensive area. I suppose there is sufficient water in the catchment area to supply both services, and one would not interfere with the other in any way. If there are more than three incorporated towns wishing to get water, it seems to me it would be necessary to follow the example of the Hunter district, and give them an Act of their own. I do not think they would agree to be managed from Sydney. It would be better to give them their own Board, and the machinery is already there.

1532. *Chairman.*] Are you prepared to put them under the control of an inexperienced Board rather than an experienced Board, who have officers thoroughly trained? The Metropolitan Board would have to manage a place 50 or 60 miles away from them. It would add to the expense of the Board at once. They would require a separate staff and a separate office, whereas the local councils have their staff ready.

1533. If you knew there would not be any extra expense set up, but that on the contrary it would be more economical to work the scheme under the Metropolitan Board, would your objection disappear? Certainly not. I would stick up for local government. In my opinion that is far better than having the scheme managed by an outside Board, or even by a Government Department.

1534. *Mr. Dick.*] With respect to the sinking fund of 3·6160,—I suppose 3·5 of that represents interest on the cost of construction? Yes.

1535. That would go to the Consolidated Revenue? Yes.

1536. The other ·1160 per cent. would, I suppose, be placed to some sort of fund? It is kept in the Loan Repayments Fund in the Treasury—a separate account altogether.

1537. Of course the ·1160 per cent. is calculated on the basis of compound interest? Yes.

1538. At what rate? Three and a half per cent.

1539. Do you think they are likely to get anything like 3½ per cent. fifty years from date? I cannot say, and I do not know how the Treasurer keeps these moneys. We pay them in—how the Treasury deals with them I do not know.

1540. In your capacity as a financial officer in connection with these various water supplies, do you know whether any of them have paid in the amount per annum to provide for a sinking fund? They have all paid since 1894, with the exceptions I have mentioned.

1541. Have the Newcastle and Hunter District Board done so? That is a Board; it pays its money into the Treasury every week. It has been found that the moneys remitted are not quite sufficient to pay all working expenses, and the repayment of instalments.

1542. Do they remit direct to the Treasury? Yes. When it was discovered that they were getting short, it was considered desirable to amend the Act in 1897.

1543. I think you said just now that the Hunter District Board was fairly successful in getting in its revenue;—have you read this clause in the 1898 report—

> The arrears outstanding to the 30th June, 1897, amounted to £6,748 8s. 4d., which, with the revenue struck for the year, £28,117 12s. makes a total of £34,866 0s. 4d. receivable to the 30th June last. Of this amount, £20,009 9s. was collected and remitted to the Treasury, leaving £14,866 11s. 4d. outstanding at the close of the year.

Did you know that was a fact? I did read that report when it was sent down to the Department. But I think there are various reasons why the arrears were greater at the end of last year than formerly. You must remember the Supreme Court actions, and the stand that certain of the larger people took against paying their rates, because they said they had been overrated.

1544. That would account for £5,000 out of the £14,000, still leaving arrears to the amount of £9,000? That represents the accumulated arrears brought forward. For instance, on the 30th of June, 1897, the arrears were £6,000; and on the 30th June, 1898, they had increased to £9,000, showing that that year had gone to the bad by £3,000.

1545. The total received during the year 1897–98 was £20,009 9s. I also find that the annual repayment instalments—that is, interest on the cost of construction and sinking fund amounted to £20,752. So that for that year, at all events, the Board were not able to pay their annual instalments? No.

1546. Irrespective of repairs, maintenance, and administrative expenses, which come to about £8,000 or £9,000? Yes.

1547. Does the state of affairs existing in the northern district, as disclosed by these figures, modify your opinion about local government and management by local Boards? No, I do not think so. The Hunter district was unfairly handicapped by the long interval which elapsed between the construction of the works and the placing of them under the Board. There was a period of eight years in which things were allowed to proceed in a very easy, go-as-you-please fashion. The rates were not properly collected.

1548. They received a large remission? They received no remission at all, and interest to the amount of £49,000 was added to the capital debt.

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1549. Do you not remember that Mr. Lyne remitted a large amount of interest? That remission was an item of compound interest, and one or two other little charges which we thought desirable to remit. The interest was first of all calculated on the compound interest principle, and that was remitted. There was no remission as far as the 3½ per cent. simple interest was concerned. The amount of interest added to the debt was £49,000, and we know very well that the Board has not been paying its way on that big debt. This is one of the chief reasons which called for the passing of the Act in 1897, which gave the Board greater powers of rating and an extension to 440 yards instead of 150 feet, and also bringing Government and other properties into their assessment book. The nominal revenue then was, I think, about £28,000. Well, they could never collect that revenue. The revenue they will now be able to collect is not quite settled. There are one or two appeals undecided, but the amount will be considerably more than £20,000.

1550. Do you think the experience gained from local management in the northern district would justify you in recommending local management for this southern scheme? Yes; as a Government officer.

1551. From a financial point of view entirely—I do not mean in regard to the actions of the northern Board—I ask whether your financial experience of the Hunter District Board has been of such a character as to justify you in recommending a local Board for the southern scheme? I believe the Hunter District Board is quite sufficient, and has ample power in itself to gather in a proper revenue; and as to the actual water supply, nothing could be managed better. But coming to the financial point, there is just that feeling against the Board, more especially in some of the outlying townships, that they may be a little too harsh, and inclined to levy too high rates. But if the Board represented the Councils, and took over the waterworks at a fair valuation, that would be the best means of managing the scheme. Then, again, that introduces the question whether the Councils should not be compelled to form themselves into a corporation and take over the debt, repay the Government the cost of the works, and manage them themselves as they think fit. But so long as the Government owns the waterworks, it must always have a say in the management.

1552. And you think the best method of managing this Wollongong scheme would be by a local Board? If there are more than two or three incorporated towns a local Board is by far the best.

1553. How many members do you think would suffice to form a Board for administering the Wollongong scheme? In the multitude of councillors there is safety. A small Board, perhaps, would not do very well. Each Council would require to be fully represented.

1554. The members of the Board would also require to be paid, would they not? Well, the fees are so very small that it is hardly worth while calling it payment. In the Hunter District, they get £26 a year; they meet once a fortnight, and get £1 a sitting.

1555. Do they not now get £100 a year? I do not think so.

1556. Still the members would require fees? Yes; but it would be by far the cheapest method of management.

1557. In addition to the fees of the Board there would be the secretarial expenses? Those could not be very large in a case like this.

1558. Still there must be a secretary? Yes.

1559. Have you any idea what the secretary would require? In the Hunter District, where there are 60,000 people, they have a secretary and an accountant, and a staff of ten or twelve. A water supply is such a detail business that a great deal of clerical work is involved. The whole of the revenue of about £20,000 comes in in small sums of £1 or £1 5s. But in a small place like Wollongong the expense would not be nearly so great, and under a Board the thing would be much better managed.

1560. I want to get at the expense of a local Board;—how much would you recommend in a case like that for the secretary? Say there is a Board appointed, and that the Wollongong Council is the managing partner in the Board. There is no reason why the Wollongong Council Clerk should not act as secretary to the Board.

1561. He would want more money? He would, and would be quite entitled to an increase. He would want from £100 to £120 in addition to his present salary. Then there would be two or three clerks who would do nothing else, but attend to the water rates, and whose salaries would have to be included. It would be necessary to have one supervising engineer, who would overlook the whole thing, and there would be one or two turncocks. One of the borough engineers could easily take the position.

1562. Do you think £600 a year would be sufficient? I think £600 would fully cover all the expenses for a local board for the Wollongong district.

1563. That would be a very fair minimum, I suppose? Yes. Suppose each Council managed its own scheme. Each Council clerk would have to get £50 or £70 in addition to his present salary. Then he would require to engage another clerk to attend to the water rates, because, as a rule, in a place like Wollongong, the water revenue would almost equal the municipal revenue. Besides the Council clerk and his clerk, there would be one or two turncocks to be paid and other expenses. The cost would come to more than £600.

1564. Suppose we take £600 as a minimum, are you aware that the total rating, even under the large scheme for the whole district would only amount to £1,250 per annum? I am not aware what the figures are, or what would be the reticulated area.

1565. The rates to be collected in the various outside villages, and Wollongong as well, would amount to £1,250, or £1,300 at the outside; so that your expenses of management under a Board would come to 50 per cent. of the total revenue; whereas we are informed by the Engineer of the Metropolitan Board that not more than £50 for administrative and office expenses would be the total charge if the water supply were managed by the Metropolitan Board? I am afraid the Board's expenses would be more than that.

1566. At any rate under your proposal £600 would be the minimum? I think you might make that the maximum. It would cost about £600.

1567. The capital cost of the large scheme is estimated at £24,711. I think you said the practice now is to fix the debt in the case of these various water supplies, not in relation to the actual cost of the supply, but in relation to the capability of the district to pay a shilling rate? That was the principle on which all the first debts were fixed; there were fifteen or sixteen of them. But understand this, that we seldom now require to go on that principle, because the works are constructed so cheaply that we never think of granting any remission to a country town. Take the last five or six works that have been constructed:—

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no remission has been granted upon them. The only case in which a remission would have to be granted is that of Parkes, where the circumstances are exceptional. At first, Parkes adopted a pumping scheme from the drift which turned out a complete failure, and they had to go back 8 or 10 miles to get a gravitation scheme, and the cost of this gravitation scheme coming on top of the pumping scheme, increased the debt to such an amount that Parkes will not be able to pay and will want a remission, and its debt must be fixed on that principle. But in all recent cases it has not been necessary to go on that principle. We have charged them with the cost of the work, and the debt has been so gazetted.

1568. I think you made some statement about finding a general objection on the part of the various bodies interested in these water-supply schemes to repay the cost of the work—a general objection, in other words, to pay the ·1160 per cent. on the capital cost? No, the general objection was, that they did not want to pay anything at all, neither interest nor principal. The first towns had been left alone for so many years that they did not expect to be called upon to pay.

1569. Is there not another sinking fund besides the one for repaying the capital cost to make each year bear its fair share of the cost of the work that required renewing? In our amending Bill we propose such a provision. We are going to compel each Council to raise such revenue as will meet all their working expenses, and repayment of instalments, and also be sufficient to create a fund to renew pipes and other things in a certain number of years. At present there is no authority to compel them to do this.

1570. Not even in the Hunter District Act? In that Act there is.

1571. And it is more than likely there will be in the Wollongong Act? Yes; in the Country Towns Act when we get the Bill through. So that in addition to the other expenditure it will be necessary to provide for that sinking fund.

1572. It would be a very small amount. The sinking fund on a capital cost of £23,000 would only be £26 13s. 7d.? It would not be much, but it is an item of expenditure which has to be provided for.

1573. Do you audit or have anything to do with the accounts of the Metropolitan Board? No; everything is done by the Treasury. All moneys are paid into the Treasury direct.

1574. But you audit the accounts in connection with the water supply of country towns? We have no power to audit under the Act. We are taking that power. It is a power that we want, because we say that so long as the Government has that large amount of money at stake it is necessary that it should see how matters are going on.

1575. These country towns do not remit direct to the Treasury, do they? Some of them do. Most of them remit through the Public Works Department. The notices as to the due dates of repayments of instalments are all sent from the Public Works Department, and we make the claim for the money.

1576. *Mr. Watson.*] You said that the scheme for the water supply at Parkes, so far as the sand-drift pumping idea was concerned, was a failure? Yes.

1577. Is it long since the works were completed—I mean that portion that was found to be a failure? About three years, I think.

1578. According to a return, laid upon the Table of the House, it appears that the cost of the first scheme—the scheme that failed—was about £15,000? Yes.

1579. Do you know what is the estimated cost of the additional scheme? I do not know the estimated cost, but so far as I remember the total cost comes to nearly £30,000. There is a long pipe-line of about 10 miles, and there is a reservoir.

1580. *Chairman.*] I suppose you go more carefully into these matters now than was formerly the case? The thing is done on a different basis entirely; it is a business matter now.

1581. *Mr. Watson.*] It is only three years ago you say since the Parkes scheme was carried out, and £15,000 spent, which seems to have been pretty well wasted? Yes; but no one could foresee that. The finest water supply in the Colony is similar to that first constructed at Parkes, and which failed there. I refer to the Dubbo scheme; it has been the greatest success in the Colony. Dubbo has a much larger river, and the scheme is an immense success. In Parkes it turned out a failure because there was not sufficient water in the drift, but that could not be foreseen.

1582. That scheme did not come before the Public Works Committee? No; the original estimate was under £20,000.

1583. *Mr. Dick.*] Should the local authorities succeed in paying the 3½ per cent. on the cost of construction, and the ·1160 per cent., or sinking fund, by the end of the 100 years, the whole of the work will then become absolutely the property of the local authority? There is no provision in the Act for that taking place. There is no provision in the Act as to what is to be done with the works at the end of the 100 years.

1584. *Chairman.*] You are prepared to allow that matter to be decided by the people 100 years hence? Yes.

1585. *Dr. Garran.*] Until they have paid that sum, they cannot mortgage the property in any way? No; not only that; but we go a step further. If they fall into arrears, and we push them, and get a judgment against them, we can claim, not only the water rate, but also every penny of revenue from whatever source, in order to meet this debt.

1586. *Mr. Dick.*] Are you quite sure that if the water rates yield more than sufficient to pay all the Government charges, the Council has no power to raise a loan on the security of the extra profit? They have no such power; the whole thing is hypothecated to the Government.

1587. Are you quite sure? I am quite certain. According to our reading of the Act—and we have been advised on it—the whole thing is hypothecated to the Government. We are taking still further power. We are getting a lien over any profits the local body may have, and we intend to see that these profits or reserves that may accumulate shall be properly spent.

1588. Are they then specifically precluded from hypothecating any profits above the Government demands upon them? They will be specifically prohibited against making any use of those profits without Government sanction; they must be devoted to water supply purposes.

1589. Under the new Act? Yes.

1590. And that Act is likely to include Wollongong, if this scheme is carried out? Yes.

Hugh

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

H. McLachlan. 9 Feb., 1899.

1591. *Chairman.*] In connection with the proposed water-works for Wollongong, it is thought that if the scheme is carried out, the Railway Commissioners will require a supply of water? Yes.
1592. It is roughly estimated that the sum paid by the Railway Commissioners for water under this scheme will be £150 a year;—can you say whether that estimate is likely to be exceeded or otherwise? The Commissioners are quite willing to give that as a minimum. That estimate is based upon what it is costing for water in adjoining localities. We are consuming at the present time about 6,000,000 gallons a year in that district. If we take 6,000,000 gallons from the Wollongong supply, we shall be quite willing to pay 6d. per 1,000 gallons; we should be willing to fix £150 per annum as a minimum payment, even if only 1,000,000 gallons were used.
1593. Where do you get your water supply from at the present time? From a number of places along the line. We have a supply, for instance at Otford, another at Austinmer, another at Mullet Creek (Dapto), and another at Minnamurra. Those are the nearest to Wollongong.
1594. If this scheme is carried out the Railway Commissioners will take a supply of water at a minimum cost of £150 per annum? Yes.
1595. Has any communication been made to the Commissioners by the Wollongong Council in reference to this matter? We had a letter about three years ago, I think, from Mr. Campbell, and the Commissioners then stated they would be willing to make the condition just mentioned. I do not think we have had any communication from Wollongong since.
1596. And the Commissioners are still willing to do that? Quite willing.
1597. *Mr. Trickett.*] Would Wollongong be a convenient place at which to get water? It would be one convenient place. It is necessary to have watering stations a certain distance apart. A supply at Wollongong would enable us to do away with the Austinmer and Mullet Creek supplies.
1598. What is the nearest place to the north at which you want a water supply? We should still keep Otford going.
1599. That is to the north of Bulli? Yes. Then, on the south, Mullet Creek is not a great distance from Wollongong—about 8 miles. We would do away with that watering station, and would be rather glad to do so, because the water there is not of the best. In dry weather it gives us a little trouble, as it gets slightly brackish. In fact, we should be pleased to see a water supply established at Wollongong, because of the certainty of a better supply.
1600. Would you keep on the Minnamurra water station? Yes, at present.
1601. *Mr. Shepherd.*] Is the water as supplied now quite satisfactory? Not quite satisfactory. At Mullet Creek, as I have just explained, we sometimes have trouble with the water, owing to a brackish tendency.
1602. So that you would prefer a supply from this source, which is likely to be perfectly pure? Yes.

WEDNESDAY 15 *FEBRUARY*, 1899.

Present:—

JOHN PERRY, Esq. (Chairman).

The Hon. Patrick Lindesay Crawford Shepherd.
The Hon. Andrew Garran, LL.D.
The Hon. William Joseph Trickett.
William Thomas Dick, Esq.
John Christian Watson, Esq.
Robert Henry Levien, Esq.

The Committee further considered the expediency of constructing Water Supply Works for the Borough Wollongong.

James Robert Millar Robertson, mining engineer, Mount Kembla Coal and Oil Company, sworn, and examined:—

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1603. *Chairman.*] We have a letter from the Mount Kembla Coal and Oil Company, intimating that you wish to make a statement to the Committee with reference to the present proposal, especially in regard to a suggestion that the administration of the scheme should be handed over to the Metropolitan Board of Water Supply and Sewerage? The Mount Kembla Coal and Oil Company are likely to be large consumers of water, and they desired me to say, being unaware whether it was proposed that the pipe-line should go through their property, that you are at perfect liberty to make use of their property, but that they should like to pay only by meter, inasmuch as the mine is already abundantly supplied with water by dams that we have been making from time to time for the last fifteen years. The village of Mount Kembla entirely belongs to the company, together with houses along the pipe-track at various points, and these we apprehend would be rated in the ordinary way on the rental.
1604. Would your Company be likely to be consumers of water from this scheme? Yes; the Company itself would not consume so much, unless you took the water down to Port Kembla; but they would very likely draw supplies from you for the central station. I understand from the plan that the pipe-line goes past our central station. In that case the land is only leased—on a long lease—and we should like to pay by meter and not by rating.
1605. Is this land within a municipality? Yes, Central Illawarra. But the mine itself—the Mount Kembla mine—is, I suppose, a mile away from the nearest point on the pipe-track. As regards the mine we are abundantly supplied; we have dams behind the mountains, and also reservoirs in the mine.
1606. Have you any objection to this scheme being administered by either the Wollongong Borough Council, or the Metropolitan Board? We know that it must be administered by either the one or the other. But the Company were rather curious to know why it was proposed to make Wollongong singular in that respect. In the case of the other country municipalities which have had water supplies granted to them the ordinary borough councils fix the rates and administer the affairs of the water boards, and we did not know why Wollongong should be made an exception. Of course, on the other hand, if the Wollongong Council had a trial, and were proved to be incapable of managing the affairs of the water board, that would be sufficient reason for putting the matter into the hands of a corporation that we all know are competent to do the work. I know the people connected with Wollongong intimately, and they are

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are people of great business capacity, quite able to manage the affairs of the water board, and much more likely to do so at less expense than any corporation situated at a distance.

1607. In the event of the Metropolitan Board taking the matter over, do you know whether they have power to make arrangements such as you suggest? I do not know.

1608. That is to supply small tenements by meter? I do not propose that. I said that apart from the mine I presumed you would charge our cottages in the usual way of rating by rental. We have a large number of cottages with four or five rooms of an annual rental of £9 or £10. I suppose there are 100 or 120. But, so far as the mine is concerned, I am a little apprehensive, because the system has not been very satisfactory up in Newcastle where I represent a colliery with a mineral railway, and I think we are rated sixteen times on the one subject, most unjustly, and what is more we cannot get the use of the water. We are rated either fourteen times or sixteen times on the one subject. That is under a special Act.

1609. Under a separate Board and not under the Metropolitan Board? The Hunter River District Board.

1610. Where would you propose to take the locomotive supply from? We would require to take it at the Central in the meantime. It is proposed, I think, to take a pipe-line down to Port Kembla, and I was suggesting to Dr. Garran that it might very conveniently be sent down by our railway as being absolutely direct. We should have no objection to that. I am quite sure large quantities of water would be taken at Port Kembla, especially in the event of the breakwater being constructed.

1611. Would it reduce the cost of laying the pipe-line if they took advantage of your railway? I think so. It would not be necessary to have any cutting at all. The pipes would be taken along our formation. We would have no objection to that.

1612. That would be on the surface? Yes.

1613. With reference to the village;—is the population there fairly well concentrated, so that an inexpensive system of reticulation could be carried out? Yes; the houses are all within half a mile or so of your pipe-line.

1614. Have you any idea what you would pay a year for water there, suppose you took water from this scheme? The houses would be rated, I suppose, according to the rental. But we do not want to be rated for the mine, because we have ourselves made adequate provision in regard to a water supply. We have large quantities of water. The supply has been obtained at very great expense. We have made a series of very large dams, and we have large storage in the mine itself; in fact, we are drawing entirely from the mine storage now—we are supplying our locomotives from the mine storage.

1615. Have you any idea of the amount of revenue the scheme would be likely to derive from your company and the village? I do not know how many houses there are in that particular place. I suppose there would be about ninety or 100 houses.

1616. Have you any idea of their value? I suppose the aggregate rental value would be about £1,000. They are all three, four, or five-roomed cottages.

1617. You said you would like to take the water from the mine by meter? No; we do not want the water from the mine at all. We have ourselves about as big a storage as you propose to make. We might require water for the locomotives at the Central. For instance, just now we could take water for the locomotives at the Central.

1618. You said you would like the water to be gauged by meter? Not for the mine.

1619. I mean as regards your property—outside the village? We do not want any water up at the mine at all; it would only be for the locomotives at the foot.

1620. Then you would not want a meter? The mine is away up in the mountains; the locomotives cannot go up there.

1621. I am talking about your property outside the village, not counting the village? We do not want any water for our property. We only want water for the locomotives. We could give you water. I have proposed to the Wollongong people times without number that they could get all the water they require, at a very much shorter distance from Wollongong than where it is now proposed. About a quarter of a mile behind our mine there is a site for a bigger storage than that proposed—an abundance of water.

1622. What is the quality of the water? First-rate; it is all good water behind the range.

1623. *Mr. Trickett.*] To what amount do you think the scheme would benefit from your engine supply? It would not benefit much in the meantime.

1624. Would the amount be £10, £20, or £30 a year? It would be far more than that. I really could not tell. As a rule, in an ordinary season, we do not want water there; we would always take it down at the jetty.

1625. That is for the steamers? No; we have to take water down for our locomotives. Sometimes our locomotives have to remain all night. If we had a water supply down at the jetty we would keep a locomotive there constantly.

1626. It is important in considering this scheme that we should get an estimate of what we are going to derive from it, if it is extended to Port Kembla? It is impossible for anybody to tell that. If the breakwater were constructed every steamer coming in would probably take from 20,000 to 30,000 gallons.

1627. That is a matter for the future? Yes.

1628. We also want to know what we should get from outside, beyond the Municipality of Wollongong, at the present time? I think it would be very wrong to lay down pipes only of sufficient size to supply Wollongong.

1629. That is not an answer to my question;—I want to get at the matter of revenue? Well, there is Corrimal and there is Bulli—a larger population than at Wollongong.

1630. We have had that evidence; let us get the evidence which I understood you came here to give? I only wanted to say that we were rather apprehensive about the Metropolitan Board getting hold of this scheme, inasmuch as we do not think that Wollongong should be made singular. Until the Wollongong Council have been proved to be incapable of the duty, we do not think they should be made singular.

1631. What does the water supply for your mine cost you at the present time? Nothing at all, now we have made the dams.

1632. Did the dams cost nothing? They cost something to make.

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1633. Surely the interest on the outlay must represent something? It was fifteen or sixteen years ago.
1634. Then the supply costs you nothing at the present time? Practically nothing.
1635. A witness before the Committee at Wollongong, the manager of the Unanderra Coke Works, said that at the present time their water was costing them about £40 a year, that they had constructed dams to enable them to get a supply, but that in consideration of the permanent supply from these waterworks they would be prepared to pay £50 a year to the board of control? They are in a different position from us. We have 400 feet or 500 feet of a head. We bring the water down by gravitation. They have to pump it from their dam. Inasmuch as the position where they consume the water is higher than the place where they impound it, they have to pump it.
1636. But I suppose they have machinery always going there? No; they keep a separate engine for that purpose. That is the reason why it costs them £40 a year; but if the water could be had by gravitation into their works from the dams where it is impounded, it would not cost them £40 a year. I daresay our locomotives would take quite as much as that, even at the central.
1637. Your company would, at any rate, be consumers of water from this supply to the extent of at least £50 a year? I would not say £50, but I daresay to the extent of £30 or £40 at the Central, and in a year like this far more, but I do not remember a year like this before. We have never been so short of water at the Central.
1638. Still you think the minimum would be £30 or £40 a year at any rate? Yes; but I hope bigger pipes will be provided than are sufficient to supply Wollongong, because these villages up to Bulli are in a perfect dearth of water just now. It would never do to supply Wollongong only; you would require large pipes.
1639. *Mr. Shepherd.*] I do not think you stated the quantity of water your company would be likely to use? No; I could not.
1640. Have you any idea of the quantity? At the present moment we would take from about 6,000 to 10,000 gallons a day; but in an ordinary year we would require almost nothing at the Central, and only for the locomotives.
1641. In the event of water being laid on there, I suppose you would give up your present supply altogether? No; we would not. We would supply better water than you will. Our water is better; not so hard.
1642. You say that the population between Mount Kembla and Wollongong is pretty well concentrated? No; I said that the population of Mount Kembla village was pretty well concentrated. There is really no population between Mount Kembla and Wollongong.
1643. Have you any idea of the number of houses between Mount Kembla and Wollongong—along the pipe-line? There is the little village of Fig-tree, and there are two or three farmers' houses, and there are about half a dozen houses that we have at the Central station, and then there are none until you come to Lower Kembla.
1644. Have you any idea what is the population of the Fig-tree village? Probably 200. They would not require very much water.
1645. Have you been in communication with the people at all as to their desire for this water scheme? No; not at all.
1646. Do you believe that they would be likely to avail themselves of the supply, if it were once laid on? All the dwelling-houses would undoubtedly.
1647. *Dr. Garran.*] Is the water storage near your mine made from the water that flows on the eastern slope? We have one dam in the centre of the village, which is used for washing purposes only. We have another large dam beyond the mountains, at the very head of the Sydney water supply.
1648. Over the ridge? Yes; that is a large dam about 25 feet deep. Then, in a year of plenty we head the water down an air-shaft 410 feet deep into storage in the mine. We have unlimited storage there.
1649. Then you have a shaft over the ridge? Yes.
1650. And you can direct the water down that? Yes; we have pipes down the shaft.
1651. That is how you get over the ridge—you do not have a tunnel? We have pipes from the dam to the shaft, and down the shaft and through the mine—a mile and a half in the mine—and down an incline.
1652. Then you have storage in the mine and outside the mine? Yes.
1653. Your own village is at present supplied from that source? No; our own village has rather a precarious supply. It is supplied from American Creek and tanks. They have really to depend upon tanks and springs up on the slopes of the mountains at present.
1654. Then they are not very well supplied? No.
1655. Not this year? In an ordinary year it is right enough, but this year they have a bad supply.
1656. And you think they would all take the water? Yes.
1657. And would take it from our main? Yes; your main passes through the village—in fact it goes through and divides our houses.
1658. You are aware that the Act provides that everywhere within 150 feet of the main, the authorities can compel the people to pay? Yes; it would be reasonable. In the Hunter River district the distance is a quarter of a mile.
1659. So that if our main goes through your village, the taking of the water by the cottages should be made compulsory? Yes, as regards the dwelling-houses; but in the case of the mine, seeing that we have protected ourselves for the past fifteen years, we do not want to be rated for that which we cannot use—we have so much of our own.
1660. These people have a certain amount of supply now, and they would have to pay a water rate? Undoubtedly, and I think it would be a very good thing, and would be very glad to see it done.
1661. Do these village-houses belong to the company? Yes.
1662. All of them? Yes.
1663. You are the real landlord? Yes.
1664. And you would be liable for the rate in the last resource? No doubt.
1665. But your company is quite willing to face the rate? Yes.
1666. And to recover it from the tenants? Yes.
1667. You say that you could find a much better source of supply for Wollongong, and nearer than the one at the Cordeaux River? I think so.

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1668. How far on the eastern side of the range? It would be on the western side, about a quarter of a mile behind our mine.
1669. Lower down the creek? Yes; from a tributary of the creek—a tributary to Brandy and Water Creek, which flows into American Creek at our central station.
1670. Is it an eastern-flowing creek? Yes; it comes from falls.
1671. Then the water you propose to serve is on the eastern slope of the range, and not on the western? No; it is on the western slope, but it cuts through a gorge in the hill. It is within 150 yards of a western flowing river—Kembla Creek.
1672. All the water it collects flows over the edge of the range? Yes.
1673. But the water itself becomes an eastern water by cutting through the ridge, so that in one sense it is an eastern water, and in another sense a western water? Yes.
1674. And you think it is a better source of supply than this one? Very much nearer, and saves the tunnelling.
1675. And the elevation is sufficient? The elevation would be about 800 feet above the sea. Our mine is about 1,000 feet.
1676. Are you aware whether the Government engineers have inspected that site? I do not know.
1677. You have never pointed it out? I have pointed it out to the Wollongong people; but the truth of the matter is that they are in such desperation for a water supply, that I do not think they would care very much if you brought the water from Timbuctoo, so long as they got it. I do not know how Wollongong exists without a water supply at the present moment. I do not know that I should be very cheerful at the prospect of spending a night there after knowing the source from which they derive their drinking water. It is not pleasant to think of. They are in great desperation for water, and have been for the past fifteen years.
1678. With regard to the supply for your locomotives, I understand that you draw it partly from the central station, where you have storage, and partly from within a short distance of Port Kembla? No; all we use at Port Kembla we take down from our central station.
1679. Have you no storage at Port Kembla? No.
1680. Then you have to take sufficient water to go that journey and back again? Yes.
1681. A water supply at Port Kembla would really be a consideration to you? Yes; very convenient.
1682. And that is the principal place where you will want it? Yes. The steamers that come to our jetty nearly all want water, and our own steamers would always water at Port Kembla.
1683. In preference to taking water in Sydney? Yes; because it saves them time; they would be able to go to work the moment they arrived in Sydney harbour. Sometimes they are short of supply, and have to get the water-boat. Very often we have to telegraph for it.
1684. They can take the water in while they are unloading in Sydney? But very often they have to get water before they commence to unload.
1685. Still they lose no time in Sydney? Sometimes they do. It would be much more convenient to take the water at Port Kembla as regards our own steamers. Then all the Melbourne steamers would always take water there.
1686. And would these large steamers of 6,000 and 7,000 tons take water at Port Kembla? Undoubtedly; they would all water there, provided you had the water.
1687. Preferably to Sydney? Yes; in fact three or four years ago, when we had abundance of water, we had a large tank on our jetty from which to water the steamers, but no sooner had we finished it than a drought came.
1688. And where would you get the water from? From the Central, or from the bottom of the incline, run out in a large tank on wheels.
1689. It cost you something to do that? We brought it down behind a train.
1690. You could not do any great quantity that way? No; we could not supply any quantity.
1691. It would pay everybody at Port Kembla to take water at Port Kembla? Yes.
1692. And you think there would be a considerable consumption? I am sure of it.
1693. And so far as your own company is concerned, you want to protect yourselves against being charged for water you should not want? Just so, seeing that we have made such provision already. It is only at an exceptional time like this that we are really short of water.
1694. Still you know that these water laws always provide that you have to pay if you are within reach of the water pipes, whether you have made provision or not? Quite so.
1695. You want to be exempted from that? For instance, if I say to you, as I would say, and willingly, and as I said to the Hunter River people, "You can make use of our railway if you please, and it will save you probably a large expenditure," I do not think, because I have been kind to you, that you are to rate us for the 4½ miles of railway you use.
1696. You would get a *quid pro quo* for that service. It would not be an absolute benevolence, your offering the use of the railway, you would do it to get rid of the rate? No; not on account of that.
1697. In any case your company would not be willing to say, "We will give you £50 certain if the water is laid on? No; but I think you would get more than £50 from the company.
1698. In practice we should? I am sure you would.
1699. Could you give any idea what it would cost to lay a 6-inch pipe from the Cross Roads to Port Kembla? I have not the figures, but it could be easily calculated. If you ran the pipes along the railway, which is the straightest line you could take, you would have no expense at all, except the cost of laying the pipes; because the highest gradient in that section of the line is 1 in 49, and that only for half a mile, and then the ruling grade on the Dapto road to Port Kembla is 1 in 62.
1700. In your judgment, would there be any necessity to make a supply tank or service reservoir near Port Kembla, or would you take the water straight from the main? I would take it straight from the main.
1701. You think the pressure on the pipes and taps would not be too severe? No; it would be quite easy to reduce that by putting the water first into a small tank for the steamers.
1702. I mean for the house supply? No; I do not think so.
1703. Householders do not like too severe a pressure on their taps? It would be reduced a good deal by the friction in the pipes over a length of about 9 miles.
1704. At Wollongong the pressure is brought down to 242 feet? That is not a great pressure; we have more than that at North Shore.

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1705. If you had no service reservoir at Port Kembla you would have the whole of the pressure of 800 feet? Wollongong would have an intermediate reservoir.
1706. Are most of the miners gathered at this village you speak of? Yes, the majority of them; either at the top village or the lower one.
1707. At about what elevation are they? The village of Kembla is about 900 feet above the sea, and the lower village would be anything from that to 500 feet above the sea.
1708. You are aware that the site for this reservoir is on part of the land under the control of the Metropolitan Board? Yes; it is at the head of the Sydney water supply.
1709. We are practically taking possession of part of their estate? Yes.
1710. Do you think that constitutes any sort of reason why they should control the scheme? I do not think so. You are taking off a very small portion of their water estate. I should have been better pleased if I had seen you a little further down.
1711. Would it matter at all to your company whether this was managed by the Wollongong Council or by the Metropolitan Board? I do not suppose it would matter very much to the company; although we have always been in friendly communication with the Wollongong people for so long that I daresay there is a little feeling in that way. But I do not think in the matter of £ s. d. it would matter anything at all to the company.
1712. Are you aware that the Water and Sewerage Board already supplies water to three or four villages? I was not aware of that. I was thinking of some of the country towns, such as Tamworth, Wagga, and other places.
1713. But there is no option in those cases but for the municipal council to take control? I think, by putting the management under the Metropolitan Board, you would be apt to make it rather cumbrous. I think the local people would be able to manage their own affairs perfectly well, and I am quite sure with a greater eye to economy. I know them well, and they are very capable people at Wollongong.
1714. Is Port Kembla itself in Central Illawarra? Port Kembla is not very far from Central Illawarra.
1715. Is it within the Municipality? Yes.
1716. Would the whole of this pipe-line, from your central station to Port Kembla, be within the Municipality? More than that; our village and our mine are in Central Illawarra. I think the proposed reservoir at the crossing of the Cordeaux River is on the boundary of Central Illawarra. A portion of your impounded waters would be in Central Illawarra.
1717. Then you are neighbours of South Illawarra and North Illawarra? Quite so.
1718. If this supply is placed under the Wollongong Council, how do you think these two neighbouring Municipalities will come to terms with Wollongong about the price? They would require to deal with Wollongong about the water. There would be no difficulty at all.
1719. Suppose it should turn out that owing to your scattered population it would cost a little more? Central Illawarra has no concentrated population at all.
1720. Suppose it should cost a little more to supply your people per head than to supply Wollongong, would your people be willing to pay a shade more for the water to get it? I do not think that it would cost our people so much as it would cost the Wollongong people, because we should take it off at the source of supply. At Port Kembla I do not think anybody would grudge to pay a shade more than would be paid at Wollongong. But up at Mount Kembla I do not see how you could consistently charge more. Not that I would say so with the intention that we would object; but I do not see how you could consistently charge more for water tapped at the source of the supply than for water used 7 or 8 miles away.
1721. You are referring to a place very near the supply; but suppose we have to take the water 4 or 5 miles, then it is different? Yes; it is a little different.
1722. Is it your opinion that the people in your Municipality and that of North Illawarra will come in as soon as this scheme is carried through? I am quite certain that North Illawarra will come in, otherwise there is no future before the place. I am sure the water supply would give a great impetus to the industries of these places. At present they cannot expand; they have no water; they are absolutely in desperate circumstances for water just now. It is painful to think of the extremities these poor people are put to at the present moment.
1723. They have had a severe lesson during the last three or four years? They have had a continuous, severe lesson for fifteen years. How they have managed to exist is more than I can tell.
1724. You think they are all pretty well converts now to a water supply? I do not think you need look for that. You are doing the people a great kindness if you force them to take the water.
1725. But when people are called upon to be taxed there is a wonderful opposition very often? I am sure that all the landlords will hail with delight the day when they are within the possibility of getting a water supply. I know if I were in that position I should give a good deal more for a water supply than you propose to charge, because I am quite sure that nothing would so enhance the value of the property as a good water supply.
1726. Do you think a shilling rate would be a very reasonable charge? Yes; very reasonable.
1727. Or a shilling per 1,000 feet? Yes; quite a reasonable rate.
1728. *Mr. Dick.*] I do not quite see your objection to placing the control of this water supply under the Metropolitan Board? I do not know that it is an objection that I should like to urge very strongly; but my objection is this: I know the Wollongong people are very capable, cautious, business people, quite as capable as the average member of the Water and Sewerage Board; and I am quite sure that they are perfectly able to administer the affairs of the Water Board, and conduct them with aptitude and economy. They have all the machinery there to do so, and I am quite sure they are perfectly able to do it; and I rather think it is a slur and a slight upon the population to say they should be put in a singular position. They are quite as good men as are on the Water and Sewerage Board.
1729. But you admit there is a great necessity to extend the supply to North Illawarra and Central Illawarra? Even in that case, and though it were to be extended to Sydney, I do not see but what they are quite as capable of administering the scheme as the Water and Sewerage Board. They are just as capable men, with as good attainments as are the members of the Water and Sewerage Board—some of them better.
1730. But are you aware that the Municipal Council of Wollongong would not be able under the present law to administer the scheme, as they have no power of rating outside their own municipal boundaries? It would be quite easy to get an Act enabling them to do so. There would be no objection to their getting

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getting an Act. It would be one of those Bills which the Legislature could easily pass in a night—much more important than some of those they do pass in a night.

1731. You must remember that if these other municipalities are to be supplied in addition to Wollongong they also must have a voice in the management of their own water supply? They might, and they might not. I know places at Home where the people, though they draw water from the supply—the Loch Katherine scheme, in Glasgow, for instance—have no voice in the administration.

1732. How far is your mine situated from the pipe-line at Mount Kembla? A mile and a quarter.

1733. Is any part of the village of Mount Kembla situated close to the tunnel of the mine? No; it is situated nearer to the pipe-line than to the mine. Some of the houses are not far away from the mine. It is scattered over a plateau about a mile in extent; but the greater number of the houses are within half a mile from the pipe-line on the level.

1734. Then how can you anticipate or fear that your mine would be rated if it is more than a mile away from the pipe-line? I do not know what they might do. It would depend upon the terms of the Act.

1735. It is more than likely that the Act would be similar in its terms to the Country Towns Water Supply and Sewerage Act? In some parts of your pipe-line you could come in close to portions of our railway, and I do not see that it would be right to assess a railway, because your pipe-line might come contiguous to it for a short distance.

1736. Then you have no great fear that your mine will come within the rateable area; you simply object to the Metropolitan Board having the control of this scheme, on the ground that there are people in Wollongong just as able to control the supply as there are in Sydney? Certainly.

1737. That is your only objection? Yes.

1738. I think you informed the Committee that you had a larger storage at your own mine for the use of your own men than they would have at the Cordeaux site? I am quite sure we have.

1739. How many million gallons do you store there? We have all the inside of our mine. We have 120 acres of storage in one part in our mine. We have a sea of water in there; we can always let it off by gravitation.

1740. I think you also stated that it is better water than the Cordeaux water? Yes. Brandy and Water Creek is better water than the Cordeaux River.

1741. In what respect? It is softer water, more agreeable water—it is better for the boilers.

1742. Has the Cordeaux water any hardness? It is a little hard for washing when it is low.

1743. Is it not identical with the Sydney water? I do not think the same conditions would affect the Sydney water very much. The Cordeaux water is all off basalt, and the Sydney water is nearly all filtered through sandstone. The Cordeaux water is rather purgative if you get it in a dry season. That is the case in some of the tributary creeks just now. That water contains a little magnesia. But all the water that would come from that infinitesimal portion of the Sydney water supply would never affect the Prospect dam one iota, because it would be filtered through 30 miles of sand and such like. It would be all altered before it got to Prospect.

1744. I think you said that as the people in the village at Mount Kembla would tap the main nearer to the impounding area they should hardly be charged as much as the people of Wollongong? No; I did not say that. Dr. Garran asked me whether they would be willing to pay a larger sum than the people of Wollongong, and I said I thought it would be quite reasonable to charge a larger sum at Port Kembla, but not at Mount Kembla, because the people at Mount Kembla would draw their supply from near to the head of the pipe-line, whereas Wollongong is 8 miles away.

1745. But have you taken into consideration the fact that if there were no Wollongong there would be no pipe-line to pass Mount Kembla? It would make no great difference to them, because we could give them a gravitation supply in an ordinary season. We could supply the village with gravitation water now.

1746. *Mr. Watson.*] Do you think the village of Mount Kembla would pay to reticulate? I do not think you would require any reticulation.

1747. Only a pipe and a stand-pipe? Yes; two or three stand-pipes—a 2-inch pipe.

1748. You think they would be willing to pay a rate for the privilege of drawing the water from a stand-pipe? I do not think that these people would be willing to pay anything. If you offered to supply them with bread they would not pay for it. They would refuse, I am sure, if you mentioned payment.

1749. In any case you would not advocate the reticulation of that village; the population is too scattered? Exactly; and in regard to all the cottages you would pass it would only be necessary to have a stand-pipe.

1750. You said that you draw your water at present for locomotive purposes at the central station? We conduct it to the central station. The central station is supplied from American Creek at the Waterfall.

1751. And it is pumped from there? No, it is not pumped; it goes by gravitation to the central station. It is only when the creek is dry that we pump it from the waterfall up on to the dam made above the waterfall. In reference to the difference in the quality of water, I would mention that the water in American Creek, where you saw the brick dam above the falls, is beautiful, soft, fine, kindly water; but the water in the little creek that comes into the waterfall is of such a quality that you might just as well almost drink castor-oil. The latter comes from a basaltic creek, and the other comes from sandstone.

1752. Do you think the magnesia element is bad? It is purgative. You need to be very particular about where you draw your water from, because if it is off basalt you will find it is a little hard, and not so good as if taken off sandstone.

1753. Do you think the proportion of basalt surface in the catchment area of the Cordeaux River would be sufficient to cause an injurious effect, such as you describe? I am afraid it would in dry weather. I do not think you are far enough down. I think you should have been a little further down the river. You are making your dam at the crossing. I think you ought to go a little further down, and you would have, for almost the same expense, a great deal more water, because on the western slope of the Cordeaux the ground is very marshy, and holds a great deal of water, and every quarter of a mile you go down you increase your area wonderfully.

1754. Would it not be much more expensive to take it from the site you suggest through the hill or ridge? I do not think so.

1755. They would want a longer tunnel? I do not think so.

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1756. If you go lower down you must get a greater width of ridge? The Cordeaux does not fall very much. It goes over very level ground there.
1757. In giving an opinion upon the quality of the water at Cordeaux, do you take into consideration the fact that the supply is mainly dependent upon the rainfall, and that the natural flow of the creek, except at times of flood will only be sufficient to make good the evaporation? The truth is that I do not think the Cordeaux water is good. I think you would improve the quality of your water by going further north, and I will tell you why: Just about the catchment area, to the west and to the south, it is cultivated land. Unless you purchase that, you will get the water contaminated to some extent. To the west of your dam you have a large basaltic hill; there is a large out-crop of basalt there. To the north you come into the sandstone again. Besides, every quarter of a mile you almost double your catchment area.
1758. Our evidence is to the effect that, so far as the catchment area is concerned, it is much more than sufficient? Well, I know this much, that the water in the Cordeaux in a dry season is much better further north than it is to the south of your dam. At the same time you would impound the water after a flood, no doubt.
1759. You were saying that if the water in the creeks were likely to be bad it would be in dry weather, such as prevails at the present time? Yes, that is the worst time.
1760. You are aware that a number of settlers have been around the catchment area, or within the catchment area, living there for the last twenty years? Yes.
1761. And you have not heard of any sickness? They get inured to it. I have been in a part of Queensland where if I took some of the water I would be ill for three or four days, unable to do anything, and yet the settlers were seasoned to the use of that water, and paid no attention to it. I have seen the same thing in Upper Burmah. I have seen the water there so bad that if you took a tumblerful and evaporated it in the sun, it would leave half an inch of sediment. It would kill you almost, and yet the natives drink it with impunity.
1762. On the same principle that you can get used to poison? Something like that.
1763. At any rate, it would be fair to assume that seeing that the greater portion of the water sent to Wollongong would be the result of heavy falls of rain impounded, it would be better than the average water in the creek? Yes.
1764. And, consequently, reasonably pure? Undoubtedly, because it would not then have percolated through the joints and crevices of the basalt, dissolving and absorbing the soluble salts from the basalt.
1765. In view of the fact that we are assured that the amount of water flowing in the river and its branch creeks would only be sufficient—that is in a dry time—to make good the natural evaporation from the reservoir area, we should be justified in saying that the water would be pure? Yes, I think so. It would be very acceptable to Wollongong. It is something deplorable to think of the quality of the stuff, called water, that these people drink at the present moment. I think the least we think about it the better. I would be very glad indeed to know that the scheme was in operation, because it would be the greatest boon to the district—better than the coal-mines.
1766. Does the full extent of your mining area come to within the maximum distance of 150 feet of the pipe-line? I could scarcely tell you from the map. I do not think any of our coal land comes within 150 feet of your pipe line, except at one point, and it is very unlikely we shall ever mine the coal there, because we have found that there are so many basalt dykes there that it is doubtful whether it could be profitably worked.
1767. In the event of provision being made to allow rating within 150 feet of either side of the pipe line, you would not be affected, so far as your coal-mine is concerned? I do not think so.
1768. Possibly you would, in respect to your railway, and you want some protection in that regard? Yes; we would like some protection there, seeing that we have already made provision.
1769. *Mr. Levien.*] Do you know Mr. Franklin of Wollongong? Very well, indeed.
1770. He is an experienced man? Yes.
1771. A very qualified man? Yes; Mr. Franklin has his head screwed on the right way.
1772. And the officers who have reported on this scheme, do you think they are qualified men? I do not know who they are.
1773. Mr. Wade and Mr. Hickson? They are quite qualified. The only difference is that I know the country very much better than either of them; but they are perfectly qualified.
1774. But you know the district better than they do? Yes.
1775. How long have you been in the Colony? Nearly twenty years.
1776. How long has Mr. Hickson been here? I suppose he has been here all his life, as far as I know; but I do not think he has been all his life at Wollongong.
1777. But he would have a great knowledge of the place? Undoubtedly.
1778. Considering that Mr. Hickson, Mr. Wade, and Mr. Franklin have reported in favour of this scheme, would you set up your opinion as against theirs? I beg your pardon, I did not say a single word against them. What I did say was this, that by going a little further north you would get a much increased catchment area, and a better quality of water.
1779. Considering that Mr. Wade has made every inquiry under the direction of his officers, do you know of any better catchment area? No; Cordeaux is the largest catchment area.
1780. Do you know of any better catchment area? No; I do not think I do. But I know one that would supply Wollongong, and give you, perhaps, a supply ——
1781. Leave Wollongong out. You do not know of any better catchment area? No.
1782. Considering that Mr. Wade, Mr. Hickson, and Mr. Darley have reported in favour of this scheme, do you think that with all their experience they have a good knowledge of what ought to be done? Yes, I have no doubt they have. I never said a single word against either of them—nobody could. I never said a single word against them or the catchment area.
1783. I am asking you to give your evidence? You are putting the questions in a way that would lead people to suppose that I objected to the scheme, and I do not.
1784. You do not object to it? Certainly not.
1785. But you gave your evidence just now, as far as I could gather, as if you differed from them, only you did not want to say so? No, I did not; all I said was that I thought if you put the impounding dam a little further north, you would increase the area of catchment and get a better quality of water.
1786. Would it not be a similar quality of water? No; a very different quality of water, for the reasons

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I gave you. Your catchment area gets water that is more in basaltic rock. If you went north you would get water that is filtered through sandstone rock, and which would be better water. But I do not put that forward as an objection. I do not object to the scheme in any detail.
1787. I suppose you have read the report of the officers of the Department? No, I have not read the report.
1788. Do you know their opinions? No, further than reading them in the papers as the result of your inquiry here.
1789. And do you agree with them? So far as I have read them, I do agree with them, with the exception ——
1790. The only question is the quality of the water? Quite so. I think they would get a better quality of water by going a little further north.
1791. Would they get a greater quantity of water? Undoubtedly. The further you go down the watershed the greater the quantity of water. You increase the area of catchment. But I am quite sure you can perfectly rely upon all their computations and calculations as to the quantity. There will be very little use of your going further north to get five times the amount of water that you require.
1792. Are they not as good judges of the quality of the water as you are? Well, I do not know that they are. I would not give in to any man as to the quality of the water, inasmuch as I have had far more opportunities of ascertaining that than they have. I do not know whether Mr. Darley has ever visited the spot, but if he has it would only be once or twice, and for an hour or two. I have spent years within a few yards of your dam. I know every waterhole and every yard of your catchment area.
1793. What do you say as to the quality of the water in the catchment area? I think if you impound the floodwaters after a storm you will get very good water.
1794. What do you think of the quality of the water—never mind qualifying it? It is good enough water.
1795. What do you say about the quality of the water? I think the water is very suitable, but I say you would get better water if you went further north.
1796. Then the only difference is that if you go further north you would get a better quality of water? Yes, and increase your catchment area.
1797. Would the catchment area be sufficient for all that is required? It all depends upon what the requirements are. If it is Wollongong, I say yes.
1798. What is the catchment area? I do not suppose you would have more than 2,000 or 3,000 acres really.
1799. Do you know what would be required? I have not gone into that. I do not know anything about the number of people to be supplied.
1800. Considering that Mr. Darley and all the others have said that that catchment area would be sufficient, have you anything to say against it? No, I have not. I assume that Mr. Darley's figures are correct. I have nothing to say against Mr. Darley, and I beg of you to note the fact that I have not a single objection to make either to Mr. Darley or to Mr. Hickson. I am the very last in the world to cavil at a single word they said, because I am sure that whatever they say they have good reasons for it.
1801. *Chairman.*] Is it characteristic of water coming from basalt that it is purgative? As a rule it is in dry seasons. Of course, when you have a large quantity it runs off quicker and is carried away, but in dry seasons, when the water has time to remain almost *in statu* for a time, so as to dissolve the soluble salts, as a rule it is rather inclined to be purgative; but as the water would be impounded in time of flood, I daresay this would not be noticeable.
1802. You say you know the country very well about there? Yes.
1803. Do you know that where the site of the dam is there is a basaltic dyke? Yes.
1804. Does that basaltic country run further north than that? A short way, and then the Cordeaux River comes off the basalt. The basalt keeps to the right-hand side of the river.
1805. Then it keeps entirely in sandstone country? To the west and to the south of your dam it is on basalt.
1806. I suppose there are sites lower down the creek—good sites for the construction of dams—equal to that where this is proposed to be put? I think so; but, of course, if you have plenty of catchment for the requirements, I do not see any reason for going further down.
1807. I think you said you thought the catchment area was about 3,000 acres? I could not say off-hand.
1808. *Dr. Garran.*] Does this magnesia settle when the water is quiet? You will get it dissolved in the water. The water would take it up in solution.
1809. Would it settle afterwards? If you evaporated the water.
1810. Would there be any tendency for a deposit to settle at the bottom? No.
1811. The water would hold it in solution? Yes.
1812. But, as regards the Cordeaux River as a source for this supply, you would hardly give the basaltic aspect of the question consideration? I do not think so.

WEDNESDAY, 22 FEBRUARY, 1899.

Present:—

JOHN PERRY, Esq. (Chairman).

The Hon. Patrick Lindesay Crawford Shepherd. | The Hon. William Joseph Trickett.
The Hon. Andrew Garran, LL.D. | William Thomas Dick, Esq.
John Christian Watson, Esq.

The Committee further considered the expediency of constructing Water Supply Works for the Borough of Wollongong.

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

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1813. *Chairman.*] Have you any information with reference to the cost of supplying the municipalities north of Wollongong with water? The total cost of supplying water to all the districts between Wollongong and Thirroul, a little town a mile north of Bulli, and which is almost as important as Bulli—a distance of

C. W. Darley. 22 Feb., 1899. of 9½ miles from the reserve—would be £13,881, including all reticulation. The pipe-line would bear a little westward after leaving the reservoir, so as to follow roads and settled districts. I put in the following estimate:—

ESTIMATE of cost of supplying district north of Wollongong from the Wollongong Water Supply, including townships of Mount Keira, Keiraville, Balgownie, Tarrawanna, Corrimal, Bellambi, Bulli, Woonona, and Thirroul.

	£	s.	d.
Extra cost of 11,000 feet of 6-in. steel main over 4 inches	500	0	0
Service tank and main at Bulli	1,300	0	0
6-inch C.I. main, Wollongong service tank, *via* Robson's Road, Gipps Road, and main south road, to Thirroul, 9½ miles	6,964	0	0
Balgownie Reticulation	913	0	0
Tarrawanna ,,	558	0	0
Corrimal ,,	649	0	0
Bellambi ,,	496	0	0
South Bulli, Woonona, and Thirroul	933	0	0
Mount Keira, Keiraville, &c.	1,568	0	0
	£13,881	0	0

Estimated Rates.

Main road, Para Creek to Bellambi Railway	80	0	0
Balgownie	48	0	0
Tarrawanna	10	0	0
Corrimal	32	0	0
Bellambi	16	0	0
Bulli, Woonona, and Thirroul	200	0	0
Mount Keira, Keiraville, &c.	65	0	0
Equals 3·25 per cent.	£451	0	0

The total rates of North Illawarra which includes everything but Bulli, Woonona, and Thirroul, are £589, of which £128 is derived from the Mount Keira, Mount Pleasant, and Corrimal collieries.

Of course there would be a considerable revenue from the sale of water by meter to the colliery railways. There is no doubt the colliery railways at Bulli would take a certain amount of water from there.

1814. Would that reduce the quantity they would take from Wollongong? No; I have put down nothing for that; but there is sure to be a sale of water in that direction. In fact, there would be a special assessment on the railways; but that is a matter to be determined hereafter. There are a number of dairy-farmers who would, of course, have to pay special rates for the supply of water for their cattle.

1815. *Mr. Watson.*] The return in the shape of rates would be 3¼ per cent. on the additional expense? Yes; that is, in rates only. A very large portion of rates, of course, could be got from stock fees, meter charges, and so on, but it is difficult to estimate it.

1816. *Chairman.*] It was suggested by one of the witnesses that the Wollongong Council might, if they took over this scheme, extend their water area, and probably be able to deal with those outlying places by supplying water at a different rate from what they would in Wollongong;—has that been the practice anywhere, or is it the practice to fix a uniform rate all over a district? It is usual to fix a uniform rate. Of course, we have not many cases of this kind. The generality of water-works are confined to the municipality concerned. In the Hunter River district, for instance, they have one rate all through.

1817. They have power to charge differential rates? I should think so; but it is not attempted anywhere. It is not usual to make a differential rate.

1818. It has been suggested that, instead of this scheme being handed over to the Wollongong Council, it should be under the control of the Metropolitan Board? I threw out that suggestion myself as a means of getting over the difficulty with different municipalities. The only reason why I suggested the Metropolitan Board was because they had the machinery—that is, the engineers and staffs of assessors, who understand the work. If you start a new Board, you will have all the primary expense without the same experience. It is quite possible the Council could manage as well as the Board, but they would not have the experienced officers.

1819. One witness has stated that there are people of great business capacity who would be quite able to manage the affairs of the Water and Sewerage Board;—have you had any experience of local Boards in that district? Only of the Wollongong Harbour Board, which was a lamentable failure. Of course, it was not confined to local people. Some people residing in Sydney had seats on the Board. The whole thing was a warning generally.

1820. The witness I refer to states that those people are much more likely to manage the affairs of the Board at less expense than any corporation situated at a distance;—I believe your opinion is that the Metropolitan Board could conduct the business of this supply much more economically than a local Board? I think they could, because they have the machinery to do it. Of course, they would appoint a local turncock and a clerk to collect the rates, or the town clerk might be appointed to do it under proper security.

1821. Dr. Robertson states that you can find a much better supply of water for Wollongong than the Cordeaux River;—have you any knowledge of a better source of supply? No; I could not recommend any source from the eastern slopes at all.

1822. He stated that the water would come from the west, but would be brought to a break in the range? Of course, it would not be from the west. If it flowed east it must be on the eastern catchment. There happens to be a spur out of the main range which runs northerly. The main range is, approximately, north and south. A spur comes out of it, and runs northerly. Of course, if you go out on that spur, you are still on the eastern fall, because it is on the eastern side of the main range. The spur turns sharply in a northern direction, and, of course, that is all on the eastern fall. The catchment area of the stream to which he refers is not 100 acres, and it would be absurd to think of supplying Wollongong with that.

1823. So that it really is not on the western side of the main range? It is on the eastern side of the main range, but on the western side of a spur which comes out of the main range.

824. Have your Department made a thorough examination of the whole country, and are you perfectly satisfied that this scheme is the best that can be obtained? Yes.

1825. Dr. Robertson states that the water in this catchment area is likely to have a bad effect on those using it, inasmuch as it will come off basalt? The collecting area is wholly sandstone; there may be a few

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few basalt dykes or overflows intersecting it; there are one or two small bars of basalt crossing the sandstone. We have in or near Sydney the same thing; but there is not the remotest chance that they would interfere with the water,—in fact, I know of many excellent catchment areas wholly of basalt. The water of the Cordeaux is particularly nice good water. The officer who made the survey, and who was instructed to go over the whole area, was interviewed by me to-day. The surveyor and he walked over the whole area, and there is nothing but sandstone there. There may be indications of a dyke here and there, but it is wholly a sandstone collecting area, and nothing could be better for collecting water.

1826. A suggestion has been made to store the water in some worked-out portion of a coal-mine;—would you favour any scheme of that sort? No.

1827. Why? It would be full of horse-droppings and human excreta as well, apart from the mineral matter in the mine. It would not be fit for drinking at all; it would be poisonous.

1828. I suppose the unused portions of mines are used as water-closets? Yes, and the working-parts as well.

1829. Therefore the water so stored would necessarily be more harmful than any water coming over basaltic formation? Yes. Apart from that, supposing everything is kept pure, the mineral water from the coal-seams would make it unfit for use. If the water is put in absolutely pure, it is sure under those circumstances to become bad.

1830. With regard to this catchment area, it appears that there is a much larger rainfall there than in connection with any portion of the Sydney water supply;—would the taking away of so large a quantity be likely at any time to interfere with the water supply of Sydney? I do not think so.

1831. Would that be an additional reason why the Sydney water supply people should take over the management of this concern. Supposing that some time the water ran short in Sydney, and that they had more than they required at Wollongong, better arrangements for drawing from the storage there could be made by the Water Board here? That might be some reason, but the maximum quantity could not be taken. The pipes would only carry out of the reservoir a little over 500,000 gallons a day, and that would not be missed from the Sydney supply. Of course, with the good storage proposed to be provided, the water would fill up the reservoir when there was a heavy rain.

1832. There are two statements by Mr. Hickson with reference to cost; the amount chargeable to Wollongong under the first scheme is £21,219; under this scheme, including Port Kembla, it is £24,711; it is proposed to charge to Wollongong £16,871, and there is £7,840 chargeable against a future supply to Port Kembla—have you any explanation to offer with reference to the reason why £16,871 should be chargeable under the second scheme? That was only one way of putting it. It was only one way of showing that probably Wollongong would only have to pay interest on a portion of the cost. At the same time, I do not hold with this way of showing it. The payment must be in proportion to the consumption. If Wollongong is taking half the water it should pay half the cost. It is an argument in favour of putting the whole thing under one management—a Board of some kind. We do not know yet what portion Port Kembla will take. The demands are increasing. No doubt at an early date, after the work is carried out, it will become a large item, so that it is quite possible that Port Kembla, considering the large class of ships which will go there, may take quite as much water at Wollongong. Therefore it should pay half the cost. Therefore Wollongong, in case Port Kembla grows, would require to have their amount reduced. If they are charged £24,000 now, and eventually Port Kembla, or some other place, takes more water than Wollongong, it should relieve the charge to Wollongong to that extent.

1833. How would you propose to apportion the difference between the cost of the scheme of providing for a larger storage and providing a scheme from which some of the other municipalities could take water;—how would you propose to apportion the difference, and meet the cost on the difference? I think there would be a great difficulty in dividing a portion of the cost at all. The scheme should be worked as a whole under a Board. It would be very difficult to say how much of the whole cost would be chargeable to Wollongong, Bulli, and Port Kembla by-and-bye, in proportion to the quantity of water taken by each place. You could not say now how much of the £24,000 would be chargeable to each place. The matter must be dealt with as a whole, and the revenue pooled as a whole.

1834. We will suppose that for the first few years Wollongong alone takes water, and that we then provide a scheme which would be more costly, and under which other places can come in afterwards,—the supply to Wollongong under the first scheme is £21,219, and the complete scheme under which other municipalities could take water, £24,000. Suppose that Wollongong takes the management of the concern, how would you propose that the Government should get back the difference. It would be unfair to charge Wollongong the full amount? Assuming that Wollongong alone was paying the whole revenue, I think it would be a fair thing for the Minister, who has the power under the Act, to readjust the charges, and to say, "If the scheme had been carried out by you alone it would have cost £21,000, and we shall only charge you upon that."

1835. In the meantime, the providing of interest for the extra cost would fall on the general taxpayer? It would, but I think that the chance of that is very remote, because we know that the Kembla heights and the townships along the road will take a considerable amount of water, and they will all be rateable if power is given to rate them. Of course, the Wollongong Council would not have power to rate them without some alteration of the Act. If the Government did not give the Corporation power to rate, it would be a fair thing to ask the Council to pay interest on the £21,000.

1836. *Mr. Watson.*] The Mayor stated in his evidence that they would be willing to pay that? That is a fair way of looking at the matter. I have no doubt whatever that Port Kembla is coming, and that a very large quantity of water will ultimately go there. It would be a pity now to carry out the smaller scheme, making it very difficult to carry out the larger scheme afterwards. It would be better for the country to risk the few extra thousand pounds.

1837. *Chairman.*] You have no hesitation in recommending that? No.

1838. *Mr. Watson.*] You were formerly the President of the Metropolitan Water and Sewerage Board? Yes.

1839. Do you know what the practice was, or is, with respect to supplying municipalities with water;—the question was asked at Wollongong, as to how the Council would stand in the event of the works being taken over by the Metropolitan Board—whether they would have to pay for water for street-flushing and so on? That is given free where the streets are kerbed and guttered.

1840. Another point upon which some fear was expressed, more especially by the people along the main-pipe-line, was as to whether, in the event of the supply being placed under the Water and Sewerage

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Board, they would be rated for any property within 150 feet—whether they would be subject to the payment of so much per year merely for having the main pipe-line through their property, or whether they would be allowed to make an agreement to take water by meter if they so desired? Where there was a house they would be rated.

1841. But supposing there was no house;—take the railway line belonging to the company represented by Dr. Robertson;—he was afraid that they would be rated, if the line went to Port Kembla, for the value of the railway line itself, along which, probably enough, the pipe-line would pass so as to save grading and formation? That question is pretty well settled now in the Newcastle district. At first they rated the whole of the colliery properties in the Newcastle district, but that was upset, and I think they have come to a more equitable way of rating now, to which the companies have all agreed.

1842. Do you know whether the Metropolitan Board rate the properties on each side within 50 yards of the main pipe-line between Prospect and Potts' Hill? No; they are not rated—only people who take the water. Of course, we do not call that a reticulation pipe.

1843. It is only in respect of reticulation that you could charge by rates? That is so.

1844. So that the people out of Wollongong along the main pipe-line need not be afraid of being rated in respect of the main supply-pipe? No; it is only where we have a reticulation pipe from which we can serve. I may mention that there is one point which the Secretary of the Committee has asked for an explanation this morning. In the estimate put before the Committee by Mr. Hickson the storage reservoir is put down at £2,368 for Wollongong alone. That is estimated to be 30 feet high. In the estimate put before the Committee the other day the same work is estimated to cost £3,565. It is only right that that apparent discrepancy should be explained. The estimate originally put before the Committee was on the supposition that the dam was to be made for Wollongong only 30 feet high, with no prospect of enlarging it. Of course if you anticipate raising that dam, you could not do it. It is necessary to have a dam with a larger base to enable you to raise it. The estimate put before the Committee the other day was for a dam with the bottom section large enough for a 40-feet superstructure. If we made a dam for £2,368, and wanted to raise it, we could not do it, but would have to start a new dam altogether.

1845. *Mr. Trickett.*] But if we go right through with the work the total cost will still be £24,711? That is so. But I recommend that the estimate be increased by the sum of £500, making £25,211, to cover the cost of laying 6-inch pipes all the way to the service reservoir.

PARLIAMENTARY STANDING COMMITTEE ON PUBLIC WORKS.

Water Supply Works for the Borough of Wollongong.

APPENDIX.

A.

[*To Evidence of James Johnston.*]

COUNTRY TOWNS WATER SUPPLY.

SCHEDULE showing, *inter alia*—(*a*) Cost of Works, (*b*) Debts as Gazetted, and (*c*) Annual Repayment Instalments, as at 1st February, 1899.

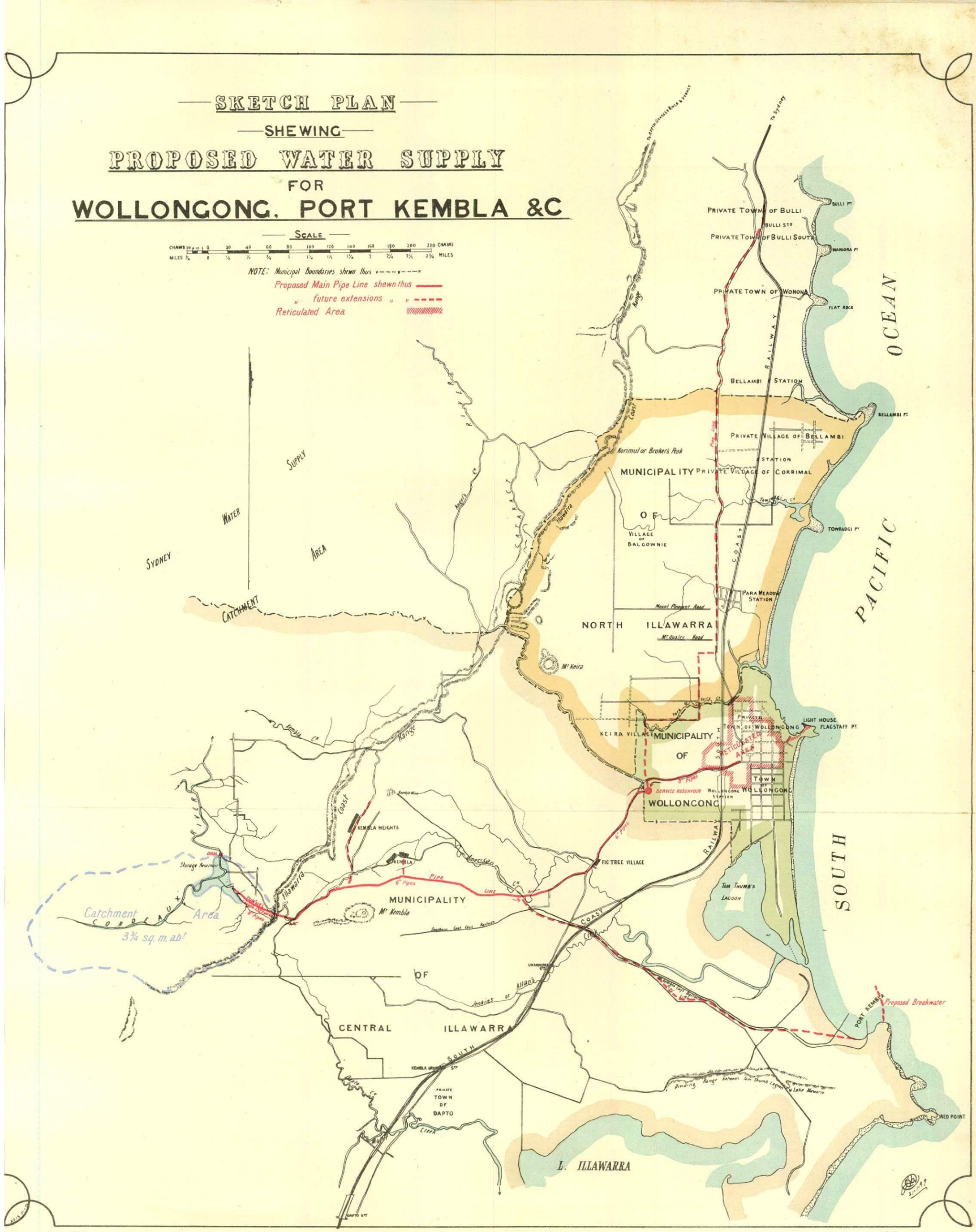
Municipality.	Departmental Estimate of Cost of Works.	Actual Cost of Works included in Estimate.	Cost of Additional Works asked for by Municipal Councils.	Interest at 3½ per cent. per annum accrued from date of commencement of works up to date of gazetting Debt.	Total Amount of Cost of Works and Interest.	Repayments made by Municipal Councils in reduction of cost prior to date of gazetting Debt.	Remission on amount of Debt granted by Governor-in-Council.	Debt as gazetted.		Period of Repayment of Debt.	Annual Repayment Instalment.
								Amount.	Date.		
	£	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.			£ s. d.
Albury (*a*)	20,000	25,636 19 10	19,548 13 6	12,058 0 2	57,243 13 6	654 2 6	15,589 11 0	41,000 0 0	31 Dec., 1893	One hundred years.	1,482 11 0
Wagga Wagga	20,000	27,315 14 5	9,956 6 6	11,045 12 3	48,317 13 2	5,109 12 3	4,708 0 11	38,500 0 0	31 „		1,392 3 0
Goulburn (*b*)	19,606	32,458 15 4	22,725 3 5	15,850 11 9	71,034 10 6	3,774 4 3	12,260 6 3	55,000 0 0	31 „		1,988 16 0
Bathurst (*b*)	31,925	47,868 16 0	6,006 17 4	15,382 7 9	69,258 1 1	238 2 2	14,019 18 11	55,000 0 0	31 „		1,988 16 0
Deniliquin (*c*)	15,310	17,222 0 0	945 17 8	5,829 16 7	23,997 14 3	2,259 7 1	3,270 0 0	18,468 7 2	31 „		667 16 0
Orange	24,000	26,447 5 4	4,495 1 4	4,769 18 9	35,712 5 5	759 4 10	2,265 0 7	32,683 0 0	31 „		1,182 0 0
Bourke	12,400	11,557 3 5	2,778 16 6	2,971 11 8	17,307 11 7	.....	3,871 11 7	13,436 0 0	31 „		485 17 0
Wentworth	8,000	8,523 17 1	1,141 13 0	1,873 13 4	11,539 3 5	59 19 0	7,479 4 5	4,000 0 0	31 „		144 13 0
Balranald	6,400	7,172 5 1	790 18 1	1,420 6 0	9,383 9 2	.....	3,383 9 2	6,000 0 0	31 „		216 19 0
Lismore	7,000	7,296 10 4	2,099 15 6	1,578 13 3	10,974 19 1	684 7 4	274 7 1	10,016 4 8	31 „		362 3 6
Manly (*d*)	22,900	26,261 0 0	(*e*) 11,559 9 7	.....	37,820 9 7	.....	.....	37,820 9 7	31 Dec., 1892		1,367 11 6
Cootamundra	7,500	8,291 7 3	3,353 18 4	894 6 8	12,539 12 3	.....	1,643 12 3	10,896 0 0	31 Dec., 1894		394 0 0
Jerilderie	5,000	4,905 0 0	1,499 18 6	175 6 3	6,580 4 9	.....	1,151 10 4	5,428 14 5	31 „		196 6 3
Lithgow	15,000	12,068 5 5	.....	681 0 6	12,749 5 11	.....	.....	12,749 5 11	30 June, 1896		461 0 0
Dubbo	14,000	13,519 8 0	466 9 0	1,252 6 4	15,238 3 4	.....	.....	15,238 3 4	30 „		551 0 0
Nowra	9,650	9,820 17 3	1,710 10 11	1,061 7 8	12,592 15 10	.....	.....	12,592 15 10	30 „		455 7 3
Nyngan	9,000	9,723 5 0	1,007 9 11	1,022 16 8	11,753 11 7	326 6 8	2,427 4 11	9,000 0 0	31 Dec., 1896		325 8 9
Hunter District (*b*)	170,000	390,532 9 5	.....	49,691 16 2	440,224 5 7	22,902 14 6	.....	417,321 11 1	30 June, 1892		15,090 7 3
Moama	4,000	3,643 2 2	2,881 14 4	1,127 12 5	7,652 8 11	51 17 11	.....	7,600 11 0	31 Dec., 1897		274 16 4
Moss Vale	14,000	14,088 0 5	2,261 1 10	2,451 10 2	18,800 12 5	1,449 4 9	4,351 7 8	13,000 0 0	30 June, 1898		470 0 0
Coonamble	4,700	4,794 12 11	1,551 3 0	600 6 8	6,946 2 7	203 14 6	.....	6,742 8 1	30 „		243 15 10
Armidale	35,000	36,465 19 1	350 0 0	3,748 9 9	40,564 8 10	146 15 8	.....	40,417 13 2	30 „		1,461 10 3
Totals	475,391	745,612 13 9	97,130 18 3	135,487 10 9	978,231 2 9	38,619 13 5	76,695 5 1	862,916 4 3			31,202 17 11

(*a*) Design and estimate of cost furnished by Mr. O. Langtree, C.E., of Melbourne.
(*b*) „ „ „ Mr. W. Clarke, C.E., of London
(*c*) „ „ „ Mr. G. Gordon, C.E., of Melbourne.
(*d*) „ „ „ Messrs. Harper, Harper, and Henderson, of Sydney, and revised by Department.
(*e*) Inclusive of cost of land, £10,000.

[One plan.]

Sydney : William Applegate Gullick, Government Printer.—1899.

SKETCH PLAN
SHEWING
PROPOSED WATER SUPPLY
FOR
WOLLONGONG, PORT KEMBLA &C



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1899.

LEGISLATIVE ASSEMBLY.

NEW SOUTH WALES.

PARLIAMENTARY STANDING COMMITTEE ON PUBLIC WORKS.

FOURTEENTH GENERAL REPORT

TOGETHER WITH

RETURNS GIVING A RECORD OF THE COMMITTEE'S INQUIRIES

AND

MINUTES OF PROCEEDINGS.

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

Printed under No. 2 *Report from Printing Committee,* 14 *March,* 1899.

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MEMBERS OF THE COMMITTEE.

LEGISLATIVE COUNCIL.

The Honorable WILLIAM JOSEPH TRICKETT, Vice-Chairman.
The Honorable PATRICK LINDESAY CRAWFORD SHEPHERD.
The Honorable ANDREW GARRAN, LL.D.

LEGISLATIVE ASSEMBLY.

JOHN PERRY, Esquire, Chairman.
WILLIAM THOMAS DICK, Esquire.
JOHN CHRISTIAN WATSON, Esquire.
ROBERT HENRY LEVIEN, Esquire.

PARLIAMENTARY STANDING COMMITTEE ON PUBLIC WORKS.

FOURTEENTH GENERAL REPORT.

To His Excellency the Right Honorable HENRY ROBERT, VISCOUNT HAMPDEN, Governor and Commander-in-Chief of the Colony of New South Wales and its Dependencies.

MAY IT PLEASE YOUR EXCELLENCY,—

The Parliamentary Standing Committee on Public Works, appointed during the first session of the present Parliament, under the Public Works Act of 1888, 51 Vic. No. 37, the Public Works Act Amendment Act of 1889, 52 Vic. No. 26, the Public Works (Committees' Remuneration) Act of 1889, 53 Vic. No. 11, and the Public Works Acts Further Amendment Act of 1897, 61 Vic. No. 6, have the honor to submit the following General Report, containing a statement of proceedings since the date of the last Report, 8th July, 1898:—

The Committee were appointed on 30th November, 1898, and on 22nd December there were referred to them by the Legislative Assembly, for consideration and report, the following proposed public works:—

	Estimated cost.
Water Supply Works for the Borough of Wollongong	£24,711
Railway from Dubbo to Coonamble	207,285
Railway from Cobar to Wilcannia	401,808
Railway from Grenfell to Wyalong	142,293
Locks and Weirs on the River Darling, between Bourke and Menindie	500,000
Public Offices, Phillip, Bridge, and Young Streets, Sydney	97,000
Public Offices, Phillip and Hunter Streets, Sydney ...	44,810
Penitentiary and Prison for Females, Randwick ...	118,000
Total	£1,535,907

The first meeting of the Committee was held on 6th December, when John Perry, Esq., was unanimously elected Chairman and the Honorable William Joseph Trickett, Vice-Chairman, and on the 18th January they commenced their first inquiry, viz., that with reference to the expediency of erecting public offices on land with frontages to Phillip and Hunter Streets, Sydney. That inquiry is practically completed, but it is thought desirable to defer reporting upon the subject until the proposed erection of public offices on land with frontages to Phillip, Bridge, and Young Streets, Sydney, has been investigated. The inquiry relating to those offices is now in progress. By some rearrangement, it may be possible to find, in the existing public buildings, rooms suitable for accommodating some of the Departments or branches for which it is proposed quarters shall be provided in one or other of the buildings under consideration, and in view of this the Committee, accompanied by the Government Architect, have inspected the offices in the buildings occupied by the Chief Secretary's Department, the Department of Railways, the Department of Public Works, the Department of Mines and Agriculture, and the Department of Lands, and in due course will visit other Departments or branches of the Public Service. To a certain extent, therefore, the two proposals before the Committee for new public offices are connected, and it appears advisable to complete both inquiries before deciding with regard to either.

Public offices, Phillip and Hunter Streets.

Public offices Phillip, Bridge, and Young Streets.

The

Water Supply Works, Wollongong.

The Committee have also had under investigation the proposed Water Supply Works for the Borough of Wollongong, and will shortly lay their report upon that proposal before the Legislative Assembly. In the course of this inquiry they visited Wollongong, for the purpose of taking local evidence and inspecting the sites of the works comprised in the scheme. At the Cordeaux River, which is the proposed source of supply, the site selected for the dam, and the area of land which will be covered by the water in the storage reservoir when the dam has been constructed, were carefully examined, and inquiries were made respecting the flow of water in the river channel. As far as possible the Committee inspected the catchment area, visited the site of the projected tunnel, followed generally the route of the pipe-line, and examined the site of the service reservoir.

Inquiries not yet opened.

The inquiries respecting the other works referred to the Committee for consideration and report have not yet been opened, but they will be commenced and carried to completion without delay.

Returns.

Appended to this Report are the returns usually published with the Committee's General Reports, which contain a record of the inquiries by the several Committees appointed under the Act, and also a copy of the present Committee's Minutes of Proceedings.

JOHN PERRY,
Chairman.

Office of the Parliamentary Standing Committee on Public Works,
Sydney, 17th February, 1899.

PARLIAMENTARY STANDING COMMITTEE ON PUBLIC WORKS.

RECORD OF INQUIRIES.

LIST of Proposed Public Works inquired into by the several Committees, with the results of their inquiries, from 27 August, 1888, the date of the first sitting of the first Committee appointed under the Act, to 17 February, 1899.

Date of nquiry.	Proposed Work.	Expenditure proposed by the Government	Expenditure recommended by the Committee.	Amount in excess of that proposed.	Amount in reduction of that proposed.	Remarks.
1888.		£	£	£	£	
4 Sept. to 22 Oct.	Improvements to the Circular Quay.	120,000	125,000	5,000		The Committee recommended an alteration in the plan of these improvements, by which the total estimated cost would be increased to £125,000.
26 Sept. to 22 Oct.	Storage reservoir at Potts' Hill, and second line of pipes to Crown-street.	120,000 165,000	285,000	.....	.....	Recommended as proposed.
13 Sept. to 22 Oct.	New Central Police Court	48,000	48,000	.....	.....	Recommended as proposed.
4 Oct. to 22 Oct.	Drainage works, Manly...	34,114	22,000	.....	12,114	The Committee recommended the adoption of a modified plan of these drainage works, by which the total estimated cost would not exceed £22,000.
10 Oct. to 22 Oct.	Drainage works, North Shore.	77,062	107,000	29,938	.....	The Committee recommended the adoption of the complete scheme proposed in relation to this work, and the estimated cost of which, as shown by the evidence, is £107,000.
31 Aug. to 22 Oct.	Harbour improvements at Newcastle.	112,000	112,000	.....	.....	Recommended as proposed.
19 Sept. to 22 Oct.	Wharfage accommodation, Woolloomooloo Bay.	42,000	.....	.....	42,000	The Committee were of opinion that the proposed expenditure was not justified either by the requirements in connection with the wharfage accommodation of the port, or by the nature of the proposal if regarded as a scheme for the improvement of a very valuable Government property.
16 Nov. to 1889. 11 Jan.	Bridge at the Spit, Middle Harbour.	62,000	.....	.....	62,000	The Committee decided that the proposed expenditure was not justified by the evidence, and that a steam-punt would meet the requirements of the district in the vicinity of the proposed work for some years to come.
1888. 7 Dec. to 1889. 27 Aug.	Drainage works for the Western Suburbs.	830,304	830,304	.....	.....	Recommended as proposed.
26 June to 30 Sept.	Improvements to the entrance of the Richmond River.	326,000	326,000	.....	.....	The Committee recommended that the proposed works be carried out in a certain order, so that the results from the works first constructed might be ascertained before others were proceeded with.
9 Oct. to 11 Dec.	Railway to connect North Shore Railway with Port Jackson, at Milson's Point.*	262,000	.....	.....	262,000	The Committee considered, for various reasons stated in their report on the subject, that the work as proposed should not be carried out.
29 Aug. to 12 Dec.	Railway from Culcairn to Corowa.	197,300 (or £4,184 per mile.)	164,500 (or £3,500 per mile.)	.....	32,800	The Committee were of opinion that this line should be constructed at a cost not exceeding £3,500 per mile.
22 Aug. to 19 Dec.	Railway from Goulburn to Crookwell.	198,300 (or £5,984 per mile.)	148,500 (or £4,500 per mile.)	.....	49,800	The Committee considered that the cost of this railway should not exceed £4,500 per mile, and that a saving should also be effected by utilizing a certain portion of the present main line instead of taking the proposed railway through a part of the city of Goulburn.
1890. 22 Jan. to 6 Feb.	Dredge and plant for Sydney Harbour.	30,000	.....	.....	30,000	The evidence showed that this class of dredge was not required.
1889. 25 Sept. to 1890. 18 Feb.	Railway from Nyngan to Cobar.	207,360	207,360	.....	.....	The Committee recommended the construction of this railway as part of a line which should be extended to Wilcannia and Broken Hill.
14 Jan. to 11 Feb.	Offices for the Board of Water Supply and Sewerage.	50,000	50,000	.....	.....	Recommended as proposed.
14 Jan. to 6 Feb.	Reticulation of the Western Suburbs Drainage Scheme.	713,592	713,592	.....	.....	Recommended as proposed.
14 Jan. to 11 Feb.	Extension of Sydney Water Supply to Southern Suburbs — Hurstville and Rockdale.	66,000	.....	.....	66,000	This expenditure was rendered unnecessary by reason of a temporary water-supply scheme being sufficient to meet requirements for some years.
19 Nov. to 2 April.	Railway from Marrickville to the Burwood Road.	90,250	90,250	.....	.....	Recommended as proposed.
	Carried forward.....£	3,751,282	3,229,506	34,938	556,714	

LIST of Proposed Public Works inquired into by the Committee, &c.—*continued.*

Date of inquiry.	Proposed Work.	Expenditure proposed by the Government.	Expenditure recommended by the Committee.	Amount in excess of that proposed.	Amount in reduction of that proposed.	Remarks.
	Brought forward ...£	£ 3,751,282	£ 3,229,506	£ 34,938	£ 556,714	
1890. 23 Oct. to 24 April.	Improvements to the entrance of the Clarence River.	580,900	211,900	.....	369,000	In this case the Committee recommended the construction of only a portion of the works proposed, as they were of opinion that when this portion had been constructed it might be found that the remainder would not be required.
31 Oct. to 15 April.	Breakwater at Byron Bay.	241,723	241,723	.....	.. ..	The original estimate for this work was £162,000; the increase was due to a difficulty in obtaining stone.
4 Dec. to 24 April.	Railway from Kiama to Nowra.	381,390	381,390	.....	.....	In this case there was an original estimate of £441,663. The reduction was due to an amended estimate made by the Acting Engineer-in-Chief for Railways since the railway was referred to the Committee.
12 Nov. to 24 April.	Railway from Grafton to the Tweed.*	1,728,100	800,000	.....	928,100	The Committee recommended that this railway should be constructed from Lismore to Murwillumbah, instead of from Grafton to Murwillumbah, the Committee's recommendation involving a length of about 60½ miles as compared with 140 miles 76 chains, the length of the line as referred to them by the Legislative Assembly.
15 Jan. to 24 April.	Railway from Cootamundra to Temora.	138,000 (or £3,656 per mile.)	125,400 (or £3,300 per mile.)	.....	12,600	The Committee considered that the cost of constructing this railway should not exceed £3,300 per mile.
23 Jan. to 24 April	Railway from Moss Vale to Robertson.	84,900	.. ..	.....	84,900	The Committee negatived this proposal because they considered another route, described in their report, was preferable.
23 Jan. to 25 Mar.	Railway from Mudgee to Gulgong.	109,330	.....	.....	109,330	The Committee decided against this work, on the ground that any extension of the Mudgee Railway should form part of a more comprehensive proposal, the consideration of which should be deferred until after the suggestion for the connection of the Northern and Western systems, by a line between Dubbo and Werris Creek, has been dealt with.
12 Feb. to 24 April.	Bridge over Tarban Creek, Parramatta River.	26,000	.....	....	26,000	The Committee considered this bridge to be unnecessary.
20 Feb. to 15 April.	Bridge over the Hunter River, at Jerry's Plains.	20,000	....	.. ..	20,000	The Committee considered that a less expensive bridge would be sufficient to meet requirements.
25 Feb. to 24 April	Bridge to connect Bullock Island with the mainland at Newcastle.	33,000	.. ..	.....	33,000	The Committee considered that this proposed expenditure was premature, pending certain reclamation works.
12 Feb. to 21 May.	Iron Bridge at Cowra ...	26,537	26,537	.....	.....	The original proposal represented an expenditure of £69,971, which amount was afterwards reduced to £26,537, as the result of a revision of the system of bridge-building in the Colony.
22 Jan. to 21 May.	Railway from Molong to Parkes and Forbes.	433,000	433,000	..... .	..... .	Recommended as proposed.
28 May to 8 July.	Hospital for the Insane upon the Kenmore Estate, near Goulburn.*	120,000	.....	.....	120,000	This proposed work, after being partly considered, was withdrawn from the Committee by resolution of the Assembly.
28 May to 21 Aug.	Railway to connect the North Shore Railway with the deep waters of Port Jackson, at Milson's Point.* (Second Reference.)	231,156	231,156	.....	.....	This proposal was before the Committee on a previous occasion (estimated cost, £262,000), when it was negatived; but having been referred to the Committee for further consideration, and circumstances appearing in the second inquiry which justified the construction of the railway, the Committee approved of the proposed work.
10 Dec. to 13 May, 1891.	Hospital Buildings, Macquarie-street.	140,000	56,000	.....	84,000	In this case, two sets of plans for the buildings were submitted to the Committee, one representing a design that was estimated to cost £140,000, and the other a design to cost £56,000, and the Committee approved of the latter.
1891. 11 Feb. to 25 Mar.	College for the Training of Teachers of Public Schools.	37,500	37,500	.....	.. ..	Recommended as proposed.
1 Feb. to 21 April.	Extension of the Kiama to Nowra Railway into the town of Nowra.	75,000	75,000	.....	.....	Recommended as proposed.
24 Feb. to 14 May.	Railway from Cobar to Cockburn.	1,168,000	1,018,000	.....	150,000	The Committee recommended the construction of this railway as far as Broken Hill only, which would reduce the proposed expenditure by £150,000.
22 Jan., 1890, to 19 May, 1891.	Cable Tramway from King-st., *via* William-street, to Ocean-street.	80,000	80,000	.....	....	Recommended as proposed.
25 Nov., 1890, to 3 June, 1891.	Cable Tramway through George, Pitt, and Harris Streets, Sydney.	120,000	.....	.....	120,000	The Committee considered that it was not expedient at present, for reasons stated in their report, that this tramway should be constructed.
	Carried forward .....£	9,525,818	6,947,112	34,938	2,613,644	

LIST of Proposed Public Works inquired into by the Committee, &c.—*continued.*

Date of Inquiry.	Proposed Work.	Expenditure proposed by the Government.	Expenditure recommended by the Committee.	Amount in excess of that proposed.	Amount in reduction of that proposed.	Remarks.
		£	£	£	£	
1892.	Brought forward .. £	9,525,818	6,947,112	34,938	2,613,644	
5 May to 2 June.	Improvements at Darling Island.	142,000	.....	.....	142,000	The Committee considered that the proposed works might be postponed for the present without inconvenience, and that a more suitable design might be submitted.
7 June to 12 July.	Stormwater sewers discharging into Johnstone's Bay.	51,352	51,352	.....	.....	Recommended as proposed.
15 June to 4 Aug.	Reservoir at Centennial Park for Sydney Water Supply.	83,000	83,000	.....	.....	Recommended with an alteration of site.
14 July to 24 Aug.	Water Supply for Wollongong and the surrounding districts.	66,000	30,000	.....	36,000	The Committee found that the Water Supply proposed for the surrounding districts was not needed, and that the estimate of cost for supplying Wollongong might be reduced to £30,000.
28 July to 24 Aug.	Second pipe-line from Walka to Buttai, for Hunter River District Water Supply.	50,000	50,000	.....	.....	Recommended as proposed.
26 July to 9 Aug.	Sewerage works at Cottage Creek.	25,000	13,000	.....	12,000	The amount of £25,000 provided for a covered sewer; but the Committee found that a cover was not necessary at present, and that by constructing an open sewer the cost could be reduced by £12,000.
21 April, 1891, to 27 May, 1892.	Railway from Glen Innes to Inverell.*	427,400	.....	.....	427,400	The evidence in this case showed that the estimated cost of constructing the railway was excessive, and indicated the probability of a serious annual loss in the working of the line. In addition to this, the Committee were not as fully informed as desirable with regard to connecting Inverell not only with the Great Northern Railway but with the coast, a matter of considerable importance in the inquiry.
31 May to 18 Aug.	Railway from Jerilderie to Deniliquin.	148,000	....	.. ..	148,000	The Committee were of opinion that the consideration of this proposed work should be postponed until it should be determined by Parliament as a matter of public policy to purchase the Deniliquin to Moama Railway.
12 July to 24 Aug.	Lunatic Asylum at Kenmore, near Goulburn.* (Second Reference.)	150,000	150,000	.....	.....	Recommended as proposed.
14 June to 28 Sept.	Railway from Grafton to Lismore.*	662,000 (or £8,000 per mile.)	108,000 (or £6,000 per mile.)	.....	554,000	The Committee decided that, for the present, only the Lismore to Casino section of the proposed railway should be constructed, that the cost should not exceed £6,000 per mile, and that the betterment principle be applied to the land to be served by the proposed line.
10 July to 26 Oct.	Railway from Eden to Bega.	564,000 (or £15,350 per mile.)	.....	.....	564,000	The Committee considered that the present resources of the district did not warrant the construction of such an expensive line, but they were of opinion that a cheaply constructed railway might be favorably considered.
22 June to 4 Oct.	Sewerage Works for Parramatta.*	75,926	.....	.....	75,926	The Committee were of opinion that the sewage farm included in the scheme was too small for the purpose, and that the sewage should be dealt with by precipitation and filtration or other effective modern process at a proposed pumping station at Clay Cliff Creek.
12 Oct. to 21 Dec.	Water Supply for Tamworth.	22,500	22,500	.....	.....	Recommended as proposed, with a provision as to the quantity of water obtainable, and the resumption of land surrounding the well in the drift forming the source of supply.
14 Sept. to 16 Nov.	Water Supply for Lithgow	15,000	15,000	.....	....	Recommended as proposed.
15 Sept. to 16 Nov.	Water Supply for Armidale.	43,500	43,500	.....	.....	Recommended as proposed.
17 Nov. to 10 Jan. 1893.	Railway from Glen Innes to Inverell.* (Second Reference.)	421,400 (or £7,975 per mile).	369,862 (or £7,000 per mile).	.....	51,538	The Committee considered it expedient this railway should be constructed, provided that the cost did not exceed £7,000 per mile, that special local rates were charged until the railway paid working expenses and interest on cost of construction, and that the betterment principle was applied to the land served by the railway.
14 Feb. to 8 Mar.	Waterworks for the town of Junee.	45,000	45,000	.....	.....	The Committee recommended that these works should be carried out, conditionally upon the Railway Commissioners undertaking to enter into an agreement for a period of not less than ten years to pay a minimum of £1,900 per annum for water supplied for railway purposes at Junee and Bethungra.
14 Nov., 1893, to 11 Jan., 1894.	Railway from Narrabri to Moree.	153,000	153,000	.....	.....	Recommended as proposed, with the condition that the work be not undertaken until a Betterment Act is passed.
	Carried forward.....£	12,670,896	8,081,326	34,938	4,624,508	

LIST of Proposed Public Works inquired into by the Committee, &c.—*continued.*

Date of inquiry.	Proposed Work.	Expenditure proposed by the Government.	Expenditure recommended by the Committee.	Amount in excess of that proposed.	Amount in reduction of that proposed.	Remarks.
		£	£	£	£	
1894.	Brought forward ...£	12,670,896	8,081,326	34,938	4,624,508	
7 Feb. to 22 Mar.	Sewerage Works for Parramatta.* (Second reference.)	75,926	.....	.....	75,926	The Committee decided that it was not expedient the proposed works should be carried out, for the reasons that the scheme had not been adequately considered, and that, according to the evidence, Parramatta was neither willing nor able to pay the rate necessary to provide the interest on the expenditure, and did not want the proposed works.
6 Mar. to 16 April.	Deviation to avoid the Lithgow Zigzag.	181,072	.....	... .	181,072	The Committee were of opinion that as the professional evidence, as well as much of the evidence generally, indicated that the proposed deviation was not a matter of urgency it was not expedient the work should be carried out.
9 April, to 22 May.	Railway from Temora to Wyalong.*	104,430	.....	.....	104,430	The Committee were of opinion that the decision upon the proposal should be deferred for six months.
11 April, to 20 June.	Removal of Pyrmont and Glebe Island Bridges.*	296,500	.....	.....	296,500	The Committee recommended that when renewal becomes necessary the existing bridges at Darling Harbour and Glebe Island should be replaced by timber structures of a kind specified in their report, which report, however, in consequence of the sudden dissolution of Parliament was not presented to the Legislative Assembly.
3 Oct. to 14 Nov.	Removal of Pyrmont and Glebe Island Bridges.* (Second reference.)	296,500	82,500	.. .. ..	214,000	The Committee recommended that the Pyrmont Bridge be replaced by a timber bridge with steel span, to cost £82,500, and decided that the Glebe Island Bridge did not at present require renewal.
19 Dec. to 27 Feb., 1895.	Railway from Jerilderie to Berrigan.	43,543	43,543	.....	.....	The construction of this railway was recommended, with the condition that the estimated cost, £2,000 per mile, should include goods and grain sheds, engineering charges, and all contingencies.
7 Mar. to 10 May.	Railway from Parkes to Condobolin.	127,000	127,000	.. ..	.....	In this inquiry the Committee, while considering it expedient the railway should be constructed, resolved that the cost should not exceed £2,100 per mile, including the cost of land resumptions.
17 May to 28 June.	Railway from Temora to Wyalong.* (Second reference.)	92,000	.....	.. ..	92,000	The Committee, in deciding against this proposed work, were of opinion that at the present time there is no justification for its construction, and the prospects of Wyalong's future are not such as to lead them to conclude that the line should be built in anticipation of what may be the condition of the gold-field and the district some years hence.
20 Mar. to 7 May.	Harbour Improvements at Newcastle.	141,000	141,000	....	.....	In this inquiry the Committee recommended a modification of the works proposed by the Department and an additional work, the cost of the works as recommended by the Committee being about the same as that of the works proposed by the Department.
26 June, to 4 July.	Tramway from Woolwich to the Field of Mars Common.	19,300	.....	....	19,300	This proposed work was referred to the Fifth Committee who, at the termination of their existence, had inquired partly into it. A motion in the Legislative Assembly to refer the proposal to the Sixth Committee was, however, negatived on 11 December, 1895.
12 Dec. to 14 Dec.	Deviation at Locksley, Great Western Railway.	47,500	47,500	....	.....	The Committee considered this work to be an urgent and necessary one, and recommended that it be carried out without delay.
17 Dec. to 24 Jan. 1896.	Water Supply for the Town of Tamworth.	32,824	32,824	....	.....	The Committee recommended that this work be carried out, with the proviso that the capacity of the storage reservoir be increased from 35,000,000 to 50,000,000 gallons.
18 Mar. to 8 May.	Electric Tramway from Circular Quay, Sydney, to the Redfern Railway Station; and also along Harris-street to the intersection of John-street.	130,500	130,500	.. ..	.....	Recommended as proposed.
	Carried forward.....£	14,258,991	8,686,193	34,938	5,607,736	

LIST of Proposed Public Works inquired into by the Committee, &c.—*continued.*

Date of inquiry.	Proposed Work.	Expenditure proposed by the Government.	Expenditure recommended by the Committee.	Amount in excess of that proposed.	Amount in reduction of that proposed.	Remarks.
		£	£	£	£	
1896.	Brought forward.....	14,258,991	8,686,193	34,938	5,607,736	
1 Jan. to 10 Mar.	Erection of Buildings at Rookwood for Infirm and Destitute Persons.	118,285	62,900	.....	55,385	The Committee decided that it was not expedient the proposed works should be carried out, deeming it inadvisable, for reasons stated in their Report, to concentrate the infirm and destitute at Rookwood. The Government estimate for the proposed buildings was £108,350 without, and £118,285 with, provision for sewage. The Committee recommended that the inmates of the Parramatta Asylums be removed, the healthy patients being housed at Rookwood and Liverpool, provision for the chronic and acute sick to be made on Crown lands near Campbelltown.
9 Jan. to 17 July.	Additions to the Treasury Buildings.	21,500	21,500	.....	.....	Recommended as proposed.
20 Feb. to 1 Oct.	Railway from Tamworth to Manilla.	72,150	71,875	.....	275	The Committee's recommendation provided for an amended route, the cost of the railway not to exceed £2,500 per mile.
21 April, to 20 May.	Railway from Nevertire to Warren.	32,730	32,730	.....	.....	Recommended as proposed.
12 May, to 31 July.	Construction of Locks and Weirs on the River Darling.	121,100	.....	.....	121,100	The Committee negatived this proposed work.
5 June, to 19 Aug.	Railway from Berrigan to Finley.	27,250	27,250	.....	.....	The Committee recommended that this proposed railway should be constructed, the cost not to exceed £2,000 per mile.
16 June to 24 July.	Improvement of Cook's River.	36,400	15,000	.....	21,400	As recommended by the Committee the construction of the proposed works would involve an expenditure of £15,000—a reduction on the Departmental estimate of £21,400—which, in the opinion of the Committee, would meet the requirements of the case.
1 Sept. 1896. to April, 1897.	Railway from Moree to Inverell.	279,500	279,500	.....	.....	The Committee resolved that it was expedient this railway should be constructed as proposed.
28 Oct. 1896, to 10 Feb., 1897.	Construction of a Deep-water Harbour at Port Kembla.	440,000	200,000	.....	240,000	The Departmental estimate of cost provided for the construction of two breakwaters, known respectively as the northern and eastern, and the necessary equipment of the port for coal-shipping and general commercial purposes. The Committee were of opinion, however, that the proposed harbour would be rendered sufficiently secure to meet present requirements if the eastern breakwater only were carried out, and the estimated cost reduced by £240,000.
5 Aug. to 10 Dec., 1896.	Railway from Condobolin to Broken Hill.	955,063	.....	.....	955,063	The Committee, while having regard to the various aspects of this proposed work, and considering also that the annual loss on the working of the railway would amount to £60,000, were of opinion that it should not, at present, be proceeded with.
11 Feb., 1897, to 13 April.	*Sewerage Works for Parramatta. (Third Reference.)	60,000	60,000	.....	.....	This work was passed by the Committee with the provision that the cost should not exceed the Departmental estimate, and that the carrying out of the work should be subject to a guarantee (by the Municipal Council of Parramatta) of the annual payment required to cover maintenance and interest, and redemption of the principal outlay.
1897. 4 May to 8 June.	Duplicate Main from Prospect to Potts' Hill.	109,317	109,317	.....	.....	The Committee recommended the amended scheme submitted by the Engineer-in-Chief for Public Works, by which the sides of the canal between Prospect and the Pipe Head Basin would be raised, the canal strengthened, and the 6-foot pipe-line between the Basin and Potts' Hill Reservoir duplicated.
14 April to 6 Dec.	New Houses of Parliament.	533,484	15,000	.....	518,484	The Committee recommended the adoption of the scheme submitted by the Government Architect, providing for alterations to the present Parliamentary Buildings, at a cost not exceeding £15,000.
16 June to 15 Sept.	New Bridge at Glebe Island.	89,100	89,100	.....	.....	The Committee recommended that there be substituted for the existing structure a stone causeway, with a central, steel swing-span.
13 July to 25 Aug.	Railway from Redfern to St. James' Road.	650,000	650,000	.....	.....	Recommended as proposed.
	Carried forward.....£	17,804,870	10,320,365	34,938	7,519,443	

Date of Inquiry.	Proposed Work.	Expenditure proposed by the Government.	Expenditure recommended by the Committee.	Amount in excess of that proposed.	Amount in reduction of that proposed.	Remarks.
	Brought forward.....	£ 17,804,870	£ 10,320,365	£ 34,938	£ 7,519,443	
1897. 31 Aug. to 7 Dec.	Railway from Condobolin Euabalong.	108,225	.....	.....	108,225	The Committee negatived this proposed work, but recommended, in connection with any proposal for a railway towards Hillston, that a survey be made for a line from Koorawatha, with a view to its consideration in conjunction with existing surveys.
16 Sept. to 25 Nov.	Railway from The Rock to Green's Gunyah.	67,000	67,000	.....	.....	Recommended as proposed.
5 Sept. to 18 Nov. 1897.	Railway from Coolamon to Ariah.	91,307	.....	.....	91,307	The Committee negatived this proposal.
20 Dec. to 1 April, 1898.	Railway from Koorawatha to Grenfell.	89,250	89,250	.....	.....	Recommended as proposed.
1898. 5 Jan. to 13 April.	Railway from the Terminus of the Rose Hill Railway to Dural.	57,000	.....	.....	57,000	The Committee negatived this proposal.
1897. 14 Dec. to 29 April, 1898.	Railway from Warren to Coonamble.	150,000	.....	.....	150,000	The Committee negatived this proposal, but recommended that a survey be made of a route from Dubbo to Coonamble.
1898. 15 Mar. to 26 April.	Harbour Works at Tweed River.	43,600	43,600	.....	.....	Recommended as proposed.
1897. 19 Oct. to 23 June, 1898.	Railway from Narrabri to Pilliga.	128,650	.....	.....	128,650	The Committee negatived this proposal, but suggested a route from Narrabri to Eurie Eurie, which could, if necessary, be extended on to Walgett.
1897. 1 Oct. to 22 June, 1898.	Railway from Byrock to Brewarrina.	146,350	146,350	.....	.....	The Committee recommended that the railway should be carried out, provided that it be made legally binding upon the Crown lessees in the district served to pay, until the railway shall become self-supporting, one farthing per acre rent additional to their present or ordinary assessment, such additional rent to be credited to the Railway Commissioners.
9 Mar. to 24 June.	Railway from Woolabra to Collarendabri.	207,798	.....	.....	207,798	The Committee negatived this proposal, but suggested a route by which a railway would go from Narrabri towards Eurie Eurie, and, at a point about 315 miles from Newcastle, proceed in a north-westerly direction to Collarendabri.
22 Feb. to 6 July.	Railway from Maitland to Taree.	982,283	.....	.....	982,283	The Committee negatived this proposal.
30 Mar. to 6 July.	Harbour Works at Bellinger River.	36,000	36,000	.....	.....	Recommended as proposed.
8 Feb. to 5 July.	Harbour Works at Macleay River.	95,000	95,000	.....	.....	Recommended as proposed.
27 April to 29 June.	Harbour Works at Hastings River.	46,500	13,915	.....	32,585	The Committee recommended that for the present the southern training-wall only, estimated to cost £13,915, should be carried out.
22 Mar. to 1 July.	Harbour Works at Manning River.	100,000	100,000	.....	.....	The Committee recommended the construction of the proposed work, with some slight modifications.
14 April to 7 July.	Harbour Works at Nambucca River.	72,500	49,393	.....	23,107	Recommended with modifications.
	£	20,226,333	10,960,873	34,938	9,300,398	

* Works marked with an asterisk have been referred to the Committee more than once, and allowing for these repeated references, and for the expenditure recommended in two instances in excess of that proposed, the actual saving effected amounts to £6,975,178.

WORKS RESPECTING WHICH THE INQUIRIES ARE PROCEEDING.

Public Offices, Phillip and Hunter Streets, Sydney	£44,810
Water Supply Works for the Borough of Wollongong	24,711
Public Offices, Phillip, Bridge, and Young Streets, Sydney	97,000

WORKS RESPECTING WHICH THE INQUIRIES HAVE NOT YET BEEN COMMENCED.

Railway from Dubbo to Coonamble	£207,285
Railway from Cobar to Wilcannia	401,808
Railway from Grenfell to Wyalong	142,293
Locks and Weirs on the River Darling, between Bourke and Menindie	500,000
Penitentiary and Prison for Females, Randwick	118,000

PARLIAMENTARY STANDING COMMITTEE ON PUBLIC WORKS.

RETURN SHOWING THE COURSE OF THE COMMITTEES' INQUIRIES FROM THE REFERENCE OF THE WORKS TO THE ULTIMATE ACTION RESPECTING THEM.

FIRST COMMITTEE—FROM 12 JUNE, 1888, TO 22 OCTOBER, 1888.

MEMBERS OF THE COMMITTEE.

LEGISLATIVE COUNCIL.

The Honorable JOHN LACKEY, Chairman.
The Honorable GEORGE CAMPBELL.
The Honorable WILLIAM HENRY SUTTOR.
The Honorable JAMES WATSON.
The Honorable FREDERICK THOMAS HUMPHERY.

LEGISLATIVE ASSEMBLY.

JOSEPH PALMER ABBOTT, Esquire, Vice-Chairman.
JAMES NIXON BRUNKER, Esquire.*
HENRY COPELAND, Esquire.
ALEXANDER KETHEL, Esquire.
JOHN RENDELL STREET, Esquire.
THOMAS MICHAEL SLATTERY, Esquire.
JACOB GARRARD, Esquire.
SYDNEY SMITH, Esquire.

* James Nixon Brunker, Esquire, by reason of his accepting the office of Minister for Lands, did not take his seat as a member of the Committee.

roposed Work.	Date of reference to Committee.	Date upon which inquiry was opened.	Date upon which Sectional Committee was appointed.	Date of Sectional Committee's Report.	Date of Committee's Report.	Statement of Committee's recommendation.	How dealt with by Parliament.	Date of Parliamentary action.
Wharfage Accommodation, Woolloomooloo Bay.	1888. 23 July..... ...	1888. 19 September	.....	.....	1888. Inquiry completed by Second Committee.	See Second Committee.	See Second Committee.	See Second Committee.
Improvements to the Circular Quay.	23 „	4 „ ...	.....	.....	22 October ...	The Committee recommended an alteration in the plan of these improvements, by which the estimated total cost would be increased from £120,000 to £125,000.	Passed.	Legislative Assembly—11 April, 1889—Bill read third time. Legislative Council—24 April, 1889—Bill read third time; 30 April, 1889—Assent reported.
Storage Reservoir at Potts' Hill	23 „	26 „ ...	.....	.....	22 „ ...	Recommended as proposed.	Passed.	Legislative Assembly—17 May, 1889—Bill read third time. Legislative Council—30 May, 1889—Bill read third time; 5 June, 1889—Assent reported.

FIRST COMMITTEE—*continued.*

Proposed Work	Date of reference to Committee.	Date upon which inquiry was opened.	Date upon which Sectional Committee was appointed.	Date of Sectional Committee's Report.	Date of Committee's Report.	Statement of Committee's recommendation.	How dealt with by Parliament.	Date of Parliamentary action.
Second Pipe between Potts' Hill and Crown-street.	1888. 23 July.....	1888. 26 September	.....	.....	1888. 22 October ...	Recommended as proposed.	Passed [Sydney Water Supply (Partial Reduplication) Bill].	Legislative Assembly—24 July, 1889—Bill read third time. Legislative Council—17 Sept., 1889—Bill read third time; 30 Sept., 1889—Assent reported.
Dredge and Plant for Sydney Harbour.	23 ,, ...	Dealt with by Third Committee.	.....	.....	....	See Third Committee.	See Third Committee.	See Third Committee.
Improvements to the Entrance of the Richmond River.	23 ,, ...	,, ,,	.....	.....	.....	,, ,,	,, ,,	,, ,,
Bridge at the Spit, Middle Harbour.	23 ,, ...	Dealt with by Second Committee.	.....	.....	.....	See Second Committee.	See Second Committee.	See Second Committee.
New Central Police Court	23 ,, ...	13 September	.....	.....	22 October ...	Recommended as proposed.	Passed.	Legislative Assembly—15 May, 1889—Bill read third time. Legislative Council—23 May, 1889—Bill read third time; 30 May, 1889—Assent reported.
Improvements to the Entrance of the Clarence River.	23 ,, ...	Dealt with by Third Committee.	.....	.....	.....	See Third Committee.	See Third Committee.	See Third Committee.
Drainage Works, Manly	23 ,, ...	4 October ...	.....	.....	22 October ...	The Committee recommended the adoption of a modified plan of these drainage works, by which the estimated total cost would not exceed £22,000, or £12,114 less than the original estimate.	Passed.	Legislative Assembly—23 May, 1889—Bill read third time; 3 Sept., 1889—Bill finally passed. Legislative Council—20 June, 1889—Bill read third time; 12 Sept., 1889—Assent reported.
Drainage Works, North Shore	23 ,, ...	10 ,, ...	.....	.....	22 ,, ..	The Committee recommended the adoption of the complete scheme proposed in relation to this work, the estimated cost of which, as shown by the evidence, was £107,000.	Passed.	Legislative Assembly—17 April, 1889—Bill read third time; 15 May, 1889—Bill finally passed. Legislative Council—9 May, 1889—Bill read third time; 22 May, 1889—Assent reported.
Drainage Works for the Western Suburbs.	23 ,, ...	Dealt with by Second and Third Committees.	.....	.....	.....	See Third Committee.	See Third Committee.	See Third Committee.
Harbour Improvements at Newcastle.	23 ,, ...	31 August ...	.....	.....	22 October ...	Recommended as proposed.	Passed.	Legislative Assembly—11 April, 1889—Bill read third time. Legislative Council—24 April, 1889—Bill read third time; 30 April, 1889—Assent reported.

SECOND COMMITTEE—FROM 24 OCTOBER, 1888, TO 19 JANUARY, 1889.

MEMBERS OF THE COMMITTEE.

Legislative Council.

The Honorable John Lackey, Chairman.
The Honorable George Campbell.
The Honorable William Henry Suttor.
The Honorable James Watson.
The Honorable Frederick Thomas Humphery.

Legislative Assembly.

Joseph Palmer Abbott, Esquire, Vice-Chairman.
Henry Copeland, Esquire.
Jacob Garrard, Esquire.
Alexander Kethel, Esquire.
Sydney Smith, Esquire.
Thomas Michael Slattery, Esquire.
John Rendell Street, Esquire.
Daniel O'Connor, Esquire.

Proposed Work.	Date of reference to Committee.	Date upon which inquiry was opened.	Date upon which Sectional Committee was appointed.	Date of Sectional Committee's Report.	Date of Committee's Report.	Statement of Committee's recommendation.	How dealt with by Parliament.	Date of Parliamentary action.
	1888.	1888.			1889.			
Wharfage Accommodation, Woolloomooloo Bay.	23 July	19 September	.....	.....	10 January ...	The Committee were of opinion that the proposed expenditure was not justified either by the requirements in connection with the wharfage accommodation of the port, or by the nature of the proposal if regarded as a scheme for the improvement of a very valuable Government property.	Not dealt with.	....
Dredge and Plant for Sydney Harbour.	23 ,, ...	Dealt with by Third Committee.	.....	.....	.....	See Third Committee.	See Third Committee.	See Third Committee.
Improvements to the Entrance of the Richmond River.	23 ,, ...	,, ,,	.....	.....	.....	,, ,,	,, ,,	,, ,,
Bridge at the Spit, Middle Harbour.	23 ,, ...	16 November	.....	....	11 January ...	The Committee decided that the proposed expenditure was not justified by the evidence, and that a steam-punt would meet the requirements of the district in the vicinity of the proposed work for some years to come.	Not dealt with.	....
Improvements to the Entrance of the Clarence River.	23 ,, ...	Dealt with by Third Committee.	.....	.....	.....	See Third Committee.	See Third Committee.	See Third Committee.
Drainage Works for the Western Suburbs.	23 ,, ...	7 December	.. ..	.....	Inquiry completed by Third Committee.	,, ,,	,, ,,	,, ,,

THIRD COMMITTEE—FROM 7 JUNE, 1889, TO 6 JUNE, 1891.

MEMBERS OF THE COMMITTEE.

Legislative Council.

* The Honorable John Lackey, Chairman.
The Honorable Andrew Garran.
* The Honorable James Watson.
The Honorable Frederick Thomas Humphery.
The Honorable William Joseph Trickett.
* The Honorable George Henry Cox.

Legislative Assembly.

* Joseph Palmer Abbott, Esquire, Chairman.
* Jacob Garrard, Esquire, Vice-Chairman.
Henry Copeland, Esquire.
James Ebenezer Tonkin, Esquire.
William Springthorpe Dowel, Esquire.
* John Sutherland, Esquire.
Edward William O'Sullivan, Esquire.
* John Hurley, Esquire.
* Charles Alfred Lee, Esquire.
* William McCourt, Esquire.
* James Patrick Garvan, Esquire.

* Shortly after the first meeting of the third Committee, John Sutherland, Esquire, died, and his place was filled by the appointment of Charles Alfred Lee, Esquire. Subsequently the Honorable James Watson resigned his seat on the Committee, and the Honorable George Henry Cox was appointed in his place. On 22nd October, 1890, Mr. Joseph Palmer Abbott, having been appointed Speaker of the Legislative Assembly, resigned his position as Chairman and member of the Committee. The Honorable John Lackey, who at that time was Vice-Chairman of the Committee, was appointed Chairman in Mr. Abbott's place, and Mr. Jacob Garrard was chosen as Vice-Chairman. Mr. William McCourt was appointed a member of the Committee on 16th July, 1890, in the place of Mr. John Hurley, whose seat became vacant by reason of his resignation from the Legislative Assembly; and Mr. James Patrick Garvan was appointed a member on the 6th November, 1890, in the room of Mr. Joseph Palmer Abbott.]

Proposed Work.	Date of reference to Committee.	Date upon which inquiry was opened.	Date upon which Sectional Committee was appointed.	Date of Sectional Committee's Report.	Date of Committee's Report.	Statement of Committee's recommendation.	How dealt with by Parliament.	Date of Parliamentary action.
Dredge and Plant for Sydney Harbour.	23 July, 1888	22 Jan., 1890	.....	.....	6 Feb., 1890	The evidence showed that this class of dredge was not required.	Not dealt with.	.....
Improvements to the Entrance of the Richmond River.	23 ,, ,,	26 June, 1889	.....	.....	30 Sept., 1889	The Committee recommended that the proposed works should be carried out in a certain order, so that the results from the works first constructed might be ascertained before others were proceeded with.	Passed.	Legislative Assembly—23 July, 1890—Bill read third time. Legislative Council—28 Aug., 1890—Bill read third time; 3 Sept., 1890—Assent reported.
Improvements to the Entrance of the Clarence River.	23 ,, ,,	23 Oct., ,,	14 Nov., 1889	28 Jan., 1890	2 April, 1890	In this case the Committee recommended the construction of only a portion of the works proposed, as they were of opinion that when this portion had been constructed it might be found that the remainder would not be required.	Passed.	Legislative Assembly—23 July, 1890—Bill read third time. Legislative Council—17 Sept., 1890—Bill read third time; 1 Oct., 1890—Assent reported.
Drainage Works for the Western Suburbs.	23 ,, ,,	7 Dec., 1888	.....	.....	27 Aug., 1889	Recommended as proposed.	Passed.	Legislative Assembly—26 Sept., 1889—Bill read third time. Legislative Council—26 Sept., 1889—Bill read third time; 30 Sept., 1889—Assent reported.

THIRD COMMITTEE—*continued.*

Proposed Work.	Date of reference to Committee.	Date upon which inquiry was opened.	Date upon which Sectional Committee was appointed.	Date of Sectional Committee's Report.	Date of Committee's Report.	Statement of Committee's recommendation.	How dealt with by Parliament.	Date of Parliamentary action.
Railway from Goulburn to Crookwell.	31 July, 1889	22 Aug., 1889	29 Aug., 1889	17 Sept., 1889	19 Dec., 1889	The Committee considered that the cost of this railway should not exceed £4,500 per mile, and that a saving should also be effected by utilizing a certain portion of the present main line instead of taking the proposed railway through a part of the city of Goulburn.	Negatived by the Legislative Council.	Legislative Assembly—25 Sept., 1895—Bill read third time. Legislative Council—12 Nov., 1895—Second reading resolved in the negative.
Railway from Nyngan to Cobar	1 Aug., ,,	25 Sept., ,,	24 Sept., ,,	31 Oct., ,,	18 Feb., 1890	The Committee recommended the construction of this railway as part of a line which should be extended to Wilcannia and Broken Hill.	Passed.	Legislative Assembly—10 July, 1890—Bill read third time. Legislative Council—17 July, 1890—Bill read third time; 23 July, 1890—Assent reported.
Railway from Kiama to Nowra	1 ,, ,,	4 Dec., ,,	14 Jan., 1890	30 Jan., 1890	22 April, ,,	In this case there was an original estimate of £441,663. The amount recommended by the Committee was £381,390. The reduction was due to an amended estimate made by the Acting Engineer-in-Chief for Railways after the railway was referred to the Committee.	Passed.	Legislative Assembly—10 July, 1890—Bill read third time. Legislative Council—7 Aug., 1890—Bill read third time; 13 Aug., 1890—Assent reported.
Railway from Marrickville to the Burwood Road.	1 ,, ,,	19 Nov., ,,	.....	.....	2 ,, ,,	Recommended as proposed.	Passed.	Legislative Assembly—11 Dec., 1890—Bill read third time. Legislative Council—18 Dec., 1890—Bill read third time; 19 May, 1891—Assent reported.
Railway from Culcairn to Corowa.	6 ,, ,,	29 Aug., ,,	29 Aug., 1889	11 Sept., 1889	12 Dec., 1889	The Committee were of opinion that this line should be constructed at a cost not exceeding £3,500 per mile.	Passed.	Legislative Assembly—10 July, 1890—Bill read third time. Legislative Council—31 July, 1890—Bill read third time; 6 Aug., 1890—Assent reported.
Breakwater at Byron Bay	6 ,, ,,	31 Oct., ,,	14 Nov., ,,	28 Jan., 1890	15 April, 1890	The original estimate for this work was £162,000. The estimate placed before the Committee, which they adopted in their recommendation, was £241,723. The increase was due to a difficulty in obtaining stone.	Negatived by the Legislative Council.	Legislative Assembly—17 July, 1890—Bill read third time. Legislative Council—15 Oct., 1890—Bill negatived in Council on motion, "That it be read the second time this day six months."
Railway to connect North Shore Railway with Port Jackson, at Milson's Point.	7 ,, ,,	9 ,, ,,	.....	.....	11 Dec., 1889	The Committee considered, for various reasons stated in their report on the subject, that the work as proposed should not be carried out.	See second reference.	See second reference.
Railway from Grafton to the Tweed.	27 Sept., ,,	12 Nov., ,,	14 Nov., ,,	28 Jan., ,,	15 April, 1890	The Committee recommended that this railway should be constructed from Lismore to Murwillumbah, instead of from Grafton to Murwillumbah, the Committee's recommendation involving a length of about 60½ miles as compared with 140 miles 76 chains, the length of the line as referred to them by the Legislative Assembly.	Passed.	Legislative Assembly—17 July, 1890—Bill (Lismore to the Tweed Railway Bill) read third time. Legislative Council—10 Sept., 1890—Bill read third time; 24 Sept., 1890—Assent reported.
Railway from Cootamundra to Temora.	27 ,, ,,	15 Jan., 1890	16 Jan., 1890	11 Feb., ,,	23 ,, ,,	The Committee considered that the cost of constructing this railway should not exceed £3,300 per mile.	Passed.	Legislative Assembly—23 July, 1890—Bill read third time. Legislative Council—17 Sept., 1890—Bill read third time; 1 Oct., 1890—Assent reported.

THIRD COMMITTEE—*continued.*

Proposed Work.	Date of reference to Committee.	Date upon which inquiry was opened.	Date upon which Sectional Committee was appointed.	Date of Sectional Committee's Report.	Date of Committee's Report.	Statement of Committee's recommendation.	How dealt with by Parliament.	Date of Parliamentary action.
Railway from Mudgee to Gulgong.	27 Sept., 1889	23 Jan., 1890	12 Mar., 1890	26 Mar., 1890	6 May, 1890	The Committee decided against this work on the ground that any extension of the Mudgee Railway should form part of a more comprehensive proposal, the consideration of which should be deferred until after the suggestion for the connection of the Northern and Western systems, by a line between Dubbo and Werris Creek, had been dealt with.	Not dealt with.	.....
Railway from Moss Vale to Robertson.	1 Oct., ,,	23 ,, ,,	30 Jan., ,,	12 Feb., ,,	29 April, ,,	The Committee negatived this proposal because they considered another route, described in their report, was preferable.	,, ,,	.....
Railway from Molong to Parkes and Forbes.	1 ,, ,,	22 ,, ,,	12 Feb., ,,	19 Mar., ,,	21 May, ,,	Recommended as proposed.	Passed.	Legislative Assembly—23 July, 1890—Bill read third time. Legislative Council—21 Aug., 1890—Bill read third time; 27 Aug., 1890—Assent reported.
Bridge over Tarban Creek, Parramatta River.	1 ,, ,,	12 Feb., ,,	.....	.....	15 April, ,,	The Committee considered this bridge to be unnecessary.	Not dealt with.	.....
Bridge over the Hunter River, at Jerry's Plains.	1 ,, ,,	20 ,, ,,	4 Mar., ,,	11 Mar., ,,	15 ,, ,,	The Committee considered that a less expensive bridge would be sufficient to meet requirements.	,, ,,	.....
Bridge to connect Bullock Island with the Mainland at Newcastle.	1 ,, ,,	25 ,, ,,	4 ,, ,,	11 ,, ,,	29 ,, ,,	The Committee considered that this proposed expenditure was premature, pending the carrying out of certain reclamation works.	,, ,,	.....
Iron Bridge at Cowra	1 ,, ,,	12 ,,	18 Feb., ,,	19 ,, ,,	21 May, ,,	The original proposal represented an expenditure of £69,971, which amount was afterwards reduced to £26,537, as the result of a revision of the system of bridge-building in the Colony, and the construction of the bridge at the reduced cost was recommended by the Committee.	Passed.	Legislative Assembly—23 July, 1890—Bill read third time. Legislative Council—21 Aug., 1890—Bill read third time; 27 Aug., 1890—Assent reported.
Hospital for the Insane upon the Kenmore Estate, near Goulburn.	1 ,, ,,	28 May, ,,	.....	.....	Inquiry not completed.	This proposed work, after being partly considered, was withdrawn from the Committee by resolution of the Assembly.	Rescinded.	Legislative Assembly—2 July, 1890—Resolution passed rescinding previous resolution referring proposed work to the Committee.
Offices for Board of Water Supply and Sewerage.	1 ,, ,,	14 Jan., ,,	.....	.....	11 Feb., 1890	Recommended as proposed.	Passed.	Legislative Assembly—7 Nov., 1890—Bill read third time. Legislative Council—20 Nov., 1890—Bill read third time; 27 Nov., 1890—Assent reported.
Reticulation of Western Suburbs Drainage Scheme.	1 ,, ,,	14 ,, ,,	.....	.....	6 ,, ,,	,, ,,	,,	Legislative Assembly—23 July, 1890—Bill read third time. Legislative Council—24 Sept., 1890—Bill read third time; 8 Oct., 1890—Assent reported.

THIRD COMMITTEE—*continued.*

Proposed Work.	Date of reference to Committee.	Date upon which inquiry was opened.	Date upon which Sectional Committee was appointed.	Date of Sectional Committee's Report.	Date of Committee's Report.	Statement of Committee's recommendation.	How dealt with by Parliament.	Date of Parliamentary action.
Extension of Sydney Water Supply to Southern Suburbs—Hurstville, Rockdale.	1 Oct., 1889	14 Jan., 1890	.....	.....	11 Feb., 1890	This expenditure was rendered unnecessary by reason of a temporary water-supply scheme being sufficient to meet requirements for some years.	Not dealt with.	.....
Cable Tramway from King-street, *via* William-street, to Ocean-street.	1 ,, ,,	22 ,, ,,	.....	.....	2 June, 1891	Recommended as proposed.	Passed.	Legislative Assembly—8 March, 1892—Bill read third time. Legislative Council—10 March, 1892—Bill read third time; 17 March, 1892—Assent reported.
Cable Tramway through George, Pitt, and Harris Streets, Sydney	1 ,, ,,	25 Nov. ,,	.....	.....	4 ,, ,,	The Committee considered that it was not expedient, for reasons stated in their report, that this tramway should be constructed.	Not dealt with.	.....
Railway to connect North Shore Railway with the deep waters of Port Jackson, at Milson's Point (second reference).	8 May, 1890	28 May, ,,	.....	.....	21 Aug., 1890	This proposal was before the Committee on a previous occasion when it was negatived; but having been referred to the Committee for further consideration, and circumstances appearing in the second inquiry which justified the construction of the railway, the Committee approved of the proposed work.	Passed.	Legislative Assembly—12 Nov., 1890—Bill read third time. Legislative Council—20 Nov., 1890—Bill read third time; 27 Nov., 1890—Assent reported.
College for the Training of Teachers of Public Schools.	21 Nov., ,,	11 Feb., 1891	.....	.....	19 Mar., 1891	Recommended as proposed.	Not dealt with.	.....
Hospital Buildings, Macquarie-street.	3 Dec., ,,	10 Dec., 1890	.....	.....	12 May, ,,	In this case two sets of plans for the buildings were submitted to the Committee, one representing a design that was estimated to cost £140,000, and the other a design to cost £56,000, and the Committee approved of the latter.	Passed.	Legislative Assembly—9 March, 1892—Bill read third time. Legislative Council—17 March, 1892—Bill read third time; 29 March, 1892—Assent reported.
Railway from Cobar to Cockburn.	19 ,, ,,	24 Feb., 1891	.....	.....	14 ,, ,,	The Committee recommended the construction of this railway as far as Broken Hill only, thereby reducing the proposed expenditure (£1,168,000) by £150,000.	.....	Legislative Assembly—25 June, 1895—Motion to go into Committee to bring in a Bill; 27 June, 1895—Motion to withdraw item from Loan Estimates.
Railway from Glen Innes to Inverell.	19 ,, ,,	21 April, ,,	23 April, 1891	2 June, 1891	See Fourth Committee.	See Fourth Committee.	See Fourth Committee.	.....
Extension of the Kiama to Nowra Railway into the town of Nowra.	19 ,, ,,	19 Feb., ,,	.....	.....	21 April, 1891	Recommended as proposed.	Not dealt with.	.....

FOURTH COMMITTEE—FROM 31 MARCH, 1892, TO 25 JUNE, 1894.

MEMBERS OF THE COMMITTEE.

Legislative Council.

The Honorable William Henry Suttor, Vice-Chairman.
The Honorable James Hoskins.
The Honorable Frederick Thomas Humphery.
* The Honorable Andrew Garran, LL.D.
The Honorable John Davies, C.M.G.
* The Honorable William Joseph Trickett.

Legislative Assembly.

Jacob Garrard, Esquire, Chairman.
Thomas Thomson Ewing, Esquire.
William Chandos Wall, Esquire.
William McCourt, Esquire.
John Cash Neild, Esquire.
Edward William O'Sullivan, Esquire.
Charles Collins, Esquire.
Henry Dawson, Esquire.

* The Honorable Andrew Garran, LL.D., on 5th October, 1892, resigned his seat as a member of the Committee, and on 12th October, 1892, the Honorable William Joseph Trickett was appointed to fill the vacancy.]

Proposed Work.	Date of reference to Committee.	Date upon which inquiry was opened.	Date upon which Sectional Committee was appointed.	Date of Sectional Committee's Report.	Date of Committee's Report.	Statement of Committee's recommendation.	How dealt with by Parliament.	Date of Parliamentary action.
Improvements at Darling Island	29 Mar., 1892	5 May, 1892	.....	.....	2 June, 1892	The Committee considered that the proposed works might be postponed for the present without inconvenience, and that a more suitable design might be submitted.	Not dealt with.	.....
Water Supply for Tamworth...	29 ,, ,,	12 Oct., ,,	12 Oct., 1892	15 Nov., 1892	21 Dec., ,,	Recommended as proposed with a provision as to the quantity of water obtainable, and the resumption of land surrounding the well in the drift forming the source of supply.	Passed.	Legislative Assembly—29 May, 1894—Bill read third time. Legislative Council—31 May, 1894—Bill read third time; 5 June, 1894—Assent reported.
Storm-water Sewers discharging into Johnstone's Bay.	29 ,, ,,	7 June, ,,	.....	.....	12 July, ,,	Recommended as proposed.	,,	Legislative Assembly—7 June, 1894—Bill read third time. Legislative Council—7 June, 1894—Bill read second time and passed through all stages; 7 Aug., 1894—Assent reported.
Reservoir at Centennial Park for Sydney Water Supply.	29 ,, ,,	15 ,, ,,	.....	.....		Recommended with an alteration of site.	,,	Legislative Assembly—20 Dec., 1894—Bill read third time. Legislative Council—21 Dec., 1894—Bill read third time; 26 Feb., 1895—Assent reported.
Water Supply for Wollongong and the Surrounding Districts.	29 ,, ,,	14 July, ,,	.....	.....	4 Aug., ,, 24 ,, ,,	The Committee found that the Water Supply proposed for the surrounding districts was not needed, and that the estimate of cost for supplying Wollongong might be reduced to £30,000.	Not dealt with.	.....
Second Pipe-line from Walka to Buttai, for Hunter River District Water Supply.	29 ,, ,,	23 ,, ,,	.....	.....	16 ,, ,,	Recommended as proposed.	.....	Legislative Assembly—2 Oct., 1895—Bill read third time. Legislative Council—12 Nov., 1895—Bill read third time; 9 Nov., 1895—Assent reported.
Sewerage Works at Cottage Creek.	29 ,, ,,	26 ,, ,,	.....	.....	9 ,, ,,	The estimated cost of this work was £25,000, which provided for a covered sewer; but the Committee found that a cover was not necessary, and that by constructing an open sewer the cost could be reduced by £12,000.	Passed.	Legislative Assembly—2 May, 1895—Bill read third time. Legislative Council—30 May, 1895—Bill read third time; 25 June, 1895—Assent reported.
Water Supply for Lithgow ...	29 ,, ,,	14 Sept., ,,	22 Oct., ,,	24 Oct., ,,	16 Nov., ,,	Recommended as proposed.	,,	Legislative Assembly—5 April, 1894—Bill read third time. Legislative Council—18 April, 1894—Bill read third time; 1 May, 1894—Assent reported.
Sewerage Works for Parramatta	29 ,, ,,	22 June, ,,	.....	.....	4 Oct., ,,	The construction of this work the Committee did not recommend, as they were of opinion that the sewage farm included in the scheme was too small for the purpose, and that the sewage should be dealt with by precipitation and filtration, or other effective modern process, at a proposed pumping station at Clay Cliff Creek.	See second reference.	See second reference.

FOURTH COMMITTEE—*continued.*

Proposed Work.	Date of reference to Committee.	Date upon which inquiry was opened.	Date upon which Sectional Committee was appointed.	Date of Sectional Committee's Report.	Date of Committee's Report.	Statement of Committee's recommendation.	How dealt with by Parliament.	Date of Parliamentary action.
Water Supply for Armidale ...	29 Mar., 1892	15 Sept., 1892	12 Oct., 1892	20 Oct., 1892	16 Nov., 1892	Recommended as proposed.	Passed.	Legislative Assembly—22 May, 1894—Bill read third time. Legislative Council—31 May, 1894—Bill read third time; 5 June, 1894—Assent reported.
Railway from Eden to Bega ...	29 ,, ,,	10 July, ,,	11 Aug., ,,	7 Sept., ,,	26 Oct., ,,	The Committee considered that the resources of the district did not warrant the construction of such an expensive line, but they were of opinion that a cheaply constructed railway might be favourably considered.	Not dealt with.	....
Railway from Grafton to Lismore.	29 ,, ,,	14 June, ,,	15 June, ,,	10 Aug., ,,	28 Sept., ,,	The Committee decided that, for the present, only the Lismore to Casino section of the proposed railway should be constructed, that the cost should not exceed £6,000 per mile, and that the betterment principle be applied to the land to be served by the proposed line.	,, ,,	....
Railway from Glen Innes to Inverell.	29 ,, ,,	6 April, ,,	23 April, 1891 (See Third Committee.)	2 June, 1891 (See Third Committee.)	27 May, ,,	The evidence in this case, which was partly inquired into by the Third Committee and partly by the Fourth Committee, showed that the estimated cost of constructing the railway was excessive, and indicated the probability of a serious annual loss in the working of the line. In addition to this, the Committee were not as fully informed as desirable with regard to connecting Inverell not only with the Great Northern Railway but with the coast, a matter of considerable importance in the inquiry. The Committee therefore did not recommend that the railway should be constructed.	See second reference.	....
Railway from Jerilderie to Deniliquin.	29 ,, ,,	31 May, ,,	2 June, 1892	23 June, 1892	18 Aug., ,,	The Committee were of opinion that the consideration of this proposed work should be postponed until it should be determined by Parliament as a matter of public policy to purchase the Deniliquin to Moama Railway.	Not dealt with.	....
Lunatic Asylum at Kenmore, near Goulburn (second reference).	31 ,, ,,	12 July, ,,	.....	....	24 ,, ,,	Recommended as proposed.	Passed.	Legislative Assembly—18 October, 1894—Bill read third time. Legislative Council—1 November, 1894 Bill read third time; 14 November, 1894—Assent reported.
Railway from Glen Innes to Inverell (second reference).	27 Oct., ,,	17 Nov., ,,	23 Nov., ,,	13 Dec., ,,	10 Jan., 1893	The Committee considered it expedient this railway should be constructed, provided that the cost did not exceed £7,000 per mile, that special local rates were charged until the railway paid working expenses and interest on cost of construction, and that the betterment principle was applied to the land served by the railway.	Negatived.	Legislative Assembly—18 April, 1894—Bill read third time. Legislative Council—7 June 1894—Bill negatived on motion for second reading.
Waterworks for the town of Junee.	2 Feb., 1893	14 Feb., 1893	15 Feb., 1893	28 Feb., 1893	14 Mar., ,,	The Committee recommended that the proposed works should be carried out, conditionally on the Railway Commissioners entering into an agreement for a period of not less than ten years to pay a minimum of £1,900 per annum for water supplied for railway purposes at Junee and Bethungra.	Passed.	Legislative Assembly—4 April, 1894—Bill read third time. Legislative Council—18 April, 1894—Bill read third time; 1 May, 1894—Assent reported.

FOURTH COMMITTEE—*continued.*

Proposed Work.	Date of reference to Committee.	Date upon which inquiry was opened.	Date upon which Sectional Committee was appointed.	Date of Sectional Committee's Report.	Date of Committee's Report.	Statement of Committee's recommendation.	How dealt with by Parliament.	Date of Parliamentary action.
Railway from Narrabri to Moree.	1 Nov., 1893	14 Nov., 1893	15 Nov., 1893	5 Dec., 1893	12 Jan., 1894	Recommended as proposed, with the condition that the work be not undertaken until a Betterment Act is passed.	Passed.	Legislative Assembly—20 March, 1895—Bill read third time. Legislative Council—4 April, 1895—Bill read third time; April—Assent reported.
Sewerage Works for Parramatta (second reference).	1 Feb., 1894	7 Feb., 1894	.....	.....	22 Mar., ,,	The Committee decided that it was not expedient the proposed works should be carried out, for the reasons that the scheme had not been adequately considered, and that, according to the evidence, Parramatta was neither willing nor able to pay the rate necessary to provide the interest on the expenditure, and did not want the proposed works.	See Sixth Committee.	....
Deviation to avoid the Lithgow Zigzag.	25 Jan., ,,	6 Mar., ,,	.....	.....	16 April, ,,	The Committee were of opinion that as the professional evidence, as well as much of the evidence generally, indicated that the proposed deviation was not a matter of urgency, it was not expedient the work should be carried out.	Not dealt with.	....
Railway from Temora to Wyalong.	29 Mar., ,,	9 April, ,,	9 April, 1894	24 April, 1894	28 May, ,,	The Committee were of opinion that owing to the uncertainty of the permanence of the Wyalong goldfield, the decision upon the proposed Railway should be deferred for six months.	See Fifth Committee.	....
Removal of Pyrmont and Glebe Island Bridges.	25 Jan., ,,	,, ,,	.....	.....	25 June, ,,	The Committee negatived the Departmental scheme, but recommended that when renewal becomes necessary the existing bridges at Darling Harbour and Glebe Island should be replaced by timber structures of a kind specified in their report, which report, however, in consequence of the sudden dissolution of Parliament was not presented to the Legislative Assembly.	,, ,,	....

FIFTH COMMITTEE—FROM 19 SEPTEMBER, 1894, TO 5 JULY, 1895, TO 17 JUNE, 1898.

MEMBERS OF THE COMMITTEE.

Legislative Council.

The Honorable Frederick Thomas Humphery, Vice-Chairman.
The Honorable William Joseph Trickett.
The Honorable James Hoskins.
The Honorable John Davies, C.M.G.
The Honorable Charles James Roberts, C.M.G.

Legislative Assembly.

* Varney Parkes, Esquire, Chairman.
* Thomas Thomson Ewing, Esquire, Chairman.
James Hayes, Esquire.
Robert Henry Levien, Esquire.
John Moore Chanter, Esquire.
Charles Alfred Lee, Esquire.
James Gormly, Esquire.
Edmund William Molesworth, Esquire.

* On 15th November, 1894, Varney Parkes, Esquire, resigned his seat on the Committee, and on 20th November, 1894, Thomas Thomson Ewing, Esquire, was elected Chairman.

Proposed Work.	Date of reference to Committee.	Date upon which inquiry was opened.	Date upon which Sectional Committee was appointed.	Date of Sectional Committee's Report.	Date of Committee's Report.	Statement of Committee's recommendation.	How dealt with by Parliament.	Date of Parliamentary action.
Removal of Pyrmont and Glebe Island Bridges (second reference).	27 Sept., 1894	3 Oct., 1894	... .	.....	21 Nov., 1894	The Committee recommended that the Pyrmont Bridge be replaced by a timber bridge, with steel span, to cost £82,500; the Glebe Island Bridge, they decided, did not at present require renewal.	Passed.	Legislative Assembly—6 October, 1897—Bill read third time. Legislative Council—17 November, 1897—Bill read third time; 2 December, 1897—Assent reported.
Railway from Jerilderie to Berrigan.	18 Dec., ,,	19 Dec., ,,	8 Jan., 1895	22 Jan., 1895	28 Feb., 1895	The construction of this railway was recommended, with the condition that the estimated cost, £2,000 per mile, should include goods and grain sheds, engineering charges, and all contingencies.	,,	Legislative Assembly—7 May, 1895—Bill read third time. Legislative Council—12 June, 1895—Bill read third time; 25 June, 1895—Assent reported.
Railway from Parkes to Condobolin.	6 Mar., 1895	7 Mar., 1895	19 Mar., ,,	3 April, ,,	21 May, ,,	In this inquiry the Committee, while considering it expedient the railway should be constructed, resolved that the cost should not exceed £2,100 per mile, including the cost of land resumption.	,,	Legislative Assembly—27 June, 1895—Bill read third time. Legislative Council—3 July, 1895—Bill read third time; 14 August, 1895—Assent reported.
Railway from Temora to Wyalong (second reference).	7 ,, ,,	17 May ,,	5 June, ,,	19 June, ,,	27 June, ,,	The Committee negatived this proposed work, being of opinion that at the present time there is no justification for the construction of this railway, and that the prospects of Wyalong's future are not such as to lead them to conclude that the line should be built in anticipation of what may be the condition of the goldfield and the district some years hence.	Not dealt with.	.....
Harbour Improvements at Newcastle.	14 ,, ,,	20 Mar. ,,	28 Mar., ,,	9 April, ,,	16 May, ,,	In this inquiry the Committee recommended a modification of the works proposed by the Department and an additional work, the cost of the works as recommended by the Committee being about the same as that of the works proposed by the Department.	Passed.	Legislative Assembly—17 September, 1895—Bill read third time. Legislative Council—6 November, 1895—Bill read third time; 13 November, 1895—Assent reported.
Tramway from Woolwich to the Field of Mars Common.	20 June, ,,	25 June ,,	.. ..	....	Inquiry not completed.	.. ..	Withdrawn.	Motion to refer work to Sixth Committee negatived—11 December, 1895.

SIXTH COMMITTEE—FROM 11 DECEMBER, 1895, TO 8 JULY, 1898.

MEMBERS OF THE COMMITTEE.

Legislative Council.

The Honorable Frederick Thomas Humphery, Vice-Chairman.
*The Honorable John Davies, C.M.G.
The Honorable William Joseph Trickett.
The Honorable James Hoskins.
The Honorable Charles James Roberts, C.M.G.
*The Honorable Daniel O'Connor.

Legislative Assembly.

Thomas Thomson Ewing, Esquire, Chairman.
Henry Clarke, Esquire.
Charles Alfred Lee, Esquire.
John Lionel Fegan, Esquire.
*Angus Cameron, Esquire.
Thomas Henry Hassall, Esquire.
George Black, Esquire.
Francis Augustus Wright, Esquire.
*Frank Farnell, Esquire.

* Since the appointment of the Committee vacancies were caused by the decease of the Honorable John Davies, C.M.G., and Angus Cameron, Esquire. These were subsequently filled by the appointment of the Honorable Daniel O'Connor, and Frank Farnell, Esquire.

Proposed Work.	Date of reference to Committee.	Date upon which inquiry was opened.	Date upon which Sectional Committee was appointed.	Date of Sectional Committee's Report.	Date of Committee's Report.	Statement of Committee's recommendation.	How dealt with by Parliament.	Date of Parliamentary action.
Deviation at Locksley, Great Western Railway.	11 Dec., 1895	12 Dec., 1895	13 Dec., 1895	14 Dec., 1895	17 Dec., 1895	Recommended as proposed	Passed.	Legislative Assembly—17 December, 1895—Bill passed through all its stages. Legislative Council—18 December, 1895—Bill passed through all its stages.
Water Supply for the Town of Tamworth.	11 Dec., 1895	17 Dec., 1895	8 Jan., 1896	16 Jan., 1896	30 Jan., 1896	The Committee recommended that the proposed work should be carried out, with the proviso that the capacity of the storage reservoir be increased from 35,000,000 to 50,000,000 gallons.	Passed.	Legislative Assembly—27 October, 1896—Bill read third time. Legislative Council—4 November, 1896—Bill read third time; 11 November, 1896—Assent reported.
Electric Tramway from Circular Quay, Sydney, to the Redfern Railway Station; and also along Harris-street to the intersection of John-street.	11 Dec., 1895	18 Mar., 1896	.....	.....	8 May, 1896	Recommended as proposed	Passed.	Legislative Assembly—2 September, 1896—Bill read third time. Legislative Council—10 September, 1896—Bill read third time; 16 September, 1896—Assent reported.

SIXTH COMMITTEE—*continued.*

Proposed Work	Date of reference to Committee.	Date upon which inquiry was opened.	Date upon which Sectional Committee was appointed.	Date of Sectional Committee's Report.	Date of Committee's Report.	Statement of Committee's recommendation.	How dealt with by Parliament.	Date of Parliamentary action.
Erection of Buildings at Rookwood for Infirm and Destitute Persons.	11 Dec., 1895	21 Jan., 1896	.....	.....	13 Mar., 1896	In this case the Committee deemed it inexpedient that the proposed buildings should be erected, but they recommended that the inmates of the Asylums in Macquarie, George, and Harris Streets, Parramatta, be removed as speedily as possible, and that the healthy destitute be housed at Rookwood and Liverpool; and further that suitable accommodation be provided near Campbelltown on available Crown lands for the chronic and acute sick.	Not dealt with.	.....
Additions to the Treasury Building.	18 ,, ,,	9 ,, ,,	.....	.....	17 July, ,,	Recommended as proposed	Passed.	Legislative Assembly—2 September, 1896—Bill read third time. Legislative Council—16 September, 1896—Bill read third time; 22 September, 1896—Assent reported.
Construction of Locks and Weirs on the River Darling.	19 ,, ,,	12 May, ,,	15 June, 1896	7 July, 1896	31 ,, ,,	Negatived	Not dealt with.	.....
Railway from Tamworth to Manilla.	11 ,, ,,	20 Feb., ,,	17 Mar., ,,	31 Mar., ,, *19 June, ,,	1 Oct., ,,	.....	Passed.	Legislative Assembly—4 November, 1896—Bill read third time. Legislative Council—11 November, 1896—Bill read third time; 13 November, 1896—Assent reported.
Railway from Nevertire to Warren.	11 ,, ,,	21 April, ,,	6 May, ,,	14 May, ,,	20 May, ,,	Recommended as proposed	,,	Legislative Assembly—13 August, 1896—Bill read third time. Legislative Council—27 August, 1896—Bill read third time; 9 September, 1896—Assent reported.
Railway from Berrigan to Finley.	28 May, 1896	5 June, ,,	14 July, ,,	28 July, ,,	19 Aug., ,,	The Committee recommended that this work should be carried out, with the proviso that the cost should not exceed £2,000 per mile.	,,	Legislative Assembly—27 October, 1896—Bill read third time. Legislative Council—4 November, 1896—Bill read third time; 11 November, 1896—Assent reported.
Improvement of Cook's River..	28 ,, ,,	16 ,, ,,	.....	.....	24 July, ,,	As recommended by the Committee the construction of the proposed works would involve an expenditure of £15,000, a reduction on the Departmental estimate of £25,000, and which, in their opinion, would meet the requirements of the case.	,,	Legislative Assembly—27 May, 1897—Committee agree to Council's amendments, resolution reported and agreed to. Legislative Council—25 May, 1897—Bill read third time; 9 June, 1897—Assent reported.

* Supplementary Report.

SIXTH COMMITTEE—*continued.*

Proposed Work.	Date of reference to Committee.	Date upon which inquiry was opened.	Date upon which Sectional Committee was appointed.	Date of Sectional Committee's Report.	Date of Committee's Report.	Statement of Committee's recommendation.	How dealt with by Parliament.	Date of Parliamentary action.
Railway from Moree to Inverell	26 Aug., 1896	1 Sept., 1896	29 Sept., 1896	15 Oct., 1896	21 April, 1897	The Committee resolved that it was expedient this railway should be carried out.	Passed.	Legislative Assembly—11 August, 1897—Bill read third time. Legislative Council—21 October, 1897—Bill read third time; 27 October, 1897 — Assent reported.
Construction of a Deep-water Harbour at Port Kembla.	20 Oct., ,,	28 Oct., ,,	13 Jan., 1897	25 Jan., 1897	10 Feb., ,,	The Committee were of opinion that the proposed harbour would be rendered sufficiently secure to meet present requirements if the eastern breakwater only were carried out, and the estimated cost reduced by £240,000.	Not dealt with	Legislative Assembly—2 December, 1897—Bill read third time. Legislative Council—8 December, 1897—Second reading moved; Debate adjourned.
Railway from Condobolin to Broken Hill.	1 July, ,,	5 Aug., ,,	19 Aug., 1896	15 Oct., 1896	10 Dec., 1896	The Committee, while having regard to the various aspects of this proposed work, and considering also that the annual loss on the working of the railway would amount to £60,000, were of opinion that it should not, at present, be proceeded with.	,,	.....
Sewerage Works for Parramatta (third reference).	10 Nov., ,,	11 Feb., 1897	.....	.....	13 April, 1897	This work was passed by the Committee with the provision that the cost should not exceed the Departmental estimate, and that the carrying out of the work should be subject to a guarantee (by the Municipal Council of Parramatta) of the annual payment required to cover maintenance and interest and redemption of the principal outlay.	,,	.....
New Houses of Parliament for the Colony.	,,	14 April, ,,	.....	.....	6 Dec., ,,	The Committee recommended the adoption of the scheme submitted by the Government Architect, providing for alterations to the present Parliamentary Buildings, at a cost not exceeding £15,000.	,,	.....
Duplicate Main from Prospect to Potts' Hill.	11 Nov., ,,	.....	.....	.....	8 June, ,,	The Committee recommended the amended scheme submitted by the Engineer-in-Chief for Public Works, by which the sides of the canal between Prospect and the Pipe Head Basin would be raised, the canal strengthened, and the 6-foot pipe-line between the Basin and Potts' Hill Reservoir duplicated.	Passed.	Legislative Assembly—1 December, 1897—Bill read third time. Legislative Council—7 December, 1897—Bill read third time; 21 June, 1898—Assent reported.
New Bridge at Glebe Island ...	9 June, 1897	16 June, 1897	.....	.....	15 Sept., 1897	The Committee recommended that there be substituted for the existing structure a stone causeway with a central steel swing-span.	,,	Legislative Assembly—2 December, 1897—Bill read third time. Legislative Council—9 December, 1897—Bill read third time; 21 June, 1898—Assent reported.
Railway from Redfern to St. James' Road.	30 ,, ,,	13 July, ,,	.....	.....	25 Aug., ,,	Recommended as proposed.	Not dealt with	.....
Railway from Condobolin to Euabalong.	5 Aug., ,,	31 Aug., ,,	17 Sept., 1897	26 Oct., 1897	7 Dec., ,,	The Committee negatived this proposed work.	,,	.....
Railway from Narrabri to Pilliga.	5 ,, ,,	19 Oct., ,,	22 April, 1898	19 May, 1898	23 June, 1898	The Committee negatived this proposal, but suggested a route from Narrabri by way of Eurie Eurie, which could, if necessary, be extended on to Walgett.	,,	.....

SIXTH COMMITTEE—*continued.*

Proposed Work.	Date of reference to Committee.	Date upon which inquiry was opened.	Date upon which Sectional Committee was appointed.	Date of Sectional Committee's Report.	Date of Committee's Report.	Statement of Committee's recommendation.	How dealt with by Parliament.	Date of Parliamentary action.
Railway from Byrock to Brewarrina.	5 Aug., 1897	1 Oct., 1897	11 Feb., 1898	5 April, 1898	22 June, 1898	Recommended conditionally.	Passed	Legislative Assembly—8 December, 1898—Bill read third time. Legislative Council—21 December, 1898—Bill read third time.
Railway from The Rock to Green's Gunyah.	5 ,, ,,	16 Sept., ,,	7 Oct., ,,	26 Oct., 1897	25 Nov., 1897	Recommended as proposed.	,,	Legislative Assembly—7 December, 1898—Bill passed through its remaining stages. Legislative Council—22 December, 1898—Bill read third time.
Railway from Coolamon to Ariah.	5 ,, ,,	23 ,, ,,	7 ,, ,,	26 ,, ,,	18 ,, ,,	The Committee negatived this proposed work.	Not dealt with	.....
Railway from Warren to Coonamble.	9 Dec., ,,	14 Dec., ,,	14 Mar., ,,	21 April, 1898	29 April, 1898	The Committee negatived the proposal for a railway from Warren to Coonamble, but recommended that a survey be made of a route from Dubbo to Coonamble.	,,	.....
Railway from Koorawatha to Grenfell.	9 ,, ,,	20 Dec., 1897	11 Feb., ,,	10 Mar., ,,	1 ,, ,,	Recommended as proposed.	Passed	Legislative Assembly—8 December, 1898—Bill read third time. Legislative Council—21 December, 1898—Bill read third time.
Railway from Woolabra to Collarendabri.	9 ,, ,,	9 Mar., 1898	22 April, ,,	19 May, ,,	24 June, ,,	The Committee negatived this proposal, but suggested a route from Narrabri towards Eurie Eurie, which would proceed from a point 315 miles from Newcastle to Collarendabri.	Not dealt with	.....
Railway from Maitland to Taree.	9 ,, ,,	22 Feb., ,,	*14 June, ,,	.....	6 July, ,,	The Committee negatived this proposal.	,,	.....
Railway from the Terminus of the Roschill Railway to Dural.	9 ,, ,,	5 Jan., ,,	.....	.....	13 April, ,,	The Committee negatived this proposed work.	,,	.....
Harbour Works at Tweed River.	9 ,, ,,	15 Mar., ,,	22 Mar., 1898	2 April, 1898	26 ,, ,,	Recommended as proposed.	Negatived	Legislative Assembly—7 December, 1898—Bill read third time. Legislative Council—21 December, 1898—Second reading negatived.
Harbour Works at Bellinger River.	9 ,, ,,	30 ,, ,,	12 May, ,,	7 June, ,,	6 July, ,,	,, ,,	,,	Legislative Assembly—7 December, 1898—Bill read third time. Legislative Council—15 December, 1898—Second reading negatived.
Harbour Works at Nambucca River.	9 ,, ,,	14 April, ,,	12 ,, ,,	7 ,, ,,	7 ,, ,,	,, ,,	.....	Legislative Assembly—7 December, 1898—Bill read third time. Legislative Council—8 December, 1898—Bill read first time.†
Harbour Works at Macleay River.	9 ,, ,,	8 Feb., ,,	12 ,, ,,	7 ,, ,,	5 ,, ,,	,, ,,	.....	Legislative Assembly—7 December, 1898—Bill read third time. Legislative Council—8 December, 1898—Bill read first time.†
Harbour Works at Hastings River.	9 ,, ,,	27 April, ,,	*14 June, ,,	.....	29 June, 1898	The Committee recommended a portion of these works only.	.....	Legislative Assembly—7 December, 1898—Bill read third time. Legislative Council—8 December, 1898—Bill read first time.†
Harbour Works at Manning River.	9 ,, ,,	22 Mar., ,,	*14 ,, ,,	.....	1 July, ,,	Recommended with slight modifications.	.....	Legislative Assembly—7 December, 1898—Bill read third time. Legislative Council—8 December, 1898—Bill read first time.†
Weirs on the River Darling between Bourke and Wilcannia.	9 ,, ,,	.....	.....	.....	.....	.....	.....	.....

* In this instance, the main Committee visited the district, but subsequently resolved themselves into a Sectional Committee. † Further procedure was stopped by the prorogation of Parliament.

SEVENTH COMMITTEE—FROM 30 NOVEMBER, 1898 (*STILL IN OFFICE*).

MEMBERS OF THE COMMITTEE.

LEGISLATIVE COUNCIL.

The Honorable WILLIAM JOSEPH TRICKETT, Vice-Chairman, The Honorable PATRICK LINDESAY CRAWFORD SHEPHERD,
The Honorable ANDREW GARRAN, LL.D.

LEGISLATIVE ASSEMBLY.

JOHN PERRY, Esquire, Chairman, JOHN CHRISTIAN WATSON, Esquire,
WILLIAM THOMAS DICK, Esquire, ROBERT HENRY LEVIEN, Esquire.

Proposed Work.	Date of reference to Committee.	Date upon which inquiry was opened.	Date upon which Sectional Committee was appointed.	Date of Sectional Committee's Report.	Date of Committee's Report.	Statement of Committee's recommendation.	How dealt with by Parliament.	Date of Parliamentary action.
Public Offices, Phillip & Hunter Streets, Sydney.	22 Dec., 1898	18 Jan., 1899	.....	.....	.....	.....	.....	.....
Water Supply Works for the Borough of Wollongong.	22 ,, ,,	25 ,, ,,	.....	.....	.....	.....	.....	.....
Public Offices, Phillip, Bridge, and Young Streets, Sydney.	22 ,, ,,	2 Feb. ,,	.....	.....	.....	.....	.....	.....
Railway from Dubbo to Coonamble.	22 ,, ,,	.....	.....	.....	.....	.....	.....	.....
Railway from Cobar to Wilcannia.	22 ,, ,,	.....	.....	.....	.....	.....	.....	.....
Railway from Grenfell to Wyalong.	22 ,, ,,	.....	.....	.....	.....	.....	.....	.....
Locks and Weirs on the River Darling between Bourke and Menindie.	22 ,, ,,	.....	.....	.....	.....	.....	.....	.....
Penitentiary and Prison for Females, Randwick.	22 ,, ,,	.....	.....	.....	.....	.....	.....	.....

PARLIAMENTARY STANDING COMMITTEE ON PUBLIC WORKS.

MINUTES OF PROCEEDINGS.

TUESDAY, 6 *DECEMBER*, 1898.

The Seventh Committee appointed under the Public Works Act of 1888; the Public Works Act Amendment Act of 1889; the Public Works (Committees' Remuneration) Act of 1889, and the Public Works Act Further Amendment Act of 1897, met in the Committee's Board-room at 2 o'clock p.m.

MEMBERS PRESENT:—

The Hon. Patrick Lindesay Crawford Shepherd,
The Hon. Andrew Garran, LL.D.,
The Hon. William Joseph Trickett,
John Perry, Esq.,
William Thomas Dick, Esq.,
John Christian Watson, Esq.,
Robert Henry Levien, Esq.

On the motion of Mr. Trickett, seconded by Mr. Levien, it was resolved "That Dr. Garran take the Chair until a Chairman be elected."

The Secretary produced a Supplement to the *Government Gazette*, dated Friday, 2 December, 1898, containing a notification of the appointment of the Committee, and reported that all the Members of the Committee had made the declaration necessary, under the sixth clause of the Public Works Act, to be made by Members prior to their entering upon the duties of their office or sitting at any meeting of the Committee.

The Committee then proceeded to elect a Chairman and a Vice-Chairman.

Mr. Trickett moved,—"That John Perry, Esq., be Chairman of the Committee."

The motion was seconded by Mr. Levien, and passed.

Mr. Levien moved,—"That the Honorable William Joseph Trickett be Vice-Chairman of the Committee."

The motion was seconded by Mr. Watson, and passed.

The Committee discussed the order of their future proceedings, and then adjourned.

WEDNESDAY, 18 *JANUARY*, 1899.

The Committee met at 2 p.m.

MEMBERS PRESENT:—

John Perry, Esq., Chairman.

The Hon. Patrick Lindesay Crawford Shepherd,
The Hon. Andrew Garran, LL.D.,
The Hon. William Joseph Trickett,
William Thomas Dick, Esq.,
John Christian Watson, Esq.,
Robert Henry Levien, Esq.

The minutes of the previous meeting were read, and confirmed.

The Secretary read the following correspondence:—

Letter from the Clerk of the Legislative Assembly informing the Committee of the passing by the Legislative Assembly of resolutions referring to the Committee for consideration and report the following proposed public works:—.

Water Supply Works for the Borough of Wollongong; Railway from Dubbo to Coonamble; Railway from Cobar to Wilcannia; Railway from Grenfell to Wyalong; Locks and Weirs on the river Darling between Bourke and Menindie; Public Offices on land with frontages to Phillip, Bridge, and Young Streets, Sydney; Public Offices on land with frontages to Phillip and Hunter Streets, Sydney; Penitentiary and Prison for Females, Randwick.

Letter from Mr. J. J. Miller, Cootamundra District Council, with reference to the proposed Railway from Grenfell to Wyalong.

Letter from the Secretary to the Board of Health forwarding, for the information of the Committee, a copy of the *Engineer*, dated 17 June, 1898, containing particulars of the system of sewage filtration in operation at Winsford, Cheshire, England.

The corespondence was received.

The following account was passed for payment:—

A. Ringdahl, repairing type-writer £1 2 6

The Committee proceeded to consider the expediency of erecting Public Offices on land with frontages to Phillip and Hunter Streets, Sydney.

Robert R. P. Hickson, Under Secretary and Commissioner for Roads, and Walter Liberty Vernon, Government Architect, Department of Public Works, were sworn, and examined.

The Committee adjourned at 4 o'clock, until 2 o'clock p.m. on Thursday, the following day.

THURSDAY,

THURSDAY, 19 *JANUARY*, 1899.

The Committee met at 2 p.m.

MEMBERS PRESENT:—

John Perry, Esq., Chairman.

The Hon. Patrick Lindesay Crawford Shepherd,	William Thomas Dick, Esq.,
The Hon. Andrew Garran, LL.D.,	John Christian Watson, Esq.,
The Hon. William Joseph Trickett,	Robert Henry Levien, Esq.

The minutes of the previous meeting were read, and confirmed.

The Secretary read the following correspondence:—

Letter from the Secretary of the Grenfell Railway League, with reference to the proposed Railway from Grenfell to Wyalong.

The correspondence was received.

The Committee further considered the expediency of erecting Public Offices on land with frontages to Phillip and Hunter Streets, Sydney.

Walter Liberty Vernon, Government Architect, was sworn, and further examined.

John Jackson, Manager of Public Wharfs, made an affirmation, and was examined.

Edmund Walcott Fosbery, Inspector General of Police, was sworn, and examined.

The Committee adjourned at ten minutes past 4, until 2 o'clock p.m. on Friday, the following day.

FRIDAY, 20 *JANUARY*, 1899.

The Committee met at 2 p.m.

MEMBERS PRESENT:—

John Perry, Esq., Chairman.

The Hon. Patrick Lindesay Crawford Shepherd,	William Thomas Dick, Esq.,
The Hon. Andrew Garran, LL.D.,	John Christian Watson, Esq.,
The Hon. William Joseph Trickett,	Robert Henry Levien, Esq.

The minutes of the previous meeting were read, and confirmed.

The Committee further considered the expediency of erecting Public Offices on land with frontages to Phillip and Hunter Streets, Sydney.

George Edward Brodie, Assistant Auditor-General and Chief Inspector of Public Accounts, and Frederick William Neitenstein, Comptroller-General of Prisons, were sworn, and examined.

The Committee adjourned at a quarter past 4, until 2 o'clock p.m. on Tuesday, 24th January.

TUESDAY, 24 *JANUARY*, 1899.

The Committee met at 2 p.m.

MEMBERS PRESENT:—

John Perry, Esq., Chairman.

The Hon. Patrick Lindesay Crawford Shepherd,	William Thomas Dick, Esq.,
The Hon. Andrew Garran, LL.D.,	John Christian Watson, Esq.,
The Hon. William Joseph Trickett,	Robert Henry Levien, Esq.

The minutes of the previous meeting were read, and confirmed.

The Secretary read the following correspondence:—

Letters from the Honorary Secretary of the Temora Branch of the N.S.W. Farmers' and Settlers' Association and the Honorary Secretary of the Barmedman Railway League, with reference to the proposed Railway from Grenfell to Wyalong.

The correspondence was received.

The Committee further considered the expediency of erecting Public Offices on land with frontages to Phillip and Hunter Streets, Sydney.

John William Holliman, Secretary to the Public Service Board; Francis Henry Wilson, Chief Clerk, Department of Lands; Critchett Walker, C.M.G., Principal Under Secretary, and Hugh McLachlan, Secretary to the Railway Commissioners, were sworn, and examined.

The Committee adjourned at 4 o'clock, until 2 o'clock p.m. on Wednesday, the following day.

WEDNESDAY, 25 *JANUARY*, 1899.

The Committee met at 2 p.m.

MEMBERS PRESENT:—

John Perry, Esq., Chairman.

The Hon. Patrick Lindesay Crawford Shepherd,	William Thomas Dick, Esq.,
The Hon. Andrew Garran, LL.D.,	John Christian Watson, Esq.,
The Hon. William Joseph Trickett,	Robert Henry Levien, Esq.

The minutes of the previous meeting were read, and confirmed.

The Committee further considered the expediency of erecting Public Offices on land with frontages to Phillip and Hunter Streets, Sydney.

Walter Liberty Vernon, Government Architect, was sworn, and further examined.

The Committee proceeded to consider the expediency of constructing Water Supply Works for the Borough of Wollongong.

Robert R. P. Hickson, Under Secretary and Commissioner for Roads, Department of Public Works, was sworn, and examined.

The Committee adjourned at 4 o'clock, until 2 o'clock p.m. on Friday, 27th January.

FRIDAY,

FRIDAY, 27 *JANUARY*, 1899.

The Committee met at 2 p.m.

MEMBERS PRESENT:—

John Perry, Esq., Chairman.

The Hon. Patrick Lindesay Crawford Shepherd,
The Hon. William Joseph Trickett,
William Thomas Dick, Esq.,
John Christian Watson, Esq.,
Robert Henry Levien, Esq.

The minutes of the previous meeting were read, and confirmed.

The Committee further considered the expediency of constructing Water Supply Works for the Borough of Wollongong.

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

The Committee adjourned at a quarter to 4, until 2 o'clock p.m. on Tuesday, 31st January.

TUESDAY, 31 *JANUARY*, 1899.

The Committee met at 2 p.m.

MEMBERS PRESENT:—

John Perry, Esq., Chairman.

The Hon. Patrick Lindesay Crawford Shepherd,
The Hon. Andrew Garran, LL.D.,
The Hon. William Joseph Trickett,
William Thomas Dick, Esq.,
John Christian Watson, Esq.,
Robert Henry Levien, Esq.

The minutes of the previous meeting were read, and confirmed.

The Committee further considered the expediency of constructing Water Supply Works for the Borough of Wollongong.

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

John Moore Smail, Engineer-in-Chief, Metropolitan Board of Water Supply and Sewerage, and Henry Chamberlaine Russell, C.M.G., Government Astronomer, were sworn, and examined.

The Committee adjourned at a quarter past 4, until 2 o'clock p.m. on Wednesday, the following day.

WEDNESDAY, 1 *FEBRUARY*, 1899.

The Committee met at 2 p.m.

MEMBERS PRESENT:—

John Perry, Esq., Chairman.

The Hon. Patrick Lindesay Crawford Shepherd,
The Hon. Andrew Garran, LL.D.,
The Hon. William Joseph Trickett,
William Thomas Dick, Esq.,
John Christian Watson, Esq.,
Robert Henry Levien, Esq.

The minutes of the previous meeting were read, and confirmed.

The Committee further considered the expediency of constructing Water Supply Works for the Borough of Wollongong.

John Moore Smail, Engineer-in-Chief, Metropolitan Board of Water Supply and Sewerage, and Robert R. P. Hickson, Under Secretary and Commissioner for Roads, Department of Public Works, were sworn, and further examined.

The Committee adjourned at a quarter past 4, until 2 o'clock p.m. on Thursday, the following day.

THURSDAY, 2 *FEBRUARY*, 1899.

The Committee met at 2 p.m.

MEMBERS PRESENT:—

John Perry, Esq., Chairman.

The Hon. Patrick Lindesay Crawford Shepherd,
The Hon. Andrew Garran, LL.D.,
The Hon. William Joseph Trickett,
William Thomas Dick, Esq.,
John Christian Watson, Esq.,
Robert Henry Levien, Esq.

The minutes of the previous meeting were read, and confirmed.

The Secretary read the following correspondence:—

Telegram from the Mayor of Wollongong and letter from the Mayor of North Illawarra, with reference to the proposed Water Supply Works for the Borough of Wollongong.

The correspondence was received.

The Committee further considered the expediency of erecting Public Offices on land with frontages to Phillip and Hunter Streets, Sydney.

Harry Chambers Kent, Architect, was sworn, and examined.

The Committee proceeded to consider the expediency of erecting Public Offices on land with frontages to Phillip, Bridge, and Young Streets, Sydney.

Robert R. P. Hickson, Under Secretary and Commissioner for Roads, Department of Public Works, was sworn, and examined.

The Committee adjourned at a quarter to 4, until half past 8 a.m. on Friday, the following day.

FRIDAY,

FRIDAY, 3 *FEBRUARY*, 1899.

The Committee met at half-past 8 a.m. at the Redfern Railway Station and, in connection with their inquiry as to the expediency of constructing Water Supply Works for the Borough of Wollongong, proceeded by train to Wollongong.

MEMBERS PRESENT:—

John Perry, Esq., Chairman.

The Hon. Patrick Lindesay Crawford Shepherd,	William Thomas Dick, Esq.,
The Hon. Andrew Garran, LL.D.,	John Christian Watson, Esq.,
The Hon. William Joseph Trickett,	Robert Henry Levien, Esq.

At 2 o'clock p.m. the Committee met in the Court-house, Wollongong.

The minutes of the previous meeting were read, and confirmed.

The Committee further considered the expediency of constructing Water Supply Works for the Borough of Wollongong.

Henry Osborne MacCabe, Mayor of Wollongong, and William John Wiseman, Alderman of Wollongong, were sworn, and examined.

The Committee adjourned at twenty minutes past 4, until half-past 9 a.m. on Saturday, the following day.

SATURDAY, 4 *FEBRUARY*, 1899.

The Committee met at half-past 9 a.m., at the "Brighton Hotel," Wollongong.

MEMBERS PRESENT:—

John Perry, Esq., Chairman.

The Hon. Patrick Lindesay Crawford Shepherd,	William Thomas Dick, Esq.,
The Hon. Andrew Garran, LL.D.,	John Christian Watson, Esq.,
The Hon. William Joseph Trickett,	Robert Henry Levien, Esq.

The minutes of the previous meeting were read, and confirmed.

The Committee then, in pursuance of their inquiry respecting the expediency of constructing Water Supply Works for the Borough of Wollongong, and accompanied by Mr. L. A. B. Wade, Inspecting Engineer, Department of Public Works, proceeded on a visit of inspection to the localities and sites of the works comprising the scheme. At the Cordeaux River, the site selected for the dam, and the area of land which will be covered by the water in the storage reservoir when the dam has been constructed, were carefully examined, and inquiries were made respecting the flow of water in the river which, though at the present time small, appears to be sufficient for the purposes of the scheme. It was ascertained that in ordinary seasons the stream is considerably larger than it is now, and that the present limited flow is due to an unprecedently dry year. As far as possible the Committee examined the catchment area, and they also inspected the site of the tunnel, including the points of inlet and outlet, and followed generally the route of the pipe-line, and examined the site of the service reservoir.

On returning to Wollongong the Committee met again at the "Brighton Hotel."

Leslie Augustus Burton Wade, Inspecting Engineer, Department of Public Works, was sworn, and examined.

The Committee adjourned at a quarter past 5, until 10 a.m. on Monday, 6th February.

MONDAY, 6 *FEBRUARY*, 1899.

The Committee met at 10 a.m. in the Court-house, Wollongong.

MEMBERS PRESENT:—

John Perry, Esq., Chairman.

The Hon. Patrick Lindesay Crawford Shepherd,	William Thomas Dick, Esq.,
The Hon. Andrew Garran, LL.D.,	John Christian Watson, Esq.,
The Hon. William Joseph Trickett,	Robert Henry Levien, Esq.

The minutes of the previous meeting were read, and confirmed.

The Committee further considered the expediency of constructing Water Supply Works for the Borough of Wollongong.

James Kirby, Alderman of Wollongong; Timothy Wood Lee, M.R.C.S.; William Ashley, Manager, Unanderra Coke Works; William McKenzie, Butcher; Jacob Carlos Jones, Mining Manager, and Chairman of the Progress Association, Corrimal; John Payne, Mayor of North Illawarra; Walter Evans, Shipping Manager, Southern Coal Co.; and Frederick Augustus Franklin, M.I.C.E., were sworn, and examined.

Henry Osborne MacCabe, Mayor of Wollongong, was sworn, and further examined.

The Committee adjourned at ten minutes to 1, until 2 o'clock p.m., at Sydney, on Tuesday, the following day.

TUESDAY, 7 *FEBRUARY*, 1899.

The Committee met at 2 p.m.

MEMBERS PRESENT:—

John Perry, Esq., Chairman.

The Hon. Patrick Lindesay Crawford Shepherd,	The Hon. William Joseph Trickett,
The Hon. Andrew Garran, LL.D.,	William Thomas Dick, Esq.,

John Christian Watson, Esq.

The minutes of the previous meeting were read, and confirmed.

The Committee further considered the expediency of erecting Public Offices on land with frontages to Phillip and Hunter Streets, Sydney.

Harry Chambers Kent, Architect, was sworn, and further examined.

The

The Committee further considered the expediency of constructing Water Supply Works for the Borough of Wollongong.

Leslie Augustus Burton Wade, Inspecting Engineer, and Cecil West Darley, Engineer-in-Chief for Public Works, Department of Public Works, were sworn, and further examined.

The Committee adjourned at five minutes to 4, until 2 o'clock p.m. Wednesday, the following day.

WEDNESDAY, 8 *FEBRUARY*, 1899.

The Committee met at 2 p.m.

MEMBERS PRESENT:—

John Perry, Esq., Chairman.

The Hon. Patrick Lindesay Crawford Shepherd,	William Thomas Dick, Esq.,
The Hon. Andrew Garran, LL.D.,	John Christian Watson, Esq.,
The Hon. William Joseph Trickett,	Robert Henry Levien Esq.

The minutes of the previous meeting were read, and confirmed.

The following accounts were passed for payment:—

Daily Telegraph Newspaper Co.—Advertising	£0	12	0
S. Bennett (*Evening News*)—Advertising	0	10	0
Australian Newspaper Co. (*Star*)—Advertising	0	10	4
B. H. Friend—Shorthand-writer accompanying the Committee on their visit to Wollongong in connection with the proposed Water Supply Works for the Borough of Wollongong	3	0	10
Total...	£4	13	2

The Committee further considered the expediency of erecting Public Offices on land with frontages to Phillip and Hunter Streets, Sydney.

John Kirkpatrick, Architect, was sworn, and examined.

The Committee adjourned at five minutes past 4, until 2 o'clock p.m. on Thursday, the following day.

THURSDAY, 9 *FEBRUARY*, 1899.

The Committee met at 2 p.m.

MEMBERS PRESENT:—

John Perry, Esq., Chairman.

The Hon. Patrick Lindesay Crawford Shepherd,	William Thomas Dick, Esq.;
The Hon. Andrew Garran, LL.D.,	John Christian Watson, Esq.,
The Hon. William Joseph Trickett,	Robert Henry Levien, Esq.

The minutes of the previous meeting were read, and confirmed.

The Committee further considered the expediency of constructing Water Supply Works for the Borough of Wollongong.

James Johnston, Clerk, Department of Public Works, and Hugh McLachlan, Secretary to the Railway Commissioners, were sworn, and examined.

Mr. Trickett gave notice that he would move on Tuesday, 14th February,—"That the Committee proceed to consider the evidence on the proposed Water Supply Works for the Borough of Wollongong, with a view to reporting on the subject to the Legislative Assembly."

The Committee further considered the expediency of erecting Public Offices on land with frontages to Phillip, Bridge, and Young Streets, Sydney.

Robert R. P. Hickson, Under Secretary and Commissioner for Roads, Department of Public Works, was sworn, and further examined.

The Committee adjourned at 4 o'clock, until 2 o'clock p.m. on Friday, the following day.

FRIDAY, 10 *FEBRUARY*, 1899.

The Committee met at 2 p.m.

MEMBERS PRESENT:—

John Perry, Esq., Chairman.

The Hon. Patrick Lindesay Crawford Shepherd,	William Thomas Dick, Esq.,
The Hon. Andrew Garran, LL.D.,	John Christian Watson, Esq.,
The Hon. William Joseph Trickett,	Robert Henry Levien, Esq.

The minutes of the previous meeting were read, and confirmed.

The Committee then, in pursuance of their inquiry respecting the expediency of erecting Public Offices on land with frontages to Phillip and Hunter Streets, Sydney, and accompanied by Mr. W. L. Vernon, Government Architect, proceeded on a visit of inspection to the buildings occupied by the Chief Secretary's Department, the Department of Railways, the Department of Public Works, the Department of Mines and Agriculture, and the Department of Lands, with the object of ascertaining, by personal examination, the extent to which those buildings are utilised, and whether they could be made to provide suitable accommodation for any of the Departments or branches proposed to be located in the new buildings under consideration.

The Committee adjourned at twenty minutes past 4, until 2 o'clock p.m. on Tuesday, 14th February.

TUESDAY,

TUESDAY, 14 *FEBRUARY*, 1899.

The Committee met at 2 p.m.

MEMBERS PRESENT:—

John Perry, Esq., Chairman.

The Hon. Patrick Lindesay Crawford Shepherd,	William Thomas Dick, Esq.,
The Hon. Andrew Garran, LL.D.,	John Christian Watson, Esq.,
The Hon. William Joseph Trickett,	Robert Henry Levien, Esq.

The minutes of the previous meeting were read, and confirmed.

The Secretary read the following correspondence:—

Letter from the Secretary to the Mount Kembla Coal and Oil Company, asking that their representative be heard before the Committee in the inquiry respecting the proposed Water Supply Works for the Borough of Wollongong.

The correspondence was received.

The Committee further considered the expediency of erecting Public Offices on land with frontages to Phillip, Bridge, and Young Streets, Sydney.

Walter Liberty Vernon, Government Architect, was sworn, and examined.

Mr. Trickett's notice of motion for the consideration of the evidence relating to the proposed Water Supply Works for the Borough of Wollongong, was postponed.

The Committee adjourned at five minutes past 4, until 2 o'clock p.m. on Wednesday, the following day.

WEDNESDAY, 15 *FEBRUARY*, 1899.

The Committee met at 2 p.m.

MEMBERS PRESENT:—

John Perry, Esq., Chairman.

The Hon. Patrick Lindesay Crawford Shepherd,	William Thomas Dick, Esq.,
The Hon. Andrew Garran, LL.D.,	John Christian Watson, Esq.,
The Hon. William Joseph Trickett,	Robert Henry Levien, Esq.

The minutes of the previous meeting were read, and confirmed.

The Committee further considered the expediency of constructing Water Supply Works for the Borough of Wollongong.

James Robert Millar Robertson, Mining Engineer, Mount Kembla Coal and Oil Co., was sworn, and examined.

The Committee further considered the expediency of erecting Public Offices on land with frontages to Phillip, Bridge, and Young Streets, Sydney.

Walter Liberty Vernon, Government Architect, was sworn, and further examined.

The Committe adjourned at fifteen minutes past 4, until 2 o'clock p.m. on Thursday, the following day.

THURSDAY, 16 *FEBRUARY*, 1899.

The Committee met at 2 p.m.

MEMBERS PRESENT:—

John Perry, Esq., Chairman.

The Hon. Patrick Lindesay Crawford Shepherd,	William Thomas Dick, Esq.,
The Hon. Andrew Garran, LL.D.,	John Christian Watson, Esq.,
The Hon. William Joseph Trickett,	Robert Henry Levien, Esq.

The minutes of the previous meeting were read, and confirmed.

The Committee further considered the expediency of erecting Public Offices on land with frontages to Phillip, Bridge, and Young Streets, Sydney.

Walter Liberty Vernon, Government Architect, was sworn, and further examined.

John Charles Maynard, Under Secretary, Department of Public Instruction, was sworn, and examined.

The Committee adjourned at ten minutes past 4, until 2 o'clock p.m. on Friday, the following day.

FRIDAY, 17 *FEBRUARY*, 1899.

The Committee met at 2 p.m.

MEMBERS PRESENT:—

John Perry, Esq., Chairman.

The Hon. Patrick Lindesay Crawford Shepherd,	William Thomas Dick, Esq.,
The Hon. Andrew Garran, LL.D.,	John Christian Watson, Esq.,
The Hon. William Joseph Trickett,	Robert Henry Levien, Esq.

The minutes of the previous meeting were read, and confirmed.

The Committee further considered the expediency of erecting Public Offices on land with frontages to Phillip, Bridge, and Young Streets, Sydney.

John Charles Maynard, Under Secretary, Department of Public Instruction, was sworn, and further examined.

The Committee proceeded to consider their Fourteenth General Report to His Excellency the Governor.

The Report was adopted, and the Chairman was authorised to sign it for presentation to His Excellency the Governor.

The Committee adjourned at a quarter to 4, until 2 o'clock p.m. on Tuesday, 21st February.

Sydney: William Applegate Gullick, Government Printer.—1899.

1899.

LEGISLATIVE ASSEMBLY.

NEW SOUTH WALES.

PARLIAMENTARY STANDING COMMITTEE ON PUBLIC WORKS.

REPORT

TOGETHER WITH

MINUTES OF EVIDENCE

RELATING TO THE PROPOSED

PUBLIC OFFICES, PHILLIP AND HUNTER STREETS, SYDNEY.

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

Printed under No. 5 *Report from Printing Committee,* 29 *March,* 1899.

SYDNEY: WILLIAM APPLEGATE GULLICK, GOVERNMENT PRINTER.

*10—*a* 1899.

[2*s.* 6*d.*]

MEMBERS OF THE COMMITTEE.

LEGISLATIVE COUNCIL.

The Honorable WILLIAM JOSEPH TRICKETT, Vice-Chairman.
The Honorable PATRICK LINDESAY CRAWFORD SHEPHERD.
The Honorable ANDREW GARRAN, LL.D.

LEGISLATIVE ASSEMBLY.

JOHN PERRY, Esquire, Chairman.
WILLIAM THOMAS DICK, Esquire.
JOHN CHRISTIAN WATSON, Esquire.
ROBERT HENRY LEVIEN, Esquire.

GENERAL INDEX.

LIST OF WITNESSES.

PARLIAMENTARY STANDING COMMITTEE ON PUBLIC WORKS.

PUBLIC OFFICES, PHILLIP AND HUNTER STREETS, SYDNEY.

REPORT.

THE PARLIAMENTARY STANDING COMMITTEE ON PUBLIC WORKS, appointed during the first Session of the present Parliament, under the Public Works Act of 1888, 51 Vic. No. 37, the Public Works Act Amendment Act of 1889, 52 Vic. No. 26, the Public Works (Committees' Remuneration) Act of 1889, 53 Vic. No. 11, and the Public Works Acts Further Amendment Act of 1897, 61 Vic. No. 6, to whom was referred the duty of considering and reporting upon "the expediency of erecting public offices on land with frontages to Phillip and Hunter Streets, Sydney," have, after due inquiry, resolved that it is not expedient the proposed erection of offices, as referred to the Committee, be carried out, but they recommend the erection of a building containing a basement, ground floor, and first floor, at a cost not exceeding £16,000; and, in accordance with the provision of sub-section IV, of clause 13, of the Public Works Act, report their resolution to the Legislative Assembly:—

ORIGIN OF THE PROPOSAL.

1. The idea of erecting the proposed buildings appears from the evidence of the Under Secretary for Public Works to have originated in a letter from the Inspector-General of Police, in November, 1895, in which he stated that the premises occupied by his Department were too small, and suggested that a building of an inexpensive character should be erected on Government land at the corner of Hunter and Phillip Streets, purchased at his instance in 1885 for police purposes at a cost of £27,500. This letter was referred to the Government Architect for a sketch plan showing what could be done, and a design for a building estimated to cost £14,000 received ministerial approval on the 8th November, 1895. In January, 1896, the Government Architect intimated that there would be sufficient room in the proposed building for the Comptroller-General of Prisons in addition to the Inspector-General of Police, and in February, 1897, the approval of the Minister for Works was given to the preparation of plans. These plans, however, do not appear to have been prepared; but a suggestion was made by an officer of the Government Architect's Department that as the site was a costly one, the building to be erected upon it should be of corresponding importance. This, it was represented, would utilise the site in a fitting manner, enable certain Public Departments at present scattered in various buildings to be brought together under one roof, and effect a saving in rent. Next came a proposal that instead of using the site in Phillip and Hunter Streets, a block of buildings should be erected on Government land with frontages to Phillip, Bridge, and Young Streets, large enough to contain not only the Police and Prisons Departments, but also some others including the Department of Mines; and a Board, with the Government Architect as Chairman, having been appointed to report upon this idea, it was found that to accommodate all the Departments at present occupying rented

rented premises would require a building of twelve storeys; moreover, the Inspector-General of Police and the Comptroller-General of Prisons, who were on the Board, objected to being placed with any other Department, on the ground that their particular duties required a certain amount of isolation, and they both recorded a protest against the proposal, and resigned. A reconsideration of the matter then took place, with the result that it was decided to propose the erection of a building at the corner of Phillip and Hunter Streets, in which, in addition to the Police and Prisons Departments, the Public Service Board, and the Department of Audit should be located.

The reasons given for selecting the Public Service Board and the Department of Audit as suitable to be accommodated with the Police and Prisons Departments in one building, are stated by the Under Secretary for Public Works to be,—first, a desire to find for these two branches of the Public Service some accommodation apart from that which they have at the present time; and, secondly, that as this accommodation could not be obtained in the building proposed to be erected on the site in Phillip, Bridge, and Young Streets, it would be an economical plan to put them in offices at the corner of Phillip and Hunter Streets.

Description of the Building.

2. The building that the Government proposed to be erected on the block of land at the corner of Phillip and Hunter Streets, Sydney, would afford accommodation for the Departments under the Inspector-General of Police, the Comptroller-General of Prisons, the Public Service Board, and the Auditor-General. It is described as consisting of a basement and five floors, each containing on an average, exclusive of corridors, lavatories, and staircases, 5,530 superficial feet of available office space, which is to be distributed in the following manner:—

Inspector-General of Police	4,510	super. feet.
also the whole of the basement	6,818	,,
Comptroller-General of Prisons	5,047	,,
Public Service Board	5,543	,,
Auditor-General	10,592	,,

The Inspector-General of Police, in accordance with his requirements and wishes, is apportioned the ground-floor, with an entrance at the corner of Phillip and Hunter Streets; the whole of the basement area also is devoted to police purposes. The latter includes the use of open yard space for parade purposes, and will be approached by the police (mounted and foot) under an archway in Phillip-street. Should it eventually be found desirable to cover in the whole of the yard, the plan is so arranged that to accomplish this no structural alterations will be required to the main building.

The Comptroller-General of Prisons is accommodated on the first floor, with access by the entrance provided for the Inspector-General of Police.

The Public Service Board is placed on the second floor, with access through an entrance provided with both staircase and lift from Phillip-street.

The Auditor-General is accommodated on the third and fourth floors, access to which is the same as that for the Public Service Board.

In addition, quarters are provided in the upper portion of the building for a housekeeper, and also for photographic printing, &c., in connection with the Police and other Departments. Each floor contains its own strong-room. The single corridor running throughout the building is described as well lighted, and so arranged that a distinct system of horizontal air shafting attached to upright ventilating shafts is provided for every floor, into which shafts communication from every room is proposed to be made, and a constant exhaustion of vitiated air set up by means of electric fans. It is proposed to construct fireproof floors and ceilings on the Monier system, and to light throughout with electricity. The basement and ground-floor walls are to be of pitch-faced Sydney sandstone, and the remainder of the work is in brick, with a spare use of sandstone dressings.

The Site.

3. The site of the proposed offices is a portion of the land at the junction of Elizabeth, Hunter, and Phillip Streets, now occupied by a series of small, dilapidated tenements, the "Star Hotel," and the present offices of the Inspector-General of Police, and was purchased in 1885 by the Government from Messrs. Roberts and Curtis

Curtis at a cost of £27,500. The remainder of the land is at present used for shop, tramway, and other purposes, and is not dealt with in the present scheme. The site, the Committee are informed, offers special facilities for equalisation of light to all parts of the new building. It is conveniently situated as regards proximity to the tramway system, Parliament House, and the public offices in the neighbourhood of Phillip-street, and also admits of separate and distinct entrances for the Inspector-General of Police and the Comptroller-General of Prisons at one point, and for the Public Service Board and the Auditor-General at another, each group being in this manner placed independent of the other.

Estimated Cost.

4. The estimated cost of the work, including fireproof construction, lifts, ventilating gear, and sub-partitions if required, is £44,810.

Rentals Paid.

5. The total rental paid by the Departments to be accommodated in the proposed building is £1,270 per annum, against which may be placed the rent received from the "Star Hotel," £156 per annum.

Present Accommodation of the Departments.

6. According to the official statement put before the Committee by the Under Secretary for Public Works it appears that the various Departments to be accommodated are at present provided for in the following manner:—

The Inspector-General of Police occupies one building (described as unsuitable) upon the site of the proposed public offices, and No. 109 Phillip-street—the latter at a rental of £200 a year and taxes. No accommodation exists, it is stated, for general police purposes, and that for the detective service is described as most incomplete and deficient.

The Comptroller-General of Prisons is located in a portion of the premises at No. 28 (Austral Chambers) Elizabeth-street, at a rental of £250 per annum. The accommodation afforded is said to be too confined for the necessities of the Department.

The Public Service Board occupies No. 50 Young-street, at a rental of £320 per annum; and, although the accommodation available there, the Committee are informed, may be generally considered sufficient for present purposes, it does not permit of proper arrangement and disposition, and the occupancy by the Board of private premises is regarded as objectionable.

The Auditor-General's Department is housed in premises at No. 15 Bligh-street, at a rental of £500 per annum. It is in all respects, it is stated, much cramped for space. The arrangements of the building are described as unsuitable, and an urgent necessity is said to exist for increased accommodation both for officials and for records, in addition to which security against damage by fire—as proposed to be provided in the new structure—is much needed for the preservation of books and documents.

The Inspector-General, in his evidence, states that, in order to obviate the necessity for renting premises which are separated from his offices, he must obtain more extended space for his present staff; more accommodation is also required to provide for a day and night service for the headquarters of the police, so that there may always be an officer in attendance to receive reports and to circulate them, by telephone or otherwise, at any hour. Practically, he wants double the accommodation he at present has in the premises owned by the Government. More room is needed for photographic purposes, for the safe custody of valuable property which, from time to time, comes into the hands of the police, and for the detective staff. Most important necessities in relation to the offices generally are that they should be quiet and retired, and at the same time convenient of access. In these respects, the Inspector-General aims at advantages much appreciated in the Scotland Yard new premises in London. The building the Inspector-General and his clerical staff, which numbers eight persons, now occupy, belongs to the Government; but £200 a year rent is paid for an adjacent house necessary for the detective officers, numbering twelve.

According to the evidence of the Comptroller-General of Prisons, his present offices are altogether unsuitable. The building is ill-ventilated, very noisy, and dusty,

dusty, and as he is in possession of only a portion of the premises (the first floor), he is much confined for space, there being no waiting-room, no proper place for records which are increasing yearly, and no suitable accommodation for a caretaker. Great inconvenience, the Committee are informed, is experienced by the public in having to wait in a passage instead of in a private room. Officers from the various Departments, Members of Parliament, the general public, and discharged prisoners frequently have business with the Comptroller-General, and there is no means of keeping the various callers apart from each other. Proper accommodation for a caretaker is required for the reason that as the Department is kept open all night, the caretaker, who is a confidential officer, must be in attendance to receive telegrams or telephone messages necessary to be communicated to the Comptroller-General for his instructions. At least double the amount of accommodation at present available is, according to the Comptroller-General's evidence, necessary. The staff numbers ten.

The evidence of the Secretary to the Public Service Board, who appeared before the Committee on behalf of the Board, indicates that the clerks are inconveniently crowded, that the board-room is not large enough for requirements, and that a waiting-room with lavatory accommodation is necessary for female witnesses at inquiries. The staff numbers sixteen, and these, together with the three members of the Board, are accommodated in eight rooms, in addition to which there is a waiting-room. Each of the members of the Board has a room, and there are a board-room, a room for the Secretary, and three rooms occupied by clerks.

From the evidence of the Assistant Auditor-General it appears that in the premises at present occupied there is no more protection for books and documents than that afforded by one small safe, and ordinary rooms. The staff numbers fifty-two. In 1896 the Auditor-General expressed, before the Committee, the opinion that certain contemplated arrangements would probably have the effect of lessening the work done by the Audit Department, and therefore would lead to a reduction in the number of clerks and the space necessary for their accommodation; but since then, at the instance of the Public Service Board, the Audit Staff has been increased by the addition of the Treasury Inspecting Staff, who are now known as Audit Inspectors, and according to the Assistant Auditor-General, when examined in the present inquiry, it is impossible to say now how far the work of the Department is likely to extend. A taking over of Departments by a Federal Government might, however, lead to a reduction of work, and consequently of officers.

Comparison of Space.

7. The following statement gives a comparison of the space at present occupied by the Departments and that provided for them in the proposed new building:—

	Present space.	Space proposed.
Inspector-General of Police ...	4,574 feet, and a yard.	11,328 feet, including the yard.
Comptroller-General of Prisons	2,160 feet.	5,047 feet.
Public Service Board ...	3,024 ,,	5,543 ,,
Auditor-General	9,353 ,,	10,593 ,,

With regard to these figures the Government Architect explains that, while in one or two cases the additional accommodation may appear somewhat excessive, the building has been roughly divided into floors, and there is no reason why the two linked Departments should not interchange their rooms, so as to give and take as occasion may require. If, for instance, the Auditor-General should want more room, and it be found that the Public Service Board does not need as much as is allotted to it, an interchange will be possible without interfering with the other occupants of the building. In a similar manner an interchange will be possible between the Police and Prisons Departments. Or the extra space might be utilised by placing the Government Statistician and his staff in the building.

The Committee's Inquiry.

8. In dealing with the matter before them, it has been necessary for the Committee, while acquainting themselves fully with the design of the proposed building,

building, to ascertain as far as possible the present conditions in regard to accommodation under which the Departments are situated, as, though it may be advisable to find new and larger quarters for one or two, it may be possible to meet the wants of the others by some re-arrangement of offices, a method by which there would, of course, be brought about a material reduction in the proposed expenditure. They examined the Under Secretary for Public Works, the Government Architect, the Inspector-General of Police, the Comptroller-General of Prisons, the Assistant Auditor-General and Chief Inspector of Public Accounts, and the Secretary to the Public Service Board, respecting the plans for the new building and the requirements of the Departments proposed to be accommodated in it; the Chief Clerk of the Department of Lands, to ascertain what accommodation would be available in the Lands Office building should the Department of Mines be removed therefrom; the Principal Under Secretary, with regard to the advisableness or otherwise of placing some of the branches of the Chief Secretary's Department in the Lands Office, and as to the isolation of the Inspector-General's Offices; and the Secretary to the Railway Commissioners, with reference to the portion of the site for the new building which is in the possession of the Railway Commissioners. They also visited several of the Departments, with the object of ascertaining by personal inspection the extent to which the buildings occupied are utilised, and whether they could be made to provide suitable accommodation for any of the Departments proposed to be placed in the new offices.

Further, with a view to obtaining some expression of opinion from competent persons outside the Department of Public Works upon the proposed building, as represented by the plans, the Committee invited evidence from some of the architects of Sydney, two of whom attended and were examined, after inspecting the plans and acquainting themselves with the evidence of the Departmental officers.

Conclusions Arrived at.

9. The result of the inquiry is that the Committee find :—

(1.) That the building was designed to suit the site rather than to economically meet the requirements of the Departments.

(2.) That the accommodation provided is excessive.

(3.) That, prior to being offered accommodation in the new building, two of the Departments did not express any desire to leave their present quarters, and can remain where they are without any serious inconvenience.

(4.) That it is not advisable to associate other Departments with the Police and Prisons Departments.

(5.) That it is advisable to provide further accommodation for the Department of the Inspector-General of Police, with which may be associated that of the Comptroller-General of Prisons, and that this can be done at a cost not exceeding £16,000.

Method of designing the Building.

10. That the primary object in designing the proposed building was to erect offices such as in appearance would fully correspond with the pecuniary value of the site, as shown in the expenditure involved in its purchase, may be seen from both the official statement placed before the Committee by the Under Secretary for Public Works and the evidence given by the Government Architect. Though the request for additional accommodation came from only the Inspector-General of Police, who asked for an inexpensive building, the Department of Public Works, taking into consideration the price paid for the site, together probably with its position, decided to erect large and costly offices, and to fill the rooms on the floors not required by the Inspector-General with some of the Departments at present occupying rented premises. The idea of erecting a building of the kind desired by the Inspector-General, which, it was shown, could be done for £14,000, was, in the first instance, as already mentioned, set aside for a proposal to accommodate a number of the Departments, including that of the Inspector-General and the Prisons Department, in offices on the Government site fronting Phillip, Bridge, and Young Streets; but as it was found found undesirable to place the Police and Prison Departments there, it became necessary to return to the Phillip and Hunter Streets' site for their accommodation, and the building now before the Committee,

Committee, to cost £44,810, was proposed. In this, general appearance, as far as it corresponds with the value of the site, seems to have been the guiding consideration in the preparation of the plans,—a method of procedure which has not provided as economically as might have been done for the Departments to be served.

Excessive Accommodation.

11. The building, as represented by the plans, contains, without the basement, 25,692 feet of floor space, and with it 32,510 feet, which it is proposed to hand over to four small Departments. The evidence of the private architects examined with regard to the amount of floor space necessary for an individual officer, is that about 100 feet is the minimum for a clerk, and about 300 feet for the head of a Department. A space of 12 feet x 12 feet is said to be ample for a draftsman to work in, and considerably less is sufficient for ordinary clerical work. Taking the superficial area of each floor of the building and dividing it by the number of officers to be accommodated, the plans show, in the case of the Inspector-General of Police, 215 feet per individual; in that of the Comptroller-General of Prisons, 458 feet; in that of the Public Service Board, 291 feet; and in that of the Auditor-General's Department, 200 feet. Allowing for board-rooms and waiting-rooms, which, in some cases, appear to be unnecessary, will somewhat reduce these figures; but with that reduction the accommodation provided is still excessive.

The Public Service Board and the Audit Department.

12. According to the information before the Committee, neither the Public Service Board nor the Audit Department made any request for new offices or extra accommodation. Nor does the Comptroller-General of Prisons appear to have expressed any desire for larger premises until it was suggested that he might share the building which it was proposed to erect for the accommodation of the Inspector-General of Police and his staff. The Public Service Board and the Audit Department could, of course, adapt themselves to larger quarters; but, at the same time, it is admitted that they can do fairly well where they are. The only inconvenience of any consequence experienced by the Public Service Board, in connection with its present offices, is the want of a waiting-room for females; and the only defect of any particular importance in the Audit Offices is the absence of proper accommodation for the safe custody of records.

Necessary provision for the Inspector-General of Police and the Comptroller-General of Prisons.

13. With regard to the Inspector-General of Police, the evidence is conclusive that he requires larger and better accommodation, and that, as far as is desirable, it should be apart from that of other Departments, and the Committee have no hesitation in recommending that the necessary accommodation be provided. No position more suitable for the purpose than that at the corner of Phillip and Hunter Streets could be selected, as while it is separated by some distance from the site of any other Public Department, it is within easy reach of Parliament House, the Supreme Court, the public offices generally, and the wharfs. A comparatively small building, with a fairly large yard space attached, would be sufficient for the Inspector-General's requirements, but in view of the value of the land, such a building, it is thought, would scarcely be in accordance with the site, and as the Prisons Department, which is closely allied to the police, is in rented and somewhat confined premises and may with advantage be removed, it is considered that an additional storey should be provided for the Comptroller-General and his staff. To this plan the Inspector-General and the Comptroller-General agree, and the Committee are of opinion that the cost need not exceed £16,000. This will provide a building three floors less than are contained in the proposal referred to the Committee, but so far as relates to the basement, the ground floor, the first floor, and the yard space, similar in area and accommodation to the larger design, and so constructed as to admit of being raised in height at any time in the future. Some misunderstanding occurred with regard to the evidence given by the Government Architect as to the cost of a building comprising the basement, ground floor, and first floor of the plans submitted for consideration; but he is clear upon the point that offices sufficient to accommodate the Inspector-General of Police and the Comptroller-

Comptroller-General of Prisons, and capable of being afterwards increased in height, can be erected for £16,000. This is confirmed by evidence given before the Committee in another inquiry relative to offices now in course of erection at the corner of Bent and O'Connell Streets, by a private architect, for a large mercantile company. In the case of that building, which is one of four storeys with an attractive exterior, accommodation is being provided for a staff of seventy, at an approximate cost of £18,000. In the building required by the Inspector-General of Police and the Comptroller-General of Prisons accommodation is wanted for thirty officers, at a cost not exceeding £16,000. Of the building in which it is proposed to place the Public Service Board, the Department of Audit, as well as the Police and Prisons Departments, the Inspector-General of Police does not approve, although he is prepared to occupy his portion of it if nothing more suitable is provided for him. The site, he states, was purchased with a view to make a headquarters for the Police, where the operations of the office could be carried on with the secrecy necessary to their success, and except as regards the Prisons Department, it is, in his opinion, objectionable to have other Departments housed with him and his staff. In this view the Principal Under Secretary and the Comptroller-General of Prisons distinctly agree.

Decision of the Committee.

14. The decision arrived at by the Committee is shown in the following extract from their Minutes of Proceedings, of 24th March, 1899:—

Mr. Levien moved,—"That, in the opinion of the Committee, it is not expedient the proposed erection of Public Offices on land with frontages to Phillip and Hunter Streets, Sydney, at a cost of £44,810, as referred to the Committee by the Legislative Assembly, be carried out; but the Committee recommend the erection of a building containing a basement, ground floor, and first floor, at a cost not exceeding £16,000."

The motion was seconded by Mr. Trickett.

Dr. Garran moved, "That the motion be amended by the omission of the word 'not' before the word 'expedient.'"

The amendment was seconded by Mr. Watson, and negatived on the following division, upon the question, "That the word proposed to be omitted stand part of the question:—

Ayes, 4.	Noes, 3.
Mr. Perry.	Dr. Garran.
Mr. Shepherd.	Mr. Dick.
Mr. Trickett.	Mr. Watson.
Mr. Levien.	

The motion was passed on the following division:—

Ayes, 4.	Noes, 3.
Mr. Perry.	Dr. Garran.
Mr. Shepherd.	Mr. Dick.
Mr. Trickett.	Mr. Watson.
Mr. Levien.	

JOHN PERRY,
Chairman.

Office of the Parliamentary Standing Committee on Public Works,
Sydney, 28 March, 1899.

PARLIAMENTARY STANDING COMMITTEE ON PUBLIC WORKS.

MINUTES OF EVIDENCE.

PUBLIC OFFICES, PHILLIP AND HUNTER STREETS, SYDNEY.

WEDNESDAY, 18 *JANUARY*, 1899.

Present:—

JOHN PERRY, Esq. (CHAIRMAN).

The Hon. PATRICK LINDESAY CRAWFORD SHEPHERD.
The Hon. ANDREW GARRAN, LL.D.
The Hon. WILLIAM JOSEPH TRICKETT.
WILLIAM THOMAS DICK, Esq.
JOHN CHRISTIAN WATSON, Esq.
ROBERT HENRY LEVIEN, Esq.

The Committee proceeded to consider the expediency of erecting Public Offices on land with frontages to Phillip and Hunter Streets, Sydney.

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

1. *Chairman.*] You have prepared a statement as to the necessity for the proposed new buildings? Yes; it is as follows :— R. R. P. Hickson.

Department of Public Works, Sydney, 17 January, 1899. 18 Jan., 1899.

MINUTE PAPER.—*Proposed new Public Buildings, Hunter and Phillip Streets, to accommodate the Inspector-General of Police, the Comptroller-General of Prisons, the Public Service Board, and the Auditor-General.*

IN a letter dated 6th November, 1895, the Inspector-General of Police stated that the premises occupied by his Department were too small, and suggested that buildings of an inexpensive character should be built on the land purchased by the Government at the corner of Hunter and Phillip Streets. This letter was referred to the Government Architect for a sketch plan, which was approved by Mr. Brunker, 8th November, 1895, at an estimated cost of £14,000.

By a minute dated 28th January, 1897, the Government Architect stated that there would be sufficient room in the new buildings for the Comptroller-General of Prisons in addition to the Inspector-General of Police. This minute was forwarded for authority to prepare plans, and was approved by Mr. Young, 12th February, 1897.

In a report obtained from an officer in the Government Architect's Branch, it was suggested that, as the site was a valuable one, buildings of a proportionate value should be erected thereon, and thus at the same time enabling the various scattered Departments to be gathered under one roof and effect a saving of rents.

I subsequently suggested that a block of buildings large enough to contain the Mines Department, the Police Department, the Prisons Department, and the various other Departments, be erected on the land situated at Phillip, Bridge, and Young Streets. With this object in view Mr. Young formed a Board, with the Government Architect as chairman, to report upon the scheme generally.

The Board found that in order to accommodate in one building all the Departments at present occupying rented premises, it would require one of about twelve stories—a building altogether too unwieldy. Moreover, the Inspector-General of Police and the Comptroller-General of Prisons objected to their Departments being housed with so many other Departments, as their particular duties required a certain amount of isolation.

In order to bring the proposed building to a convenient size, and at the same time to satisfy the Prisons and Police Departments, the Board decided that it would be advisable to erect another block of buildings at the corner of Phillip and Hunter Streets, in which, in addition to the two Departments mentioned, the Public Service Board and the Auditor-General's Department could be accommodated.

The proposed building consists of a basement and five floors, each containing on an average 5,530 super. feet of available office space, exclusive of corridors, lavatories, and staircases, which is to be distributed in the following manner :—

Inspector-General of Police	4,510	super. feet.
,, ,, together with the whole of the basement	6,818	,,
Comptroller-General of Prisons	5,047	,,
Public Service Board	5,543	,,
Auditor-General	10,592	,,

The proposed scheme for the erection of these public offices is explained in the accompanying plans, marked Nos. 1 to 6, inclusive.

The various Departments to be accommodated are housed at present in the following manner :—

Inspector-General of Police.—This Department now occupies one unsuitable building upon the site of the proposed public offices and No. 109, Phillip-street—the latter at a rental of £200 a year and taxes. No accommodation exists for general police purposes, and that for the Detective service is of the most incomplete and deficient character.

Comptroller-General of Prisons.—This Department occupies a portion of the premises at No. 28, Elizabeth-street, at a present rental of £250 per annum. The accommodation is also too confined for the necessities of the Department.

Public Service Board.—This Department now occupies No. 50, Young-street, at a rental of £320 per annum; and, although the present accommodation may be generally considered sufficient for present purposes, it lacks proper arrangement and disposition, while its occupancy of private premises is objectionable.

Auditor-General.—This Department occupies premises No. 15, Bligh-street, at a rental of £500 per annum. It is in all respects much cramped for space. The arrangements of the building are unsuitable for the purpose, and an urgent necessity exists for increased accommodation both for officials and for the records, in addition to which security against damage by fire—as proposed to be provided in the new structure—is much needed for the preservation of the documents.

 The

R. R. P. Hickson.
18 Jan., 1899.

The total rentals paid, therefore, for outside premises, and exclusive of those occupied by the Inspector-General of Police on the site in question, amount at present to £1,270 per annum.

Site.—The land proposed to be utilised is a portion of that lying at the junction of Elizabeth, Hunter, and Phillip Streets, now occupied by a series of small, dilapidated tenements and the "Star Hotel," and was purchased in 1885 from Messrs. Roberts and Curtis at a cost of £27,500. The remainder is at present used for shop, tramway, and other purposes, and is not dealt with in the present scheme. This site offers special facilities for equalisation of light to all parts of the new building. It is conveniently placed as regards proximity to the tramway system, Parliament House, and the public offices generally in the neighbourhood of Phillip-street, and also admits of separate and distinct entrances for the Inspector-General of Police and the Comptroller-General of Prisons at one position, and for the Public Service Board and the Auditor-General in another position, placing both groups independently of each other.

There is no trouble anticipated as regards the nature of the foundations, nor any cost in excess of that ordinarily required for a building of this character.

The erection of this building will necessitate finding temporary offices for one portion of the Inspector-General of Police staff only.

The Inspector-General of Police, in accordance with his own particular requirements and wishes, is placed on the ground floor, with an area of 4,510 superficial feet, having entrance at the corner of Phillip and Hunter Streets, while the whole of the basement area (6,818 superficial feet) is devoted for police purposes in addition. This latter also includes the use of the open yard space for parade purposes, and can be approached by the police (mounted and foot) under a distinct archway in Phillip-street. The plan is so arranged that, should it be found eventually desirable to cover in the whole of this yard, no structural alterations will be required to the main building to accomplish this.

The Comptroller-General of Prisons is placed on the first floor, with an area of 5,047 superficial feet, and with access from the same entrance as the Inspector-General of Police.

The Public Service Board is placed on the second floor, with an area of 5,543 superficial feet, and access through an entrance provided with both staircase and lift from Phillip-street.

The Auditor-General is accommodated on the third and fourth floors, with a total area of 10,592 superficial feet, and access by the same means as provided for the Public Service Board.

In addition to this, quarters are provided for the housekeeper in the upper portion of the building, and also for photographic printing, &c., in connection with the Police and other Departments.

Each floor contains its own strong-rooms.

The single corridor running throughout the building is well lighted, and so arranged that a distinct system of horizontal air shafting attached to upright ventilating shafts is provided for every floor, into which communication from every room is proposed to be made, and a constant exhaustion of vitiated air set up by means of electric fans.

It is proposed to construct fire-proof floors and ceilings, on the Monier system, and to light throughout with electricity.

The basement and ground-floor walls are shown to be of pitch-faced Sydney sandstone, and the remainder of the work in brick, with the spare use also of sandstone dressings.

The whole appearance will be quiet, but substantial, and has been designed with a view of absolute utility.

The cost, including fireproof construction, lifts, ventilating gear, and sub-partitions, if required, is estimated at £44,810.

For the sake of comparison with the cost of other public buildings in Sydney, it may be of advantage to quote the following :—

Building.	Cost per cube foot.	Total cost.	Remarks.
		£	
Proposed new building	1/1¼d.	44,810	
Lands Office	1/7d.	249,000	
Public Works and Colonial Secretary's Offices ...	1/5¼d.	236,000	
General Post Office	2/5d.	385,000	Not including recent additions.
Custom-house	1/7d.	64,000	

The sum of £14,000 is voted on Loans 1896, as a first instalment for a building on this site, and is available for use in the erection of any larger building thereon that may be determined upon.

By a resolution of the Legislative Assembly, on 22nd ultimo, it was decided to refer the matter to the Parliamentary Standing Committee, to consider and report on the expediency of erecting the offices in question.

2. I observe from your statement that the Inspector-General of Police objected to being accommodated in a building in which he would be likely to be interfered with by other Departments? Yes; that objection has reference to the proposal to erect a building at the site at Bridge, Phillip, and Young Streets.

3. I notice that in the building now before us, you nevertheless propose to provide accommodation for other Departments? Yes.

4. In what way have the objections of the Inspector-General of Police been overcome? He will have practically a different building with a distinct approach. He will not be connected in any way with the portion of the proposed building which will be occupied by other Departments; he himself will be able to express his opinion upon that point.

5. It has been found impossible to construct the whole of the accommodation required by the different Departments upon the site fronting Bridge-street? Yes; it would require a building of some twelve stories.

6. *Mr. Trickett.*] The portion of your statement relating to the comparative cost of the different public buildings does not include the cost of the land? No; not in the case of this particular building.

7. Does the computation exclude the cost of the land in regard to the other buildings? Yes.

8. I notice that in January, 1896, the Government Architect submitted plans for a building for the Comptroller-General of Prisons and the Inspector-General of Police;—that was approved by the Secretary for Public Works, Mr. Young, and it appears to be a feasible plan in keeping together two Departments of a similar character; whereas the proposal now submitted to us includes two Departments altogether distinct;—for instance you are seeking to put under one roof the Inspector-General of Police, the Comptroller-General of Prisons, the Public Service Board, and the Auditor-General;—the two firstnamed Departments appear to be Departments which could be very well worked together, resulting possibly in a saving of expense from their being under the same roof; but how is it that you have selected the Auditor-General's Department and the Public Service Board? For very good reasons. In the first place we want to get some accommodation for those two Departments apart from that which they have at the present time; we cannot get it on the site in Bridge-street, as it would involve too high a building, and Mr. Vernon thinks that it would be economy, therefore, to put them in the building at the corner of Phillip and Hunter Streets. It can be done without any additional roof expenditure.

9. That is the only reason why these two Departments are being selected? That is the only reason.

10. How does the proposed expenditure compare with the present rents the Government is paying for premises occupied by the Auditor-General and the Public Service Board? There will be a saving of £1,270 a year in rents.

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11. Comparing that amount with the interest on the cost of the building and land, how will it work out? The proposed buildings are to cost £44,810, and the land cost in 1886 £27,500. The two amounts make a total of £72,310. Allowing 4 per cent. you would have a total of nearly £3,000 a year.
12. And at the present time the Government are paying in rents for these two Departments £1,270? Yes.
13. So that looking at the question from an economic point of view the proposed buildings will involve a greater expenditure to the State? Yes.
14. *Mr. Watson.*] The Government is receiving rent at the present time from a portion of the premises on the Phillip and Hunter streets site? Yes.
15. *Mr. Trickett.*] Can you give us those particulars? I cannot; but it must be borne in mind that the Auditor-General requires more room, and it cannot be obtained where the Department is now located.
16. *Mr. Watson.*] The Inspector-General of Police also requires more accommodation? Yes; that must be provided in any case.
17. *Mr. Trickett.*] If the Auditor-General's Department and the Public Service Board are accommodated in the proposed buildings, will not that have the effect of very much curtailing the accommodation available for the Inspector-General of Police? No; I think the Inspector-General of Police will tell you that the accommodation proposed to be provided for him is sufficient.
18. He has at the present time space for the accommodation of a large number of men? He will still have that. He will have the whole of the yard space, the ground floor, and basement. If you include the yard space he obtains 10,000 feet as against 5,000 feet given to the other Departments.
19. Are we to understand that the proposed buildings will not cover as much ground as the present buildings? They will cover a little more, but the yard space required for parading the men is not covered.
20. I notice that a point is made in your statement of the ventilation of the proposed buildings;—is the building of a character which would require special provision in that respect? I think all buildings in this hot climate require special consideration in that regard.
21. Are you providing anything special in the way of ventilation? Mr. Vernon will be able to give you the details; but we are making better provision than has been made in the buildings already erected.
22. Mr. Vernon will also be able to give the description of fire-proof construction referred to? Yes.
23. In arriving at the classification of the Departments to be accommodated upon this block of land, who was consulted? I suggested to Mr. Young that a Board should be appointed, with Mr. Vernon as Chairman. The Board consisted of one officer from the Public Instruction Department, one from the Lands Department, one from the Mines Department, one from the Police Department, one from the Prisons Department, and one from the Auditor-General's Department.
24. You yourself were not a member of the Board? No.
25. I suppose that, beyond handing in the general statement you have read, you cannot give us any detailed information? No; you will be able to obtain that from Mr. Vernon, as far as the building is concerned, and from the heads of the Departments proposed to be accommodated.
26. *Dr. Garran.*] In answer to Mr. Trickett, you explained that in the new building we shall really be paying more per annum for the accommodation of these Departments than the Government is now paying in rent? Yes.
27. But I understand you to say that they will be provided with very superior accommodation? Yes.
28. Do you think the superior quality of accommodation will compensate for the extra annual cost? I do. Further than that, I would point out that you could not give the additional accommodation required by the Auditor-General's Department unless you obtained another house for it.
29. There is an absolute necessity for additional accommodation both for the Auditor-General and for the Inspector-General of Police? So I am informed.
30. In the case of the Auditor-General's Department, there is also the necessity for fire-proof storage for the many valuable documents in its custody, which storage it does not possess at the present time? Yes.
31. This block of land was bought by the Government with the intention that new public offices should be erected upon it? Yes.
32. The property was acquired some years ago, upon the ground that it was a specially suitable locality for public offices, especially so far as the police were concerned? Yes; it was pointed out by the Inspector-General of Police himself.
33. The large yard there has been very convenient for police purposes? Yes.
34. You could hardly obtain so large a yard, I suppose, in any other portion of Sydney? I do not think you could get a yard like it in any other part of the city.
35. As to the putting of three or four different Departments in the same building with the police, I understand that they will be on different floors? They will be on different floors, and will have distinct entrances.
36. So that the police will be as detached as though they were in a separate building? Yes.
37. All the Departments accommodated in the building will have the advantage of a strong-room? That is another detail which Mr. Vernon will be able to speak upon.
38. I wished to know whether it was intended to carry the fire-proof strong-room from the ground floor right up? That is intended.
39. Then each Department accommodated will have the advantage of a fire-proof strong-room for its own use? Yes.
40. That is an advantage which these Departments do not possess at the present time? Quite so.
41. The Government will require to erect buildings both on the block opposite this building and also on the block under consideration? Yes.
42. Neither would be large enough singly for the erection of a building to take in all the Departments requiring accommodation? No.
43. So that the Government are compelled to build upon both blocks? Yes.
44. The site now occupied by the police is too valuable for the erection of a small building for their accommodation alone? Yes; it is thought that it would be a mistake to erect such a small building on so valuable a site.
45. And it is thought that if you give the Inspector-General of Police all he asks for there can be no objection to accommodating other Departments there? No.
46. Do you know whether the plans have been submitted to the Inspector-General of Police? Yes.
47. Has he approved of them? I understand so.
48. Have they been submitted to the other Departments concerned? Yes.
49. And they are all satisfied with the accommodation proposed to be provided? I believe so.

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50. Have you so planned the subdivision of rooms as to meet the requirements of each Department? Yes.
51. You have spoken of the necessity for a photographic room for police purposes? Yes.
52. Could not all that work be done at the Government Printing Office? No; I think the Inspector-General of Police will tell you that the persons they photograph must be photographed on their own premises. It would not do, I understand, to carry them to another building for that purpose. I know that the Inspector-General made a great point of having a place in which the police could photograph prisoners.
53. Do you not regard it as rather a wasteful expenditure to keep a skilled photographer there for only occasional use? I could not say how much he would be required, but I know that the Inspector-General of Police made a great point of having a place in which they could take photos. of prisoners.
54. But, as a rule, the prisoners would not be at the Police Office, they would be at a gaol? They are brought in there, I understand, as they are taken up from the street or elsewhere, and they undergo some sort of examination, I believe. What it is, I do not know, but I know that they are photographed there.
55. Before they are sent to the lock-up? So I am informed.
56. In your statement you make a comparison between the cost of erecting the proposed building, and the cost of erecting other public buildings; is it quite fair to make that comparison with buildings erected at a time when building was certainly much dearer than it is now; take the Post Office, for instance? I suppose building was dearer then, but a portion of the building to which you refer was erected in later years.
57. The main portion was erected before the great fall in value? Yes; prices are less now than they were then.
58. Some of the other buildings to which you refer were erected when Mr. Bruce Smith was Secretary for Public Works? Yes; prices have fallen since then.
59. So that it would be hardly fair to make out that you are saving so much per cubic foot over your predecessors? This is not a case of predecessors, because Mr. Vernon is comparing the building with some of his own.
60. You are also comparing brick buildings with stone buildings? Yes.
61. The Government has put up suitable buildings lately for public offices to save the renting of premises? Yes. In the case of the Works Department a great number of buildings were rented all through the city. The Government had not only to consider the cost of that, but the great inconvenience which existed in having the buildings scattered. The Lands Office had also branches scattered over the city, and the Mines and Public Instruction Department are still in that position.
62. Speaking generally, has the policy of the Government building for itself been an economical one? I think so, most decidedly.
63. And it has been decidedly more convenient? Quite so.
64. On the whole you think it has been a good policy? I do.
65. And that so far as your experience goes the Government is justified in continuing it? I think so.
66. Could you give us any figures to prove that there has been a saving of money? As far as the Works Department is concerned I think I could; but I do not know that I could do so, so far as other Departments are concerned.
67. In any case, you think the Government gets its money's worth in superior accommodation? It certainly gets better accommodation, and there is a great convenience in the working of the Department. The public are greatly convenienced in not having to travel over several streets, as they formerly had to do, in connection with public offices.
68. The work is also more concentrated? Yes.
69. And it is under better supervision? Yes.
70. On the whole, you have no doubt as to the policy having been a success? I have not the slightest doubt about it.
71. *Mr. Watson.*] Is the total area of the block bought by the Government, in 1886, to be occupied by the proposed buildings, or only a portion of it? Mr. Vernon will be able to give you that information.
72. Can he also give us information as to the rental received by the Government for premises upon the land which it is proposed to build upon? I think Captain Jackson will be able to give you that information if Mr. Vernon cannot.

Walter Liberty Vernon, Government Architect, sworn, and examined:—

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73. *Chairman.*] I understand that you designed the proposed buildings? Yes.
74. The accommodation which is proposed to be afforded having been brought under your notice by the various Departments concerned? Yes; the accommodation proposed is in proportion to the requirements they have individually submitted.
75. You have had consultation with the heads of the various Departments as to their requirements? Yes.
76. Are they perfectly satisfied with the arrangement you propose to make? Yes. I have taken an opportunity to see the responsible heads of all the Departments, and as far as I can understand we have met their requirements. There are one or two little points of detail which may come before you, but which do not affect the principle of the construction. I think, in the case of the Comptroller-General of Prisons, he requires a residence for a caretaker, as well as that provided for the police. That happens to be a matter of detail which has cropped up since the plans have been prepared. Otherwise I do not know of any points upon which requirements have not been met. The Public Service Board, the Auditor-General, the Comptroller-General of Prisons, and the Inspector-General of Police, have all been supplied with plans.
77. I understand that portion of this block of land runs into Elizabeth-street, and is now occupied by the Railway Commissioners? Yes; the land owned by the Government continues round to a point in Elizabeth-street, opposite the alignment from which we start in Phillip-street. It embraces the whole of the corner commencing at the end of, I think, No. 69, Phillip-street, and continuing round to, and including the tramway waiting sheds, and the buildings over them.
78. That portion of the property in Elizabeth-street is under the control of the Railway Commissioners? I understand so.
79. Have you considered whether it would be possible to provide upon this block the whole of the public offices required—that is to say, could you take the whole of the block, supposing it were necessary? That has been considered. The plans placed before the Committee are based upon the assumption that some day

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day it may be necessary to continue round into Elizabeth-street. The plan is so arranged as to admit of a continuation of the frontage in Elizabeth-street, to complete the whole building. There are some rent-producing properties there which it is not desirable at present to destroy. Nothing is to be gained by it.

80. What proportion of the Government block will be occupied by the proposed building? Almost two-thirds of it.

81. *Mr. Trickett.*] At what point do you start in Hunter-street? At the point adjoining a small stationer's shop. There are two empty, dilapidated, dirty-looking tenements there on portion of the site which we shall occupy.

82. The proposed buildings will extend round to the shops and residential chambers? Yes.

83. *Chairman.*] Suppose you occupied the whole of the block with buildings, would it be possible to accommodate there the Mines Department? No; if you look at the building which it is proposed to provide for the Mines Department, shown on the plan in red, you will see that it could not be provided on this block. There is also the Public Instruction Department to be considered.

84. Could you give the Committee a statement showing the floor space occupied by the Government offices, taking a period twenty years back, ten years back, and comparing them with to-day? I am afraid there would be a difficulty in obtaining the information; but I can give you the present accommodation.

85. Could you give us the average rental paid during that period? I have here a short statement showing the accommodation now occupied by these departments as compared with the accommodation which it is proposed to give them. The Inspector-General of Police at present has 4,574 feet and a yard, and we propose to give him 11,328 feet including the yard. Then the Comptroller-General of Prisons has 2,160 feet as against the proposition for 5,047; the Public Service Board has 3,024 feet as against a proposition of 5,543 feet; the Auditor-General has 9,353 feet as against the proposal for 10,593 feet. I might also explain that in one or two of these cases the additional accommodation may appear somewhat excessive. The building has been roughly divided into floors for these departments, but there is no reason why the two linked departments should not interchange their rooms so as to give and take as occasion may require. For instance, if the Auditor-General requires more room and it is found that the Public Service Board do not require so much room an interchange will be possible without any interference with the other occupants of the building. The same observation applies to the Police and the Prisons Departments.

86. Mr. Hickson, in his statement, drew a comparison between the cost of different public buildings, and the cost of the proposed building. He pointed out that the cost of the proposed building would be 1s. 1¼d. per cubic foot—how do you account for the difference in price exhibited between the proposed new buildings, and the Post-Office which is set down at 2s. 5d. per cubic foot. I suppose that in the case of the Post Office the material is more expensive? Exactly; but the object in giving a comparative statement is not to show the cheapness of one building as compared with another, but to show that the general tendency in the building of public offices is to reduce the cost as much as possible, and as a means to this end the character of the material is somewhat altered. Of course it would be quite possible to rebuild the Post Office at the present day at a less cost than 2s. 5d. per cubic foot, because prices are somewhat lower. Then on the other hand, you would have to include in the 1s. 1¼d. per cubic foot more modern constructional work, as regards fire-proofing, lifts, and things of that kind. That adds to the cost of the simple fabric, and is not included in the cost of the original buildings compared with it. I have a list showing the cost of a number of public buildings here and elsewhere.

87. *Dr. Garran.*] Will you give us particulars of some of those buildings? Yes. The Houses of Parliament in London cost 2s. 6d. per cubic foot; the British Museum, 1s. 6d.; the Home and Foreign Offices, 1s. ⅛; the Royal Exchange, 11d.; St. Thomas' Hospital, 9d.; the Bow-street Police Office, 11d; the General Post Office (new building), 8⅛d. The cost of the General Post Office in Sydney was 2s. 5d.; the cost of the Mortuary Station at Redfern 1s. 1d., and of a similar building at Rookwood, 1s.; the Custom House in Sydney cost 1s. 7d.; the Fire Brigade Station, 11⅛d.; the University Physical Laboratory, 5¼d., that is a temporary building; the University Medical School, 11¼d.; the lock-up in George-street, 1s. 7½d.; the Bathurst gaol, 12⅜d.; the Goulburn gaol, 1s. 1⅛d; the Callan Park Asylum, 10⅛d.; the Goulburn Court-house, 11⅛d.; the Court-house, lock-up, and Post and Telegraph Office, Balmain, 9⅛d.; the Free Public Library, 1s. 3d.; the Court-house and lock-up, and the Post and Telegraph Offices at St. Leonards, 10d.; the Eastern Suburbs Court-house (Paddington), 7⅜d.; the lock-up at Pyrmont, 1s. 1¼d. I have taken these buildings at random.

88. As compared with the price of the Callan Park buildings, the proposed new buildings will not be particularly cheap? They will be cheap when one considers the internal fittings necessary for this building, and which were not required at Callan Park.

89. The external stone work at Callan Park would be dearer? Yes; but the difference is made up in the internal cost.

90. Is there anything special in the internal construction of the work to which you wish to direct our attention? The whole of the floors will be fire-proof, and the whole of the brickwork from top to bottom will be in cement. The fire-proof construction is that known as the Monier system, and we shall adopt it if we get reasonable terms. It combines extreme strength and elasticity with a minimum of weight, and from tests made it has proved very effective against the action of fire or heat. I am strongly of opinion that we could not do better than use it in the construction of floors.

91. How much dearer will it be than ordinary floors? It would be no dearer than fire-proof flooring of a heavier character, but it would cost more than ordinary wood flooring.

92. How much more would it cost than ordinary wood flooring? It would cost about 7s. a yard as against—comparing it with other cement floors—a cost of from 4s. upwards.

93. If, for instance, a fire were to break out in the offices of the Inspector-General of Police, it would not go into the room above? It should be confined to the room in which it broke out. The whole of the partitions shown on the plan are the necessary constructional partitions. These are all of brick, and should any sub-partitions be required to divide the larger rooms, they can be made, although it is really against modern practice. It is found that offices often get out of control, and are subdivided to an excessive extent; but assuming that they are subdivided in this case, I should prefer to use fire-proof partitions, which have recently been introduced. They are of iron stamped into corrugated shape, and are covered on both sides with asbestic plastering. For strength and endurance and fire-resisting properties, this has been proved to be very good.

94. How much dearer is it than lath and plaster? It comes to practically the same thing. I am using it in the General Post Office in the roof of the large telephone exchange.

95.

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95. Do you propose to continue a fire-proof room for books and valuable documents right through from the basement? Yes; the room on each floor will be at the internal angle of the building. The ventilating shaft, which is shown, is the small area which is being made use of to collect the vitiated air from the rooms. It is carried along the corridors in a false ceiling. The height of the corridors is 2 ft. 6 in. less than the height of the room, consequently a chamber along the whole of the corridors is used to absorb the vitiated air from the rooms. To do this effectually, mechanical means will be applied to the shaft, and we propose to employ an electric fan.
96. Do you propose to light the buildings by gas or by electricity? By electricity. We shall use the shaft and false ceilings for purposes of that kind.
97. The electric wire can be got at at any time? Yes.
98. Will your brick wall in cement be damp-proof? Yes. The walls will be thick, because the building is a great height. We shall use good bricks with a cement bedding. There will be no fear of damp.
99. Have you tested such walls in any buildings which you have erected;—you know how searching rain is in a gale? Yes; they have been tested in a great many places. If the walls were thinner I should have recommended walls of a hollow character, but they are not necessary in this case.
100. What thickness will the walls be? They will be in accordance with the regulations of the City Building Act. Although we are not bound by it, we shall necessarily fall in with it. The walls will decrease in thickness as they go up,
101. Why are you not bound by the Building Act;—do you not think the Government ought to obey the law in a case of that kind, if only to set a good example? We always build somewhat in excess of the requirements of the Act.
102. *Mr. Levien.*] Do you propose to carry out these buildings by day-labour or by contract? By contract.
103. Do you think it would be cheaper to carry it out by contract? I think so in a case of this kind, because it is an entirely new building. There is no interference with existing occupants, and it is not a case of alteration with an existing building. In such a case as this I recommend the ordinary process of calling for public tenders.
104. Do you think any saving would be effected if the building were erected by day-labour? It is very difficult to say. The question is a very difficult one to answer, although I do not think day-labour would cost more. My experience of day-labour in the Works Department, in public buildings, has been, so far, that it is successful. We have been enabled to carry out alterations of existing buildings, and have avoided contractors' claims, which might otherwise have arisen.
105. You think day-labour can be employed advantageously when you are making additions to buildings? Yes.
106. But not when you are carrying out a new building like this? No. In a case of this kind I do not recommend day-labour at all, I recommend contract work.
107. How many rooms have you provided for the Inspector-General of Police? There is an entrance hall and waiting-room; provision for the Chief Clerk, the Inspector-General of Police, a board room, and a large room for correspondence, records, and accountant. On the other side we propose to devote the whole of the space to the Detective Office. The Inspector-General has an idea of making a sort of miniature Scotland Yard.
108. The whole of this accommodation will be used by the police alone? Yes; the Inspector-General has two floors; the men will be paraded on the lower floor, and the second floor will be for the administration of the whole service throughout the Colony.
109. *Mr. Dick.*] Is there any reason which led you to design the proposed buildings in brick instead of in stone, in conformity with the majority of public buildings? In the very first communication received from the Inspector-General of Police, some two or three years ago, he insisted upon the simplest and cheapest building we could put up for him. He was particularly anxious that for police purposes there should be no architectural display at all. This design has grown under his first requirement.
110. Is there a material difference between the price of the best brick buildings and stone buildings? There is some difference.
111. I understand that the prices are similar? There is not much difference as between stone and first-class brick.
112. What is the difference? About 10 per cent.; that would be in the face of the work.
113. What would be the difference in the case of these buildings estimated to cost about £44,000? It would come to about £2,500.
114. You would not recommend then that the building should be in conformity with other public buildings—of stone? I designed it partly from the suggestion of the Inspector-General of Police and partly from an idea that perhaps a change in design might be desirable.
115. Now that the Comptroller-General of Prisons, the Public Service Board, and the Auditor-General are also to be housed in the same building, I suppose the opinion of the Inspector-General of Police would not entirely govern the question of design? I suppose not; but a great many public buildings are designed in brick and stone.
116. Is this building part of a general scheme for the housing of public Departments which are now accommodated in private buildings? Yes.
117. You are taking into consideration the fact that other Departments will repuire accommodation, and you put these buildings forward as part of a larger scheme? Yes. I can give you some particulars from the report of the Board to which the Secretary for Public Works referred the matter. The original proposal was to build for the Inspector-General of Police on the site under consideration, a building for the police alone, at a cost of £14,000. The money was voted for that purpose. Then it was found desirable to find accommodation for the Comptroller-General of Prisons. Before anything further was done the scheme was enlarged to include that accommodation. In the meantime the Mines Department which is still scattered, required accommodation, although the main Department occupies an extensive portion of the Lands building, the laboratory is at Lower George-street, and some of the branches are in the Works Department; the Museum being in the Domain in the old temporary technological building. In addition to the Mines Department, it would be necessary to give some consideration, before long, to the Public Instruction Department, which has entirely outgrown its accommodation. The scheme grew, therefore, until a whole number of small Departments were added to it—the Charities, the Fisheries, the Electoral Registrar, the Medical Board, the Pharmacy Board, the Government Statistician—all these

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Departments are housed in separate buildings, and are being driven from pillar to post, some of them not having any permanent location. Under these circumstances it was considered desirable to put them all into one building, but it was found impossible to do this on account of the enormous height of building which would be required. Therefore, at the express wish of the Inspector-General of Police, who objected to come down as far as Bridge-street, on many grounds, so far as his Department was considered, the original scheme in which he was included with the Comptroller-General of Prisons was fallen back upon. Those two officers then left the Board, and others took their places, because it was found that they could have nothing to do with the scheme for general offices. Still the scheme had to be reduced, because the building was found to be too large, and the result was that the Public Service Board and the Auditor-General were included in the scheme now under your consideration. They were included for two reasons. One was that the building required more storeys in order that it might be proportioned to the value of the site. The other was to fall in with a scheme of reducing the size of the Bridge-street building. The Board subsequently reported that there would be only room at Bridge-street for the Mines and Public Instruction Departments.

118. The proposed buildings are part of a general scheme which is now under consideration? Yes.

119. As to the space now utilised by the Inspector-General of Police, and the space which is proposed to provide for him, he has at the present time 4,574 feet? Yes; and under this proposal he will have, exclusive of the parade ground, 11,328 feet.

120. The 4,000 feet which he has now does not include the parade-ground? No.

121. How much extra space will the police have, inclusive of the parade ground? They will have practically double the amount.

122. I understand that they are very much cramped for room, and that they have the greatest difficulty in storing valuable records? That is the case I believe.

123. Is no additional space to be afforded for that purpose under your proposal? I understand from the Inspector-General of Police that a great deal of his business is with the police themselves, and this can be carried out on the basement, which is to be fitted up for police purposes. The 11,000 feet includes both the basement and the first floor. The arrangement will relieve his own office, and the Detective Office, of a large amount of business which is now done there, and to that extent the Department will get extra room. The Comptroller-General of Prisons, who enters by the same entrance as the Inspector-General of Police, has considerably increased accommodation as compared with his present accommodation, and it would be quite possible and easy for him to arrange with the Inspector-General of Police to take some of his room, if it were wanted by the police.

124. Is the Inspector-General satisfied with the amount of accommodation provided for him? This plan has been prepared under the close supervision of the Inspector-General of Police.

125. Has any special internal arrangement been made to secure general supervision by the responsible head or his assistant, or is the old system of partition of offices to be carried out? The partitions should not be carried out; but there is no one to insist that that should not be done. The work of the Government officers should be done in as large a room as possible. In this case we have put partitions only where construction absolutely requires them. The rooms at the back are of considerable length; they are about 40 feet long. In all cases, I have kept them entirely open, and it is to be hoped that they will never be closed.

126. You said that you intended to use the Monier system of flooring, if you could get reasonable terms? That is so.

127. Arrangements have not yet been made? The royalty, of course, is in the hands of one firm, and unless we can get the work done at a reasonable price upon the Monier system, it will not be done upon that system. It is open to the firm to give us a reasonable price, and it is open to the Department to reject the price if it is not reasonable. I was obliged, therefore, to make that qualification when speaking of the flooring. There are other means which we can use if we do not get a reasonable price from the firm.

128. With reference to the use of day-labour as against contract labour, I understand that the extensions to the Government Printing Office were of a substantial character; the accommodation of the building was practically doubled by means of day-labour? Yes, practically.

129. The additions were as large as many important public buildings? Yes.

130. I cannot quite see the force of your objection to day-labour in the erection of new public buildings while you do not object to it in the case of additions to buildings? In the case of the Government Printing Office we had to do the work over something like 700 employees. The building was full of them, and in many cases we had to drop columns down between printing presses while the men were still at work. We had to get these columns and the girders in position without interfering with the men at work at the machines. We did so because we could study them. But no contractor I have ever met would have done that sort of thing, and in all probability we should have had claims of all descriptions. There would also have been friction with the Government Printer, and everything was against the carrying-out of the work by contract.

131. Day-labour was considered successful in the case of the Government Printing Office alterations? Yes, I think the circumstances warranted the attempt. Fortunately, the men were a high class of workmen. We could go also to market for our material as cheaply as could any contractor in Sydney.

132. Would not the conditions be easier in the case of an absolutely new building? There is a great amount of responsibility and personal supervision required in a case of that kind. It is absolutely impossible to carry out an indefinite number of works by day-labour on account of the necessity for personal supervision. The responsibility would be altogether too great.

133. Has not a difficulty arisen as to the *bona-fides* of a number of Government contractors;—has it not been difficult to locate contractors with security, from a Government point of view? We have not experienced it, and for this reason—that no contract is let by the Government now unless there is a cash deposit. That is the best security we can possibly have.

134. *Mr. Levien.*] Is there any proposal on the part of the Inspector-General of Police for stabling? None whatever.

135. It is not proposed to have stabling in the new building? There is stabling in the police buildings at present, but I believe the intention is to do away with it.

136. *Mr. Watson.*] As to day-labour, you say that you are not at present prepared to recommend the adoption of the system in the erection of complete buildings? No.

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137. Have you had any experience of the system in the erection of complete buildings such as those now under consideration? No.
138. Therefore you have no objection to the system founded upon experience; it is merely a question of providing proper supervision on the part of officers upon whom you can depend? There is that question, and also the question of personal anxiety. One has to see the work within control.
139. Do you think your personal anxiety would be increased by your having an officer of the Department supervising day-labour instead of supervising the work of a contractor? Yes; in contract work the contractor stands to win or lose on a definite amount of contract. He may lose by it. I know nothing about it. I have nothing to do with his loss whatever. If the work is carried out by day-labour and it exceeds the original estimate, I feel that to some extent; it would go against me.
140. It is not a question of practicability or comparative cost; it is rather a question of getting efficient supervision without entailing worry and anxiety upon yourself? It is a question of anxiety and obtaining the efficient supervision of a business man. That would be the great difficulty.
141. Do I understand you to say that the difference between the proposed building in brick and in stone would be only £2,500? Roughly speaking.
142. Is there any objection to erecting a building wholly of stone? No; it is a matter of choice more than anything else.
143. As to lasting properties;—is there anything in favour of stone buildings as against a combination such as you have projected? As far as lasting goes, I am under the impression that well-burnt bricks will last a great deal longer than would Sydney sandstone.
144. Can you always ensure getting well-burnt bricks as easily as you can get stone? We are getting very good bricks in Sydney now. At the same time there is a great deal to be said in favour of erecting public buildings with stone of the locality.
145. As to durability, which would be preferable? My impression is that brick is more durable than stone. I do not know a single stone building in this Colony 80 years of age in which the stone is in anything like good condition.
146. Do you know of any case of a brick building? I know of cases where the bricks show no sign of deterioration, and where they are not likely to. The vitrification of the brick protects it against all effects of climate.
147. Is it a fact that they have been refacing the stones at Government House? Yes.
148. Was a good quality of stone put in in the first instance? Some of it was of good quality, but the fault has arisen, not so much from the stone, as from the careless manner in which it was put in. Where, however, the stone was exposed to the south-east wind great ribs were torn right through the bed of the stone, and were taken off. The state of the stone is due, I think, to constant attrition by high winds. I do not know how else to account for it.
149. Are there not two distinct qualities of sandstone here—one soft and flaky, and the other hard and more durable? Some stone is much better than other stone; still they are all of the same character chemically. They are nothing more nor less than compressed sand, with some of the sand forming a sort of silicate cement, holding the other grains together. The stone has never undergone any natural change like the igneous rock or limestone. It is simply compressed sand.
150. It is always likely to disintegrate after certain exposure? Yes. It is beautiful stone all the same.
151. It has been stated that portion of the block upon which it is proposed to erect these buildings is under the control of the Railway Commissioners;—was that portion resumed separately from the land on which it is proposed to erect the building? I cannot say.
152. I want to arrive at the cost of the resumption of this particular piece of land upon which these buildings are to be erected? The matter has not come under my observation, but I could get you the information to-morrow.
153. Mr. Hickson has informed us that the land was purchased in 1886 from Messrs. Roberts and Curtis at a cost of £27,500, and he says that the remainder is at present used for shop, tramway, and other purposes, and is not dealt with in the present scheme;—that would give one the impression that the whole of the block, right round into Elizabeth-street, cost £27,000 to purchase, and if that is so, it would have some bearing on the interest upon this scheme? I will endeavour to obtain the information for you to-morrow.
154. I should also like information as to the income now being derived from the particular block of land upon which these buildings are to be erected; and, secondly, from the remainder of the block which it is not now proposed to utilise? I think Captain Jackson will be able to give you that information.
155. You propose to light the buildings with electricity? Yes.
156. Will you obtain the power from the Government Printing Office? There is a proposal to obtain the power from the power-house of the tramway system; but that is only under consideration at the present moment. If it is not possible, no doubt a central power-house will be built for the supply of all these buildings.
157. At the present time the Works Department and other Departments are supplied from the Government Printing Office? Yes; but the limit has been almost reached.
158. So that other power will have to be provided? Yes.
159. *Chairman.*] Do you know whether the Government owns the whole of the land fronting Bridge-street, from Macquarie-street down to the Exchange? Yes.
160. Have you ever considered the advisableness of having the whole of the Government offices fronting Bridge-street;—would it not be possible and convenient to have them there, connected in some way with an overhead bridge? It would be very convenient, providing the bridge were not too high up. Then the question would arise as to how low it could be placed without interfering with traffic. So far as putting the whole of the Government offices in Bridge-street is concerned, I agree with the Inspector-General of Police that it would be a wrong position for him, although it would be a right one for other Departments.
161. So far as he is concerned, what is the difference between the proposed site and the site in Bridge-street? The proposed site is near the centre of government—Parliament House—and it is desirable that the police should be in touch with it. Of course, it is not central as regards the city itself; but it would be more central than the Bridge-street site to the north.
162. What is proposed to be done with the building now occupied by the Public Instruction Department? I do not know what are the intentions of the Government in that regard.

163. Those buildings will be vacated, I presume? Yes; and the question will arise whether it is desirable to put other offices on that ground or to keep it open as an ornamental square. I understand that the Railway Commissioners intend to take a tramway down Bent-street in front of the "Hotel Metropole" to the Circular Quay, and that would involve the taking of a portion of that piece of land. W. L. Vernon. 18 Jan., 1899.

164. *Mr. Watson.*] To give the eastern tramway system connection with the Circular Quay? Yes, I presume so.

165. *Chairman.*] Would it not be possible to overcome the objection of the Inspector-General of Police by providing the police with accommodation in the building now occupied by the Public Instruction Department? I should prefer that that question were asked of Mr. Fosbery himself. From a building point of view we can erect a building for him there as well as in any other place.

166. Does it not strike you that to put up a new building and to vacate an old one and leave the old one vacant is not very economical? The building to which you refer is old, and it would not be suited to the modern requirements of any Department.

167. You think the objections of the Inspector-General of Police are sufficient to warrant you in putting up a building for him quite apart from other public buildings? He has expressed a very strong opinion as to his own requirements as distinct from those of any other Department. A great deal of his work is confidential work with certain members of the public, whom it is not fair or advisable to parade before public officers generally.

168. Did you inquire whether any of these Departments could be accommodated in the public buildings now in existence? We have no building which is not fully occupied.

169. Take the Auditor-General's Department;—would it not be possible to accommodate it by an extension to the Treasury? It may be possible to do so some day, but it is not so yet. The present tramway system runs obliquely across that valuable piece of land upon which the Treasury stands. If some day the tramway terminus is removed it may be quite possible as you suggest to continue the Treasury building in that direction, but I understand that there is an objection to the Auditor-General being under the same roof in the Treasury.

170. Could you make any additions to the Justice Department which would accommodate the Prisons Department? Only by putting another story on, and some of the walls are hardly fit for that.

171. *Mr. Watson.*] There is no more land available there? No; it is all occupied.

172. Have the Railway Commissioners expressed any opinion as to where they could take the tramway terminus if it were removed from the rear of the Treasury? The Railway Commissioners themselves, I believe, have never entertained the idea of leaving that site, so far as I know. I think they are very tenacious of it; but at the same time I believe the Treasury are very anxious to get them off it. No doubt the tramway down Bent-street would relieve the terminus to a great extent.

173. But they would still want marshalling yards? Yes, unless there were a circular system of travelling.

174. *Chairman.*] As to the fireproof rooms;—have you made sufficient provision for each Department to store their books and papers in them? There will be sufficient accommodation to store all their records and valuable books.

175. The Auditor-General will have a large number of valuable papers and books? The vouchers, after a certain time, are not valuable, although they are stored; but there is ample room to provide for all books which should be kept. In addition to that, the whole building is, to a certain extent, fireproof.

176. As to the difference between day-labour and the contract system, you say that, in the case of an entirely new building, you prefer the contract system? Yes. The custom has been in new buildings to follow the ordinary custom of contract work. I also think it is advantageous.

177. Would the wages paid by a contractor be the same as the wages paid by the Department? Yes. We are very careful to keep within the rates of the contractors as regards the payment of wages. If we paid more we should drain the contractors' yards of their best men, and if we paid less we should very soon hear of it; so that we pay the same rate.

THURSDAY, 19 *JANUARY*, 1899.

Present:—

JOHN PERRY, Esq. (Chairman).

The Hon. Patrick Lindesay Crawford Shepherd.
The Hon. Andrew Garran, LL.D.
The Hon. William Joseph Trickett.
William Thomas Dick, Esq.
John Christian Watson, Esq.
Robert Henry Levien, Esq.

The Committee further considered the expediency of erecting Public Offices on land with frontages to Phillip and Hunter Streets, Sydney.

Walter Liberty Vernon, Government Architect, sworn, and further examined:—

178. *Chairman.*] You were yesterday asked by the Committee to prepare some information? Yes; I have a statement showing the accommodation at present possessed by, and that proposed to be given to, the various Departments to be housed in the new building. W. L. Vernon. 19 Jan., 1899.

179. Have you anything to add to your statement of yesterday? I should like to supplement my statement as to the approximate difference in cost in the facing of a brick and stone building. I gave the amount as about £2,500. I have since made a calculation, and I find that that is substantially correct for the difference in facing. But it is not usual in the case of Government buildings to erect a composite building of that kind; that is to say, of stone front, with a brick backing. It is preferable that the whole of the wall should be of stone, if stone is chosen. In that case the measurements would bring the difference up to about £5,000. The amount of £2,500 is correct for the facing, but to carry out the entire thickness of the walls in stone, instead of brick, would represent a difference of £5,000. I should also like to explain to the Committee that the proposed buildings cover the whole of the land purchased from Roberts and Curtis. The Crown owns the remainder of the block through the Railway Commissioners. I might also mention that, although the Committee have been informed as to the rental now being paid for outside offices, it was never supposed that any comparison would be made between those rentals

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rentals and the annual interest on the capital cost of this scheme, because you cannot make any comparison between the accommodation. Therefore you cannot make any comparison between the interest on the one hand and the present rentals on the other.

180. *Mr. Watson.*] In addition to that fact, the Inspector-General is at present occupying an old building on the site? Quite so, in respect of which no credit is taken at all. That would make a difference of another £200 a year for the premises now occupied.

181. *Dr. Garran.*] Do you know what rent was being paid for those premises before they were purchased? No.

182. The Government has rented them for a great many years? Yes; as a matter of fact, there is no comparison whatever between the accommodation proposed to be provided for the Inspector-General of Police, and the accommodation he now has. The intention is to form a proper centre for police administration throughout the Colony. Pursuing that same subject further, it would be found by calculation that if the Inspector-General of Police were charged, as it was originally intended he should be, with the cost of the site, and of his portion of the building, namely, £14,000, the original scheme for the Inspector-General, if he were charged with the whole of that, and the other Departments now being added were charged with the cost of their additional floors, it would be found that the rentals in the one case just about tally with the interest in the other. The additional floors in this scheme will cost £30,000, and the interest upon that will fairly tally with the rental now paid by the Departments to be accommodated.

183. *Chairman.*] The various Departments represented strongly that they require this extra accommodation, and you estimate that if they had to rent additional premises, the additional rent required to be paid would more than cover the interest on the buildings proposed to be put up? It would cover the interest on that portion of the buildings, but it would be quite impossible to make any comparison of rental, so far as the Inspector-General of Police is concerned, and the interest payable on his portion of the scheme.

184. *Dr. Garran.*] I understand that, under the new system, supposing it to be realised, each Department will have more accommodation than it now has? Yes.

185. Each Department will have room for expansion, far better accommodation, and fire-proof premises? Yes.

186. *Mr. Levien.*] Do you think that the Prisons Department and the Police Department would be better apart than in one building? I believe, as a matter of fact, they would rather be distinct from each other. I think they would have liked separate buildings.

187. But it would be quite practicable for them to transact their business under one roof without any inconvenience, and without putting the country to the expense of such a building;—could not the two Departments be carried on as well under one building as separately? I think so; and for that reason I have had much consultation with them with a view to embracing them in one building. I admit that they would rather have had separate buildings, but eventually they concurred in the arrangement I suggested. My own opinion is that the two Departments can be worked very well in the same building.

188. *Chairman.*] You have so designed the building that they cannot possibly clash if it is found necessary to keep them quite apart? Yes, excepting that they have a common entrance.

189. *Mr. Trickett.*] According to the statement of Mr Hickson, Mr. Young approved of the Comptroller-General of Prisons and the Inspector-General of Police being accommodated in the one building, and plans were ordered to be prepared for that purpose;—were those plans prepared? No; only pencil sketches were made.

190. Then the whole matter was referred to a Board of which you were chairman? That is so.

191. As a member of that Board, did you go into the whole reclassification of the Government departments? Only so far as finding accommodation for certain specified Departments was concerned. Certain Departments were under consideration; there was no general reclassification.

192. Did it not strike you that it would be a good thing to have the various Departments in buildings arranged under some system—that we might have Departments allied to one another in certain buildings;—would it not have been well to inquire into the whole of that matter before settling upon a plan by which you put into one building two Departments, which it is admitted are of a co-ordinate character, and at the same time associated with them two Departments which are not in that position;—do you not think it would be better to have some connection between the Departments in different buildings instead of accommodating them in a haphazard way? That matter was very fully considered as far as these particular Departments were concerned, and the Public Service Board and the Auditor-General's Department were specially selected for accommodation in this building, because they were distinct from any other Government Department. They were put in the building in order that they might hold a perfectly independent and neutral position in regard to all other Government offices. They were specially selected for that reason. Our instructions never went beyond finding accommodation for certain specified Departments, and, of course, we could not go beyond our instructions.

193. Although your instructions were so limited, you seem to have gone into the question of including the Mines Department? That Department was mentioned in our instructions.

194. Is there not room for the Mines Department in the building in which the Lands Department is accommodated? No, there is not. Another scheme will be put before the Committee for the accommodation of the Mines Department; it is now very much scattered.

195. *Mr. Watson.*] Some of the branches are in private offices? Yes; and some are at the old Naval Stores. The museum is in the Domain.

196. And the Stock Branch is in Young-street? Yes.

197. *Mr. Trickett.*] In the statement of Mr. Hickson reference is made to the Mines, Police, Prisons, and various other Departments to be located on the block in Phillip and Bridge Streets;—what are the various other Departments referred to? Charitable Institutions, Fisheries, the Electoral Registrar, the Friendly Societies, the Medical and Pharmacy Board, and the Government Statistician.

198. Would it not occur to one that, as being allied to the Police Department, the Comptroller-General's Department, and the Coroner's Department should be as convenient as possible? The Coroner has always been attached to the Court business of the Colony more than to actual police and prison business. No question has been raised, as far as I am aware, as to their dissociation. (For my own part, I could not express an opinion as to whether it would be a wise course to take.

199. Then as regards the Aborigines' Protection Board, that was one of the branches for which you had to make provision? Not specifically; but I am under the impression that it comes under the Inspector-General of Police.

200.

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200. That will be provided for in the proposed building? Yes; there is a Board-room for purposes of that kind.
201. Then as regards the administration of laws for the preservation of public health, should not that be allied with the police? The Health Board are already established in a new building at the foot of Macquarie-street.
202. They occupy the whole of the building? Yes.
203. Is it a Government building? Yes.
204. Do you not think, as head of one of our large Departments, that it would be well, in dealing with the erection of public buildings, that the whole question of classification should be gone into, especially when we are considering the utilisation of large public sites? If one were commencing *de novo* with the housing of Government Departments in Sydney it would be a very feasible and proper thing to do; but it is impossible to do it under the present circumstances.
205. You think it would be unworkable? Yes; unfortunately the question has to be considered piecemeal, according to the detached sites which are available.
206. I understand that in the proposal now before the Committee you are not actuated by a desire merely to fill up a vacant block of land—you really wish to provide what you think necessary accommodation for the specified Departments? Yes. Land was purchased for the specific purpose of building a Scotland Yard for the Inspector-General of Police, but I think that, practically speaking, his requirements are not sufficient to cover the cost of the land, and that it is therefore desirable and proper, from an economical point of view, to add other Departments to the building.
207. You have been recently in England—how does the space which the authorities possess in London for the head of their Police Department compare with the space allotted here? Our accommodation, of course, is very much smaller than that at Scotland Yard. The new Scotland Yard building is entirely devoted to police purposes—that is, to the police of the County Council. The city police are a distinct body. They have their quarters in the city. The metropolitan area of London is under the London County Council. The police buildings are very large, and are fitted with every possible convenience and accommodation that can be conceived for police purposes. We cannot compare our accommodation with theirs at all, and there is no occasion for doing so.
208. Do you think that in a metropolis such as this, which is a growing one, it would be well to utilise this site for the purpose for which it was intended, and to have a large yard for the massing of a number of constables, adding to the accommodation from time to time in case of necessity;—would not that be better than utilising the whole site for other Departments, simply because the cost appears in connection with one Department to be rather large? The scheme provides for the whole area of the site being available for parade purposes—for the massing of police. That object is met. It is the upper portion of the building which is to be utilised for other purposes.
209. Still you are taking up a large portion of a building for purposes quite foreign to police purposes? It is not the intention of the police to make permanent or residential barracks there; they have their barracks elsewhere. The place is purely for administration. Of course I must be guided by the accommodation which Mr. Fosbery tells me he requires. I could not dictate to him what he might want.
210. Have you been guided by what he says in that respect in the yard accommodation provided? I have; but it is only fair to Mr. Fosbery to say that he has raised an objection to the open portion of the yard being under the observation of persons from the windows of the offices overhead, and also from the windows of adjoining property; but I believe I satisfied him upon this point by telling him that at any time we could erect a sort of mews roof which would give him a covered yard.
211. *Mr. Watson.*] Wherever the yard might be placed in the city it would probably be liable to inspection from windows of surrounding properties? Quite so; and it is necessary that the yard should be in the city.
212. *Mr. Trickett.*] As to Scotland Yard in London, is it not merely a place for administration;—it is not a police barracks, is it? That is quite true; there are no barracks, but they have means of massing men there if necessary.
213. Is it not a place which can be easily approached by gates, and so forth—that is, by vehicles or by horses? As a matter of fact, it has a frontage to four streets; it is a four-sided building with a large court-yard in the centre.
214. That is my idea of the place which would strike one as being desirable for the head centre of our police establishment;—does not your observation in the old country point in that direction? It would be very desirable if it could be obtained; but it must be understood that to enclose a court-yard of any size by its own building would mean a very large building indeed.
215. *Chairman.*] Two carriage-ways have been provided into the proposed yard in the design? Yes.
216. *Dr. Garran.*] The building at Scotland Yard is quite a recent one? It has been erected within the last four years.
217. It has been designed for the purposes of the metropolitan police upon the basis of a great many years' experience? Yes.
218. There are a great many things there which are altogether beyond our present means and necessities? Yes; there are large suites of rooms. Some of them are devoted to museums of objects of curiosity in connection with crime. Then there are a great many rooms for surveyors and offices in connection with the erection and care of police buildings. The detective department is, of course, very large indeed. It is quite out of proportion to anything of the kind required in Sydney.
219. You had the advantage of seeing that building when you were visiting London? I went over it the year before last.
220. Have you included in the building you have designed all that the Inspector-General wishes you to include? Yes.
221. He really gets all that he asks for? Yes.
222. His only objection, then, is to the openness of the yard? I understand that that is the only objection he has.
223. And that objection you think you could meet with very little expense? Yes.
224. Is Mr. Fosbery at all strong in his objection to other Departments being associated with him in the same building? I might read a paragraph from the report to which I referred yesterday which has some bearing upon your question. The report says: "As regards the Inspector-General of Police, he strongly expresses

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expresses his opinion as to the desirability of providing him with self-contained premises, or, as he expresses it, with a Scotland Yard altogether under his control; but that if the public exigencies necessitated the accommodating of other Departments in his projected building, it should be distinctly understood that it is provided as against his particular wishes and opinions. It was suggested to the Inspector-General of Police that the desirability of parading his Police Force free from observation upon occasions on the basement floor might be provided for by covering in the yard. He, however, thought that such a suggestion might remain in abeyance, as he would still have the basement proper in which this duty could be carried out." I thought it only proper to place this paragraph before Mr. Fosbery before submitting it to the Board for approval. He read the paragraph through, and he said that it perfectly coincided with his opinions, and that although he would rather have a separate building he was not going to raise any objection to the proposal, taking all the circumstances into consideration.

225. It is really a question of expenditure of public money? Yes.

226. Is the yard you are going to give the Inspector-General as big as the yard which he has at the present time? It is larger, if the present stabling is taken as part of the yard.

227. As a matter of fact, you do encroach upon part of the present yard? Yes; but the Inspector-General has the advantage of using the whole of the basement.

228. The basement is on arches, so that it would be comparatively open? It would be almost as open as the yard itself.

229. Men could be paraded underneath, if necessary? Yes.

230. Then the Inspector-General would have more space available for the handling of men than he has at the present time? Yes.

231. He would be able to handle double the number of men? Yes; I should say so.

232. *Mr. Watson.*] In your comparative statement of the space at present occupied by the Inspector-General, and the space proposed to be occupied by him, the yard in each case is left out of the calculation? Yes.

233. Then the Inspector-General has a large increase in available space? He has double the space really.

234. *Dr. Garran.*] There are some conveniences in having large public offices near one another? Yes.

235. But in view of the possibility of a great fire, would it be desirable to have all the large public offices quite close together? I should presume not.

236. Is there not some advantage in having them scattered over the city from the point of view of safety? Excepting that it may be discounted by the properties surrounding the buildings.

237. In some respects there might be danger? Yes.

238. But you have also to consider that if there were a large conflagration the whole of the offices would not be destroyed? Quite so.

239. You think that is a matter which should be considered? It should be considered.

240. We have committed ourselves too deeply in building our public offices in their present situations to admit of our having one large block devoted to them? I am afraid it would be impossible to arrange that now. Unfortunately there is no chance of making a public building in Sydney of sufficient size to enclose a good court-yard.

241. You could not make one big quadrangle unless you took a corner of Hyde Park? That would be the only way to do it.

242. *Mr. Levien.*] The Auditor-General's Department is quite distinct from all other Departments? Yes.

243. In view of the great responsibility attaching to the custody of the vouchers and other documents in the Department, do you not think it should be an office entirely by itself? I think the object of isolation is fully met in the scheme.

244. Do you not think that, in view of the responsibility attaching to the custody of the documents in the Department, it should have a special office, with special precautions against fire? Perhaps to fully meet the requirements of the office, it should have one distinct building; but I do not think that, as a rule, that is found to be the case. I do not know of any case where the Government Audit Office is a building distinct from other Government buildings. There are many more valuable documents in the Colony than are the vouchers in the custody of the Auditor-General. When the vouchers have reached the Auditor-General they have all been paid.

245. *Chairman.*] They are kept merely as a matter of record? They are checked to see that no improper payments have been made. No doubt an ideal office of the Auditor-General would be a distinct building; but I do not think it is absolutely necessary.

246. *Dr. Garran.*] The documents which the Auditor-General has are mostly duplicate documents? They are all duplicated in the Treasury.

247. The Auditor-General has not a figure in his office which is not in the Treasury also? I do not think he has.

248. *Mr. Trickett.*] As to the desirableness of trying to get all the public offices together, I would refer you to the evidence which you gave when you were examined a year or so ago with reference to the proposed Treasury buildings;—in reply to Question 491, you said:

> *Mr. Hassall.*] Do you not think it would be possible to elaborate a scheme whereby all the public offices might be placed in juxtaposition to each other, so as to enable the public to transact their business without having to run all over the place. Starting with the Lands Office, could we not utilise the space occupied by the Public Instruction Department and the space at the corner between Bridge and Phillip Streets, so that we could have the public offices practically all together? I think the scheme is an admirable one. No doubt all the Government Departments could be brought into close connection with one another, except the Post Office, and the Crown Law Office which must be in connection with the Courts.

Now, starting with the Chief Secretary's Office, and the Public Works Office in which we are now situated, we have a big block of land opposite fronting Phillip, Bridge, and Young Streets. Then we have the Education Department frontage, which takes you on to the Lands Department. Shutting out the two Departments of the Inspector-General of Police and the Comptroller-General of Prisons, do you not think the rest of the Government Departments could be massed on this splendid site, giving us a continuous range of public buildings from Macquarie-street down to the Exchange corner, as you seemed to contemplate when you were last examined by the Committee upon this subject? I am still of the same opinion; but in working out a scheme one has to meet practical difficulties, such as those raised by the Inspector-General of Police, who insists that he must be in a certain position.

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249. Suppose this vacant block were utilised for the Mines Department and for the Public Instruction Department and for the other purposes you contemplate, could you not then let the Inspector-General of Police and the Comptroller-General of Prisons be accommodated on the site purchased for that purpose;—they would have a splendid central position, with a good yard accommodation, and we should be falling in with the views of the Inspector-General in every way? It would be perfectly possible to do so, but you would be putting a two-storey building upon a block of land which had cost a great deal of money.
250. But you do not want to cover the whole of that site with buildings at the present time? I think that the site having cost so much money, the accommodation provided upon it should be in some proportion to the cost.
251. Having regard to the future development of the city, do you not think we should start with an establishment capable of expansion? It has never been possible to look so far ahead as your question would seem to suggest when we have been erecting public buildings in Sydney. The difficulty we have is that we have to meet the requirements of the Government from hand to mouth. The consequence is the present disjointed and scattered arrangement of public offices.
252. That would be done away with if you were to fill up the vacant block in Bridge-street, making a continuous row of public buildings? It would be a very desirable scheme to be carried out; but, on the other hand, you have to erect suitable buildings upon the site under consideration.
253. I can understand that a certain class of building should be erected from an economic point of view; that is, utilising every foot of the land upon which the building is erected, but we are dealing now with a different kind of institution, requiring vacant land as well as a building, and it would appear that the Government had purchased this particular site distinctly for police purposes? Undoubtedly, the money was borrowed for the purpose.
254. *Mr. Watson.*] Supposing it were agreed that it was an unwise or undesirable thing to attempt to provide on this particular site for the Auditor-General's Department and for the Public Service Board, would that be the means of giving any more yard accommodation to the Inspector-General of Police? No more on that site.
255. So that the Inspector-General's space would not be increased by taking away the accommodation proposed to be given to these two other Departments? The yard space would not be increased.
256. Nor would the other accommodation, as far as present necessities go? No. The present requirements of the Inspector-General are fully met by the scheme. It would be quite possible to build another storey, but that is looking too much into the future.
257. I take it that if the necessities of the Department did require a larger yard space, or a larger floor space on the basement, you would have to shift the Department to another spot altogether? Yes.
258. That would have to be done in any case whatever we may do at present with this particular piece of land? Yes.
259. *Chairman.*] You mentioned yesterday that you had so designed the proposed buildings in Phillip and Hunter Streets that you could add to the frontage in Elizabeth-street if necessary? Yes.
260. If it were decided to resume from the Railway Commissioners the piece of land now held by them in Elizabeth-street, could you by that means get additional yard space? No; I should have to decrease the yard space to some extent. I should have to take a strip of the yard to obtain the same depth of building. The depth of the two frontages differs.
261. *Dr. Garran.*] I understand that the Government, in addition to the site with which they are now dealing, has two very fine blocks in Bridge-street—one occupied by the Education Office, and one at the corner of Bridge-street and Phillip-street. Are you putting before the Committee plans for utilising both of the Bridge-street sites? No; only one of them.
262. That is the site at the corner of Bridge and Phillip Streets? Yes.
263. The site occupied by the Education Office you do not touch at present? No.
264. The Government will have that in reserve? Yes.
265. Suppose we approve of both of these plans of yours, will there then remain any of the Government Departments accommodated on private premises? None, except some in connection with the Registrar-General and the Railway Commissioners. I believe theirs is the only Department which will have some of their offices in lodgings.
266. The Government will be pretty well housed? Excepting a few small accidental branches in the Domain, some of which are Military offices. Practically speaking, the Government would be housed entirely under its own roof.
267. It will not be renting many buildings? No.
268. And the Government will still have the site occupied by the Education Offices? Yes. So far as the offices of the Registrar-General in regard to births, marriages, and deaths are concerned, I believe provision is to be made to meet that difficulty and inconvenience of their being in lodgings.
269. If we were contemplating the purchase of land now on which to erect these buildings, the question of the reserved site in Bridge-street might be important; but the question is, having all these sites of land, which is the best method of utilising them all;—your suggestion is that we should make all we can out of this corner, and all we can out of the Bridge and Phillip Streets corner, and reserve the Education Department site for further necessities? That is my opinion. I would convert it into an ornamental garden in the meantime.
270. If the Inspector-General of Police wanted additional room, would it be more likely to be additional yard space or additional room space? Room space, I should think.
271. In that case it would be easy to annex part of the floor above him, and turn someone out? Yes.
272. So that there will be no difficulty in providing for the expansion of the Department? No.
273. There is nothing in the questions which have been put to you which has altered your opinion as to the expediency of these buildings? No; the matter has been fully considered from all points of view.
274. *Mr. Trickett.*] I see that in Mr. Hickson's statement he says that the sum of £14,000 was voted in a loan vote as a first instalment towards the cost of erecting these buildings;—that sum was to be expended upon buildings for the Inspector-General of Police? That was a building on this site in which he is to occupy two floors.
275. Was not the money actually voted to carry out your design of a building for the Inspector-General of Police, to cost £14,000? Undoubtedly it was, but the scheme has grown since.
276. *Chairman.*] Have you been informed by the Lands Department that they require the whole of that portion of their buildings now occupied by the Mines Department? Not officially.

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277. If it be determined to erect offices upon the block of land fronting Bridge and Phillip Streets, will there be any offices vacant in the Lands Department? Not long, because some of the branches referred to in the report will no doubt be housed there instead of outside, and the Lands Department itself would be glad to get back some of the room which it gave up to the Mines Department. I might also add that of the large three-storied strong-room in the centre of the building, two floors are occupied entirely by the Lands Department, and the third floor, one-half by the Lands and one-half by the Mines Department. The consequence is that the Mines Department has no room in which to keep its documents, and the Lands Department is itself cramped, because it has not the whole of the strong-room.
278. The demand of the Lands Department for increased space has been growing for years and years? I cannot say so from my official knowledge. The scheme has been proposed, not so much with the idea of giving more room to the Lands Department, as with the idea of placing the Mines Department under proper control in one building.
279. The object of the scheme is not merely to put buildings upon land which is now vacant? No.
280. You do not think we shall be providing so much extra accommodation in these two sets of new buildings as to empty some of the existing buildings? There is no fear of that at all.
281. You are sure we shall not be over-building? I am quite sure we shall not.
282. *Mr. Watson.*] Do you think that the one lift you provide in this building will be sufficient? Yes; because it is required only for the second, third, and fourth floors. In the main corner of the building the lift is not required as access; it leads only from the ground floor to the first floor.
283. So that you have, practically, only one entrance to the upper floors? Yes; in Phillip-street.
284. *Chairman.*] As to the putting of all the Government buildings in Bridge-street, and the likelihood of their destruction in one big conflagration, I understood you to say yesterday that if a fire broke out in one of the rooms to which you referred it would not spread? Quite so; it would be confined to the one room.
285. Therefore there would be no danger of a great fire sweeping away a large proportion of the public buildings if they were erected close together? That is so, with the exception of the building in which we are now sitting. This building is not fire-proof. A fire on the basement of this building would destroy it.
286. Suppose there were a fire in this building, and a public building were erected on the other side of the street, would there be much danger to that building? There would not be any serious danger unless under exceptional circumstances.
287. *Mr. Dick.*] With regard to the new scheme of ventilation to which you have referred, could you give us some idea of what it will cost? If I calculate the construction of the chamber and shafts as part of the cost of the building, which I am fairly entitled to do, I am reduced to the cost of fitting up the electric plant, which would be very small.
288. What will be the annual cost of maintaining the system of ventilation? It would be practically nothing, except oiling the bearings, with occasional attention, so long as electricity is supplied for other purposes.
289. Yesterday you gave us some figures relative to the financial aspect of the proposal;—I understand that £27,500 have been expended out of the Loan Vote upon the site? Yes.
290. That imposes upon us an annual burden of £1,000, for which we obtain very little return at present? That is so.
291. We also pay £1,270 for the rental of premises now occupied by Departments to be housed in this building? Yes.
292. In all you have an annual burden of about £2,370, which the present system imposes upon the tax-payers of this Colony? Quite so; and before long the Auditor-General must take more premises, and, of course, if he requires more premises we must pay more rent.
293. The present unsatisfactory system is costing us about £2,370 a year? Yes.
294. The new buildings are estimated to cost in round figures £44,000? Yes.
295. Four per cent. upon the proposed expenditure would represent about £1,792? Yes.
296. So that it really means not £3,000 or £4,000 of additional expenditure, but only about £1,800, because we save rent, and we are already paying interest on the cost of the site? Exactly.

John Jackson, Manager of Public Wharfs, made an affirmation, and was examined:—

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297. *Chairman.*] You have charge of various buildings which are rented from the Government? Not the whole of them.
298. Do you know the "Star Hotel" upon the site under consideration by the Committee? Yes.
299. What rent does the Government receive for those premises? £156 a year.
300. Are there any other buildings on this particular site rented by the Government to private individuals? Not that I am aware of. The "Star Hotel" is the only property there that is in my charge.
301. *Mr. Levien.*] To whom do the buildings on this block in Elizabeth and Hunter Streets, on the other side of the "Star Hotel," belong? I think they belong to the Railway Commissioners. In 1892 I was to take charge of them; but they were taken from me by the Commissioners.
302. You do not know whether they were resumed by the Works Department or by the Railway Commissioners? I believe they were resumed by the Railway Commissioners for tramway purposes.
303. Are the two unused buildings adjoining the "Star Hotel" under the Railway Commissioners? I think they are under the Tramway Department.
304. What would you say the Inspector-General's offices were worth a year in rent? They might be worth £300 a year.
305. That is including all the yard accommodation? Yes.
306. What would the properties adjoining the "Star Hotel," to which I have referred, realise, supposing they were in tenantable repair? The Government might get £75 a year for both of them.
307. *Mr. Watson.*] The total rental now being received by the Government in respect of the land on which it is proposed to erect these buildings, at the corner of Hunter and Phillip Streets, is £156? Yes; it is all received from the "Star Hotel."
308. *Chairman.*] Does the tenant of the "Star Hotel" pays the taxes? No; the Government pays the taxes.
309. If you receive only £156 a year for a corner hotel property, the Government paying the taxes, do you think £200 a year a fair estimate of rent for the premises occupied by the Inspector-General of Police? I think £300 a year would be a fair estimate.

Edmund

Edmund Walcott Fosbery, Inspector-General of Police, sworn, and examined:—

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310. *Chairman.*] You have reported at various times that you require additional accommodation in connection with your Department? Yes; the accommodation in the old building is altogether inadequate for present requirements. I have represented that repeatedly. Indeed, I have had recently to rent an adjacent house to afford the necessary accommodation. We pay £200 a year for it.

311. Will you state to the Committee, as briefly as possible, what extra accommodation is required? There are only eight rooms altogether in the present building, which is Government property, and in those rooms we have to accommodate all the staff of clerks, to provide a waiting-room, also to provide accommodation for the detective officers and the detectives, the result being that there is not sufficient accommodation to enable the men to do the necessary writing. We required practically double the accommodation. We wished to provide for a day and night service for the head-quarters of the police, so that there might always be an officer in attendance to receive reports and to circulate them by telephone or otherwise at any hour of the day or night. It was impossible to make accommodation for existing requirements in the buildings we have. We have not anything like the accommodation we require at present. We require, for instance, a photographic gallery. If we received a photo. of a suspected offender from another colony, as we did yesterday, we should have to run off a hundred copies of the photo. as expeditiously as possible. To enable us to work the gallery properly we must have more room. In addition to that we require better means for storing valuable property. We often have prisoners' property and property held as exhibits, for which we have no proper accommodation whatever at present. For example, a man arrested not long ago had upwards of 500 sovereigns. Those sovereigns could not be lodged in the bank, because they had to be made an exhibit, and it is not convenient to leave that number of sovereigns about in an office in which there is no one present during the night. We also want better accommodation for securing jewellery and valuables of all kinds which may be detained perhaps for a long time. We also require accommodation to enable detectives to make out their reports. The all-night service of the police requires that there should be a convenient room connected with the telephone where an officer or two could remain in case any occurrence reported had to be acted upon instantly. The place would require to be quiet and retired, at the same time it must be convenient of access, and we have none of this accommodation at present.

312. Have you examined the plans? I have done so carefully.

313. Are they up to your requirements? I do not know exactly whether it is in my province to say so, but I do not approve of them. When I purchased the property on behalf of the Government it was a good bargain, although it seems a large sum upon paper now; it was purchased with a view to make a head-quarters for the police. We wanted a place where an informant would not be under observation too much by public officers when he came in to make a confidential communication. Persons do not care to be looked at upon such occasions if it can be avoided. Also, there are times when persons have to be arrested and taken into the office and searched, and in certain cases we do not want too much observation. Therefore, I hoped that the Government would have erected a separate building for us. I should not have objected to the Comptroller-General of Prisons being in an adjacent building, but I hoped that mine would have been isolated. At the same time, I am not going to oppose the wishes of the Government. If it is more economical to have a larger building, and to combine in it other offices it is perhaps outside my province to object to it strongly. I only point out that it would have been better in my estimation to have a separate building for the head-quarters of the police.

314. Apart from that consideration, does the accommodation proposed meet your requirements? It will fairly meet requirements, but you will observe that the office of the Inspector-General of Police and of the Detective branch are on the ground floor, whereas the photographic gallery is on the fourth floor. I think I might emphasize a little more by saying that it is a matter of daily and hourly occurrence that persons of shady character want to interview the police upon various matters, and they have a strong objection to daylight and to too many eyes seeing them enter the office. To meet that difficulty the Government Architect has explained to me that he has given me a separate entrance, and that my offices will be in fact isolated from all the rest of the offices in the main building. To a certain extent that removes the difficulty.

315. *Mr. Shepherd.*] Making allowance for the ordinary expansion of your Department, how long do you suppose the space allotted to you in this building will prove sufficient for your requirements? It is amply sufficient now, but I do not suppose it will be sufficient for all time.

316. Your expansion in the future will have some relation to that which has taken place in the past, and I want to know how long the space allotted to you, looking at the matter in that light, is likely to meet your requirements? I could not say. At all events it will answer for many years to come.

317. Is the large yard provided intended for drill purposes? No.

318. I presume the large yard at Belmore will still be continued for that purpose? That is to be taken over by the Railway Commissioners. But at the same time we must have a police depôt for drill and instruction generally. The depôt at Belmore Barracks at present answers all our requirements.

319. *Mr. Dick.*] Do you pay anything beyond the £200 you have mentioned for the renting of adjacent buildings? We have a little bit of a hovel in which one of our men lives alongside the "Star Hotel," but it is not worth speaking of. Perhaps I had better explain the circumstances under which the property was acquired. We originally rented the old house in which my offices are now situated. When the owner, Miss Roberts, died, the land was sold in four lots, as far as my memory serves me. The Railway Commissioners had previously resumed the corner of Elizabeth-street and Hunter-street, where they had a waiting-room, and where they erected four shops. The four lots of Miss Roberts' property were—first, the old house in which my offices are, and next the "Star Inn," and then some old premises used by Mr. Curtis, the undertaker, and, fourth, the vacant land adjacent to my offices in Phillip-street. The Government of the day, when it authorised the purchase of my office, thought that it would be wise, as it already held a block in Elizabeth-street, to acquire, if they could get it, upon reasonable terms, the whole block, and that is how we became possessed of so large an area there. I did not require the "Star Inn" site, or the site occupied by Mr. Curtis' shops. I merely wanted the yard and the old house for my purposes.

320. You still have a strong objection to other Departments being housed in the building with you? I think it is objectionable.

321. For the reasons you have mentioned? Yes.

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322. You except from that objection the Comptroller-General of Prisons? I would not object to his being there, because there are people who go to his offices who frequently come to mine. We are more in the same line, as it were. Even as regards the Comptroller-General of Prisons I recommended that he should have a separate house.

323. In your opinion, would it be well, instead of having one large building of the kind indicated, in which to house all these Departments, to erect four separate buildings? I do not think that would do; it would mean four or five storeys, so far as my offices are concerned, and it would not be convenient to have them distributed over four storeys.

324. But under the proposed arrangement you will have the first and the fourth or fifth story? We shall have the photographic gallery up aloft, but all the rest of the offices will be together. The work in police offices is different from that in any other offices. The men are kept running about every minute from one office to another.

325. Apart from your objection on the grounds you have mentioned, do the plans recommend themselves to you? Yes. You will observe that the detective branch is well separated from the official branch. The official branch can at any time be cut off from the public. The offices are well designed in that regard.

326. *Mr. Watson.*] Do you think the yard space provided is large enough? No; but it is as large a space as they could give us. We shall have to make it do.

327. The exclusion of other Departments from the site will not have any effect upon the yard space? No; they have given us the whole of the basement under cover and a yard. It is a good large space for the centre of the city.

328. The inclusion of other Departments in the building does not affect your yard space at all? No.

329. I understand you to say that a number of persons who come to your office are anxious to avoid observation? Yes.

330. Have you considered the possibility of their being less noticeable in going to a building in which other Departments are accommodated than would be the case if they went to a building in which only the police were accommodated? There would be more persons about if other Departments were accommodated. I suppose there would be something like 100 officials in the entire building.

331. But if you multiply the number of Departments those who had occasion to go to the building would be less noticeable? I do not know that that would be the case.

332. *Dr. Garran.*] When the place you are now in was first rented it was done at your instance? My predecessor was alive, but I took the place.

333. You thought it a suitable site? I thought it an excellent site, because it is near to Parliament House, it is near to the Colonial Secretary's Office, and the other public offices are not far away. It is also near to the Supreme Court and to the Law Offices. I do not think a better position could be found for my purposes.

334. How many years have you been located there? Thirty-four years.

335. During that time you have been confirmed in your opinion that you could not find a better site? I am satisfied upon that point.

336. When you had rented the place for some years you took the responsibility of advising the Government to purchase it? Yes.

337. In order to erect there a better building for your purposes? Yes. I did not recommend the purchase of the whole block, but the Government decided to purchase it for reasons of their own.

338. You do not want to be forced away from that position? Certainly not.

339. If you want new police offices your opinion is that they should be erected there and nowhere else? That is my advice.

340. You say that the active members of your Department are continually running from room to room? Yes.

341. Under those circumstances, would it not be more convenient to have your work upon one floor instead of upon two floors as at present? We propose in the new building to have it all upon one floor; it will be much more convenient.

342. It would be more convenient to have all your offices upon one floor in the big building than to have a separate building of three or four storeys? Any building in excess of two storeys would be inconvenient for us. The division of our work into two floors would not cause much inconvenience. The business in connection with our accounts is heavy, and could be carried on on one floor, and it would not interfere with the general and detective work upon the other floor.

343. If you had an entire building to yourself you would not want more than two storeys? Certainly not.

344. The reason more storeys are suggested is to be found in the extreme value of the site—that is to say, it would be rather expensive to erect a building of only two storeys upon that site? I have already referred to that point. I have said that if the Government thinks it advisable to erect a larger building in view of the value of the site that is a matter for it to decide.

345. Having your clerical branch on the one floor, and your active officers on another floor, you would not want anything beyond that;—you would not require to go upstairs at all? Except for photographic purposes.

346. Would it not be more convenient for you to go to the Government Printing Office for photographic purposes than to go up to the fourth storey of the proposed building? We make use of the Government Printing Office when we can.

347. Would it not be less expensive to have all the Government photographic work done in one place, instead of in two? We have plenty work to do in our photographic galleries, without going to the Government Printing Office at all.

348. You would rather do the work yourselves? Yes; we must do so. A great part of our photographic work consists in multiplying portraits of criminals. Perhaps a hundred will come in at once, and we have to supply the other colonies with copies of all those photos. The photographing itself could be readily done by the Government Printing Office, but there are certain information and particulars which we put on a sheet with our photos, which must be done by ourselves, and which could not be done by any other offices.

349. You do not take original photos.? Sometimes it is necessary. Occasionally we take a snapshot of a person we are likely to hear of again.

350. But you would not want a gallery for snapshots? We should require it, in order to work off the negatives.

351.

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351. Could not those negatives be worked off at the Government Printing Office? It is quite possible that that might be done, but sometimes photos. have to be taken instantaneously, and it is convenient to have a photographer there. When he is there, he might as well do all the mounting, and the multiplication of photos. The Government Printing Office helps us considerably. If we wanted to put in the *Police Gazette* a photo. of a person which we want to be seen all over the Colonies at once, the Government Printing Office, in the space of half an hour, would do all that we required by putting it in the *Gazette*. They constantly help us in every way they can.
352. One of the inducements to you to take your present place originally was the nice large yard attached to it? Yes.
353. Have you found it practically sufficient for all your purposes? During the great strike we had little enough room in which to move about, but we made it answer.
354. In the new buildings, you will not only have an open yard, but a covered basement underneath the building? There will not be any more space, I think.
355. Mr. Vernon says that, taking in the basement, you will have more room for the massing of men than you now have? We may have a trifle more.
356. For the massing of men, would your barracks be equally convenient? We do not want a space for the massing of men, but to enable me to hold a reserve in a central position should there be any disturbance requiring such a precaution.
357. Would the site of the barracks be equally convenient for that purpose? No; it would be too far away. Besides, we have received notice from the Railway Commissioners that they have resumed the property.
358. Mr. Vernon says that the Departments associated in the building with you will enter in a distinct place from you, and that to all intents and purposes you will be as isolated as though you occupied separate houses;—there will be separate staircases, so that you will not be interfered with any more than if the block were chopped into four separate houses? Under those circumstances the inconvenience would be reduced.
359. The convenience to you of having only one floor is greater than the convenience which would arise from having a building all to yourself? Yes.
360. It seems to me then that on the whole you will gain as much as you lose? Yes. I still prefer to have premises solely for my own occupation, but I think the Government has made the best arrangement it can, having to deal with such a valuable site.
361. At all events, you will have elbow room for some years to come? Yes.
362. As far as space is concerned, you have nothing to complain of? No.
363. You will also have a strong-room, which you very much want? Yes.
364. Has the subdivision of rooms been made according to your wishes? It was drawn out by the architect in the rough with me.
365. Exactly as you wanted it? Yes; of course, it will be a vast improvement upon the present arrangements, under which a great deal of time is lost in running from place to place.
366. Whatever inconvenience there may be in the new building, your requirements will be much better provided for than they are at present? Undoubtedly.
367. *Mr. Trickett.*] I understand that in 1885 this site was bought at your suggestion? Yes.
368. In 1895 you complained of the want of accommodation? I had done so before then.
369. Plans were prepared and approved by the then Colonial Secretary? I have no knowledge of that fact.
370. At any rate, if your suggestion had been carried out you would have had a building of your own on that site at the present time? Yes.
371. Going a step further, a Board appears to have sat upon the question, and to have recommended a certain building, in which you were accommodated with other Departments;—were you examined before that Board? I was appointed a member of the Board; but I recorded my disapproval of combining in the building several Departments by retiring from the Board. The proposal was that a large building should be put up opposite the Colonial Secretary's Office, on the vacant land there; and my office was to be moved down to that spot. That I strongly dissented from, and I wrote the reasons for my dissent, and left the Board. Then they fell back upon my site, and approached me to know whether I would object to other offices being combined with mine. I gave the answer then that I give now—that if the Government thought the site was too valuable to be devoted to a two-storey building, and proposed to put other public offices there, I could, of course, interpose no objection, although I preferred to be alone.
372. Therefore, although you fall in with the proposal from an economic point of view, you object to it from your point of view as Inspector-General of Police—from an administrative standpoint? I cannot go quite as far at that. I can only say that I should prefer an isolated building for the head-quarters of the police. It comes to the same thing.
373. Do you consider your Department in any way an analogous institution to Scotland Yard in London? It is, for some purposes, on a small scale. When I was last in England the Chief Commissioner of Police told me that he experienced similar inconvenience to that which we had experienced here in having several houses, with officers running about from one place to another. There was no chance of introducing a time-saving police system at head-quarters.
374. Guided by their past experience, they have now built new premises? Yes.
375. Are those premises not entirely occupied by the police? Undoubtedly.
376. They are not amalgamated with any other Departments? No; they are solely for police purposes.
377. That must necessarily be a great advantage in a large city? I have always thought so.
378. You think so still? Yes.
379. As to the accommodation to be provided, would your present clerical staff be the fixed staff which will have to be provided for? Our clerical staff now is just as it was thirty years ago. There are about six clerks, I think. Then there is the whole staff of the detectives, and of course involved in that there is a great deal of writing to be done. One or two plain-clothes constables are employed frequently in clerical duties. The detectives also have to come to the building to write up their reports. There are about a dozen of them, and they would require to be accommodated with desks at least.
380. I ask these questions because the accommodation you have, according to the Government Architect, is 4,574 feet, whereas he proposes to give you 11,328 feet? Perhaps he does not include the rented premises to which I have referred. That would make a difference.

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381. You have gone into the matter carefully with Mr. Vernon, and you are satisfied that you require every inch of the room provided? Yes.
382. You say that there is a good deal of running about from room to room in your Department. You will avoid that in the new building by putting as many clerks together as possible? Yes. There is a long room in which all the working clerks would be accommodated. The Secretary alone would have another office. The building is very well planned, as far as that is concerned.
383. Yours is not a Department in which the staff grows rapidly? I have never allowed the staff to grow, but the Force has increased to three times its number in my time.
384. At the present time there is no necessity for largely increasing the staff? No.
385. There is a proposal by Mr. Vernon for roofing in the yard in order to prevent persons from overlooking it? I told him I thought that would be altogether undesirable. I do not believe in shutting out air.
386. Mr. Vernon stated in his evidence yesterday that a number of offenders were taken to you in the first instance before being taken to the police court—is that so? I think he must have a little knowledge of police work which the Inspector-General does not possess.
387. It is not the case then? No; sometimes men are taken to the office before they are arrested.
388. You have had notice to leave the barracks at Belmore? I have had notice at any time for the last ten years that we may be required to turn out.
389. I suppose it will be impossible to have the barracks on the same premises as your offices? The depôt is wholly a different thing. There must be accommodation for a large number of horses and prison-vans, drill-yard, stores, a gymnasium, and a variety of other buildings. You require a good space of ground. You could not do with less than 3 acres.
390. Have you plans of Scotland Yard? No; I have not seen them, except in the newspapers.
391. How does your establishment compare with the establishment in Melbourne—are there good quarters there? They work their establishment in a different way. The head office is in the Colonial Secretary's Office, and is simply for a clerical staff. The active police work is done in a separate building called the Detective Office, which is in Swanston-street, I think, but I do not approve of that system. If the head of the police is to be referred to as an active manager of the Department he must be come-at-able where his men are. He is not going to be held responsible for actions which take place if he has not been on the spot to direct them himself, or to know what is going on.
392. Therefore, you think it is desirable that the Detective Office, the plain-clothes constables, and the ordinary constables, the whole system, in fact, should be under one central control? Yes; I do not see any other way of saving time, and having direct action taken.
393. Do you not think it would be better to amalgamate in a building with your Department, the Coroner's Office and the Department of the Comptroller-General of Prisons, than to bring in two Departments such as the Auditor-General's Department and the Public Service Board? I do not think I am a good judge of that, but there can be no possible objection to the Prisons Department being associated with our Department in a building. Instead of that being a disadvantage it would be the reverse.
394. Do the two Departments in any way work together? Yes; we are in constant communication; we have to work together.
395. Therefore, you quite fall in with the proposal so far as that Department is concerned? Yes; the Comptroller-General of Prisons is as anxious for the arrangement as I am myself.
396. Do I understand that you put in a written objection to going down to the Phillip and Bridge Streets site? Yes.
397. And as to the proposal upon the site under consideration, after you left the Board you still objected in writing to the Auditor-General and to the Public Service Board being put in with you? I have had no communication except with the Under Secretary for Public Works and the Government Architect, and I have told them both what I have told you.
398. Your Department in years to come must grow, and if that is the case, and other Departments are in the same building with you it will be necessary to give you part of the space occupied by one or other of them;—is not that likely to create considerable confusion? If anything of the kind took place the Detective Office could be removed to a separate building in the immediate neighbourhood without a great amount of inconvenience.
399. But that would entail a good deal of trouble? It would be inconvenient to some extent.
400. The fact remains that yours is a Department which it is highly desirable to keep by itself;—that is your opinion? Yes.
401. *Chairman.*] Have you examined the site at present occupied by the Education Department in connection with the possibility of utilising it for your purposes? It would not be so suitable for our purposes. I looked upon the site which we occupy from the first day we obtained it as the most central and convenient position which could be obtained for our purposes in Sydney.
402. You make a strong point of the necessity for large yard accommodation? Yes; you must remember that we are unlike other public officials. I dare say you constantly see me running about the streets. In the first place, the Attorney-General wants me to see a witness. Then the Colonial Secretary wants to see me about a matter. Then I have to attend some of the Boards of which I am a member, and it is a great convenience to me to have my office situated like the nave of a wheel so that in going out along the various spokes as it were, there is no great loss of time. The Supreme Court is at the end of the street, and even a quarter of a mile makes a difference in a case like mine. I might also mention that the tramway runs along in that direction, and that is of great advantage because the superintendents of police have to report at my office every day, and sometimes oftener, and it is convenient for them to go backwards and forwards by tram. The situation is a very convenient one, and I do not think it could be improved upon.
403. It would be impossible to get the accommodation you require with the same convenience elsewhere? I think so.
404. In other cases with which you are acquainted, are the police offices isolated? In Dublin there is a separate building at the Castle for the Inspector-General of Constabulary; but I am not acquainted with any other place where the police force is worked upon the same central lines as is the police force in the Australian Colonies. In other cases the police are municipal or local, excepting, of course, the Metropolitan

police

police of London, which stretches 15 miles. In that case there are 13,000 men, in the case of the Irish Constabulary there are 15,000. E.W.Fosbery. 19 Jan., 1899.

405. *Mr. Levien.*] A room is provided in the proposed buildings for Boards? I observe that there is a large room with a small office off it. I suppose it is meant for the Inspector-General. If the occupant of the office has no larger ideas than I have, he will be quite content with the small room, and leave the Boards the use of the larger one.

406. I presume the Board for the Protection of the Aborigines would meet there? Yes; I have to attend several Boards, and we occasionally, as you know, have to hold a court at my office. We must have a large room there.

FRIDAY, 20 *JANUARY*, 1899.

Present:—

JOHN PERRY, Esq. (Chairman).

The Hon. Patrick Lindesay Crawford Shepherd.
The Hon. Andrew Garran, LL.D.
The Hon. William Joseph Trickett.
William Thomas Dick, Esq.
John Christian Watson, Esq.
Robert Henry Levien, Esq.

The Committee further considered the expediency of erecting Public Offices on land with frontages to Phillip and Hunter Streets, Sydney.

George Edward Brodie, Assistant Auditor-General, and Chief Inspector of Public Accounts, sworn, and examined:—

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407. *Chairman.*] What position do you occupy in the Public Service? I am Assistant Auditor-General.

408. Has your Department made any request for extra office accommodation? We require extra accommodation. I do not know if any request has been made by the Department.

409. Is your Department likely to increase? It is quite possible.

410. How long have you occupied your present premises? Since the 1st February, 1887.

411. Have you found yourself at any time cramped for space? Yes, being a private dwelling-house, the place is not at all fitted for a public office; the rooms are too small.

412. They do not afford an opportunity for proper supervision? No; for instance, one branch, which we call the Expenditure Branch, is at present divided into four rooms. It is impossible for the head of the branch to exercise proper supervision over the officers in those rooms. The consequence is that the supervision is left to subordinate officers.

413. What is the principal thing for which you wish the extra accommodation? In the first place, the lease of the building, occupied by the Auditor-General, expires on the 1st February, 1900. In the second place, the offices are too cramped; we have not proper accommodation for the storage of the very important and valuable records in our custody.

414. What rental are you paying? £500 at present. We paid from the 1st February, 1887, to the 1st February, 1897, £1,000 per annum. We are now paying £500 per annum to the Perpetual Trustee Company.

415. Would there be any difficulty in the way of your renewing your lease at £500? I do not think so. I cannot speak positively. I saw the Manager of the Company, Mr. Mackenzie, a few days ago. He said that the lease had about twelve months to run, and before the expiry of the lease he could not give me any decided answer.

416. Has your Department examined the plans of the proposed buildings? I examined the plans for the Auditor-General; no one else in the Department, I think, has seen them.

417. Were they designed in order to give your Department the rooms you require? Yes; the plans I saw will suit our requirements. I went into the matter very carefully.

418. Have you any Departmental objection to being associated in the same building with other Departments? Not with the Departments suggested. I consulted the Auditor-General, and explained the whole case to him. He did not see any objection, and I, myself, see none. We are not like an ordinary public office;—we are more in the nature of a private office;—we prefer being away from public offices;—in fact, our business would necessitate our being as isolated as possible from any other public office.

419. Would the design of the proposed buildings give you that isolation, in your opinion? It would do so, I think.

420. *Mr. Dick.*] Has there been any increase in the number of your officers during the last few years? Within the last two years the staff has been augumented by the transfer of the Treasury Inspecting staff, numbering six officers.

421. Did that involve an increase in the number of your offices? To the extent of two rooms.

422. Do you anticipate any further increase of an analogous character? I cannot say that at the present time I do.

423. Do you think the increase of space proposed to be given to you will be sufficient to meet your requirements in the near future? As far as any judgment can be formed at present.

424. You are satisfied with the plans? I am perfectly satisfied with them. The Auditor-General himself was satisfied with the explanation I made of them.

425. You are satisfied that due facility is provided for supervision by responsible heads? The arrangements would be much better;—in fact, they would be all that is necessary.

426. I understood you to say, in answer to a question by the Chairman, that your Department covers a large number of valuable records;—is it a fact that those records after a short period become valueless? No; we have duplicates of the accounts at the Treasury, and we have the disbursement vouchers for all the Government Departments. There are also records in regard to the payment of money which are referred to very frequently. A private firm, for instance, may put in a claim five or six years old for the payment of a sum of money. We have a number of those cases; quite recently some occurred. It is necessary that we should have our records for some long period, in order to satisfy ourselves that a claim has not been already met.

427. The storage of these documents would occupy a considerable area? Yes.

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428. Would you require to put them all in a strong-room, or would the fact of the building being fireproof, be sufficient to admit of your storing a number of the records in the various rooms? I think the accommodation provided would be quite sufficient for those purposes.

429. Has the advisableness of placing the Auditor-General and the Treasury in close proximity, or in the same building, suggested itself to your mind? No. Many years ago the Auditor-General's officers and the Treasury officers occupied one building in Bridge-street, but, in my opinion, it is far preferable for the Auditor-General's Department to be in a building altogether away from the Treasury.

430. We have already had some evidence on that point;—can you suggest any reason why the two Departments should be separated? Yes; I think one good reason is that it is impossible to have absolute supervision over the whole of the officers in the two Departments at all times, and there might be a danger of irregular intercourse between the officers of the Treasury and the officers of the Auditor-General's Department which would not be known to the senior officers. That would minimise the effectiveness of the check upon the accounts by the Auditor-General.

431. It is from the point of view of public safety and to avoid fraud, that you think it advisable that the two Departments should be in separate buildings? I do, most certainly.

432. *Mr. Trickett.*] How many clerks have you in the Audit Office at the present time? Fifty-two.

433. Has not Mr. Rennie expressed the opinion that in all probability his Department will decrease as regards the number of clerks employed? I have not heard the Auditor-General express an opinion to that effect.

434. Mr. Rennie was examined by the Public Works Committee when they were considering the question of erecting the Treasury building, and at Question 547 he gave this evidence:

> In view of that fact, would you favour the erection of large Treasury buildings providing the accommodation which would be necessary for your Department, distinctly apart from the Treasury, although under the same roof? I should like an office built expressly to suit my purposes. I may as well say that, as time progresses, it is not at all unlikely that the work will be reduced. Certain arrangements may be made which would have the effect of reducing my work and reducing the number of my clerks, and also the space necessary. I have long felt that we have a larger establishment than the public may consider necessary for audit purposes.

435. Mr. Rennie gave that evidence on the 28th January, 1896? At that time I have no doubt that the evidence was perfectly correct, but since then the Treasury Inspecting staff has been transferred to the Auditor-General's Department. We have taken their work over, and that being so the different branches of Audit have since been extended. The advent of the Inspecting staff of the Treasury was not anticipated by the Auditor-General. The Auditor-General's business to a certain extent is circumscribed by the present Audit Act, but on the transfer of the Treasury Inspecting staff, and the Chief Inspector of Public Accounts, who hold commissions under the hands of the Colonial Treasurer, the Auditor-General has extended powers. The Auditor-General did not anticipate that phase of the question when he gave the evidence to which you have referred.

436. Since that evidence was given the staff of the Audit Office has been largely increased? To the extent of the Treasury Inspecting staff.

437. Those officers now come under the Auditor-General? Yes; they are called Audit Inspectors now.

438. They have nothing whatever to do with the Treasury? Nothing whatever.

439. Therefore the evidence I have quoted is not applicable to the present time? No.

440. Are you aware whether Mr. Rennie has also changed his opinion in that direction? I have not asked the Auditor-General his opinion, but I think it would be practically the same as mine at the present time. He knows the changes which have taken place in the work.

441. Have you consulted the Auditor-General generally with regard to the proposed buildings? Yes; I attended various meetings of the Board, and I reported to the Auditor-General immediately on my return from those meetings.

442. I understood you to say in answer to a former question, that you did not approve of the Treasury and the Audit Department being in one building? That is so.

443. That is also in accord with the views of Mr. Rennie? I feel most certain that it is, although I have not asked him the question.

444. Your reasons for the Departments being apart is that the officers may not have an opportunity of consulting, thus altering the effect of the check one upon the other? I do not think they should have any friendly relations beyond those that cannot be avoided.

445. The Auditor-General's Department, you think, should be regarded as a distinct Department, not having any business with the public at all? It may be considered a private Department altogether, I think.

446. Therefore, as regards location, it does not much matter where it is? It does not.

447. Do you keep the records in connection with the C.Ps. in your Department? Yes.

448. How many books are there? I am not prepared to say at this moment.

449. The Committee have been informed on a previous occasion that there are twenty-five as compared with 100 in the Treasury buildings? We have about the same number now, I think.

450. They may be regarded as very valuable records? They are most valuable. They are a check against the Treasury books. They do not contain the same detail information which the Treasury registers do. They are simply for the purpose of checking the cash transactions, so that there is no necessity to put in a number of details which are recorded in the Treasury books.

451. The checking is by number? By number and amount.

452. And those records, you say, are very valuable? Yes.

453. Have you in your present building sufficient safe accommodation for the protection of these and similar valuable records in your custody? No; we have no safeguard at all.

454. You have only movable safes? We have one small safe—that is all.

455. Are these books put away in a safe? No; they are kept in an ordinary room.

456. Have you looked at the plans to see whether there is sufficient fireproof accommodation for these records? Yes; I consulted with Mr. Vernon, and I understood that he intended to make the whole building fireproof.

457. The twenty-five books to which you refer could not very well be put away in a safe; they would require to be in a fireproof room? Yes; they are immense books.

458. Have you seen that in the arrangement of the proposed buildings it would be possible to have a number of clerks under supervision, similar to that obtaining in the case of mercantile firms? Yes; there

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there are two large rooms and a smaller one. One of the rooms is 854 feet, and another 502 feet. That gives us a considerable superficial area, and the clerks can be under supervision of officers placed at either end. The same observation applies to both floors.
459. Your Department, being upstairs, would not be attended by very much inconvenience? Not with a lift.
460. You state that you have fifty-two officers, with the addition of the branch from the Treasury? Yes; I should mention that we lost one officer in the re-grading of officers by the Public Service Board.
461. Is any money paid into your Department? None at all.
462. When the two Departments were in one building some years ago—the Treasury and the Auditor-General's Department—was any inconvenience found to exist? That I could not say; it would be early in the seventies. The Departments were not worked together exactly; the Treasury building was divided into two parts; the Auditor-General had the western end and the Treasury Officers had the eastern end.
463. The corner at which it is proposed to erect these buildings is notably a very noisy corner, in consequence of the number of trams passing;—would that be an inconvenience to work such as your office has to perform? No; it would not affect them much. The officers engaged on work requiring quietude could be put in rooms away from the front of the building.
464. I see by the statement handed in by Mr. Vernon that your Department at present has 9,553 feet, and that the new buildings will give you 10,593 feet;—I suppose you do not require much superficial increase. It is the inconvenience attaching to the present buildings occupied by you which is sought to be remedied? That is the primary reason for the change. Of course it is impossible to say at the present time how far the work of the Audit Office is likely to extend. It is just as well to allow a little room for expansion.
465. Were you a member of the Board which sat to consider the accommodation of these various Departments? Yes.
466. Did any discussion take place by the Board as to the advisableness of putting these Departments together, or was the question considered merely from an economic standpoint? It was considered merely from an economic standpoint.
467. You are aware that Mr. Fosbery dissents from the idea of his Department being mixed up with other Departments? I have heard so. I was not on the Board with Mr. Fosbery.
468. Apart from the question of mixing up the various Departments, you think the accommodation provided on the floors set apart for you will be in every way suitable? Yes.
469. And sufficient for many years to come? Yes.
470. *Mr. Levien.*] In one of your answers you referred to the possibility of the officers of your Department acting in concert with the officers of the Treasury Department, supposing they were accommodated in one building, leading possibly to a defrauding of the revenue? If the two offices were brought into contact the relations of the officers would naturally become friendly, and they might give information to one another which might eventually develop into some irregularities.
471. Do you mean to infer that there might be some frauds owing to communications between the officers of the two Departments? I wish to convey my opinion that officers in the Audit Department should not have too friendly relations with officers whose accounts they are examining. They should be as distinct from those officers as is necessary for the due performance of the audit.
472. You are referring to the relationship between the officers themselves? Yes.
473. Supposing the Treasury officers were down stairs in a particular building, and that the Audit officers were up-stairs, would that make any difference if the Auditor-General had proper supervision over his officers? It would be easier for the officers, if they were in the same building, to meet one another than if they had to go out from one building to another. If they had to leave the office to have communication with officers in another part of the city, their absence would be noticed and inquired into.
474. How long have you occupied the position of Assistant Auditor-General? Two years.
475. In what office were you before that? In the Treasury.
476. For how long? For about twenty-four years.
477. Did you ever hear of any case of complicity between officers of the Auditor-General's Department and the officers in the Treasury Department—I mean complicity with a view to fraud? I am glad and proud, being an old officer of the Treasury, to say that I never heard anything of the kind.
478. You know of no such instance? Not a single instance.
479. Then why do you now say the two sets of officers require to be separated? For the one reason, that is the possibility of officers in the Auditor-General's Department becoming on too friendly terms with the officers of the Treasury through being brought into close contact with them in the one building there might be irregularities.
480. You know of no case of fraud through their communication? No.
481. Then you are indulging in mere supposition when you speak of the probable effect of the two sets of officers being under one roof? Quite so.
482. Have any complaints been made by the Auditor-General or by the Colonial Treasurer which would reflect upon any officers in their Departments;—has any improper conduct on their part led to complaints? As an old officer I am happy to say that I do not know of anything of the sort.
483. Were you deputed by the Auditor-General to inspect the plans of the proposed building? He is aware that I have seen them.
484. Do you know whether the Auditor-General has himself been requested to inspect the plans? I do not know that he has. I have a letter here from the Principal Under Secretary bearing upon the question.
485. To whom is it addressed? To the Auditor-General.
486. Has he inspected the plans? He has not closely inspected them.
487. Do you know whether he inspected them at all? Yes; he saw a copy of plan No. 3.
488. Has he expressed any opinion as to the accommodation required by the Department? He left that entirely to me.
489. So that, as far as his individual opinion is concerned, the Committee know nothing about it? No.
490. So far as the Auditor-General's Department is concerned, the Committee are to be guided entirely by your opinion? Not exactly; because I stated my views to the Auditor-General, and showed him the list of offices.

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491. But he expressed no opinion about the matter? Not in precise terms.
492. Whatever you have said or recommended the Auditor-General has acquiesced in? He has.
493. How many clerks had you in your Department two years ago? I think about forty-four or forty-six officers.
494. You have now fify-two? Yes.
495. Then the number has increased? Only to the extent of the Treasury Inspecting staff.
496. They are absolutely under the Auditor-General? They are now. The staff has been increased by six officers.
497. The buildings you now occupy, you say, are not large enough for your purposes? No.
498. Has not the Auditor-General stated that he never asked during the whole term of his office for any rooms for the protection of documents? I do not know that.
499. You think some provision of the kind is absolutely necessary? I think we should have a fireproof room. We have in the Department documents which, if they were destroyed, could not be replaced.
500. And you think that in any case the Auditor-General's Department and the Treasury should not be in one building? That is my opinion.
501. Not even if there were a check officer? I do not think that would make much difference.
502. Let me direct your attention to the evidence which Mr. Rennie gave to the Public Works Committee on the 28th January, 1896;—he gave this evidence in reply to Question No. 501:—

You would be quite satisfied as long as you were separated by a street, but you would not like to be next door to the Treasury? I should not like to be next door to the Treasury; but if there was a strict check against close intercourse between the two Departments it might be all right

—? I do not know what the Auditor-General means by a strict check upon close intercourse between the two Departments. I do not see how that is possible.
503. Do you know how the Departments of Audit and the Treasury are worked in the other colonies or in England? I have no knowledge on that point.
504. You do not know whether in England, for example, the Treasury and the Audit Office are accommodated under the same roof? I do not know.
505. You are speaking only from your knowledge of this Colony? Yes.
506. Mr. Vernon said yesterday that no records of very great importance were kept in your Department; you now say the opposite? I do not see how he could know the value of our records. We have records of value extending back as far as 1850.
507. Of very great value? I question very much—I cannot speak positively—whether, as far as the public accounts are concerned, there is a complete set in the Treasury extending as far back as those which we have in our Department.
508. Yet there have been no fireproof safes provided in your Department for the protection of these valuable documents? No.
509. Do you know whether it has at any time been recommended that such provision should be made? I do not.
510. On 28th January, 1896, Mr. Rennie also gave this evidence:—

I understood you to say that it was useless for the Treasury Department to transcribe certain information because it could all be obtained elsewhere? I say it is useless.

Therefore it would not be a national calamity if a fire took place and destroyed the Treasury books? Certainly not.

What do you say to those answers by Mr. Rennie? From my own knowledge of the Treasury books, I can say that the information which is contained in them is absolutely necessary. I know that that is so.
511. So that you do not agree with Mr. Rennie's answers? Not altogether.
512. Let me also refer you to Mr. Rennie's evidence in reply to Question 536:—

Mr. Davies.] I want to verify a statement of that kind made by the Treasury Department. Supposing the Treasury records were burnt, could the information be obtained? It could be made up from my records to-morrow.

? That is so, because we have vouchers from the land agents.
513. If you had not storage room you could not retain those vouchers? Certainly not.
514. *Chairman.*] Therefore, it is absolutely necessary that storage room should be provided? Most decidedly.
515. *Dr. Garran.*] Is the opinion you have expressed as to the undesirableness of having the Treasury and the Audit Office quite close together your individual opinion, or have you adopted the opinion of the Auditor-General? It is my individual opinion.
516. I asked you that question because in the inquiry already referred to, Mr. Rennie was asked the very same question, and he said that when the Audit Office formed part of the Treasury buildings, it was a source of great inconvenience, and to some extent of annoyance, because the clerks of the two Departments were continually running into each other's offices, interfering with what he considered a distinct business of each;—do you remember such a thing happening? I do not remember it happening; but, as a matter of fact, the officers of the Treasury very frequently had interviews with the officers of the Audit Department, in connection with their individual work.
517. You were in the Treasury at the time to which the Auditor-General refers? Yes.
518. Could there be frequent colloguing between the two Departments without your knowing anything of it? No.
519. Mr. Rennie says that when two Departments were so close together the clerks were always running along to the Treasury;—as an old Treasury officer do you know whether that is a fact? The Treasury officers frequently have, up to the present day, intercourse with the officers of the Auditor-General's Department.
520. But there was evidently a certain amount of running about, which the Auditor-General did not want? I do not know that there was any reason for special complaint.
521. Mr. Rennie said in reply to Question 501, that if there were a strict check against close intercourse between the two Departments matters might be all right;—how could he, as Auditor-General, if you say that intercourse is necessary, prohibit his clerks from going into the Treasury? We prohibit them now from too close an intercourse with the Treasury; but it is necessary that they should have a certain amount of intercourse with the Treasury officers in making an examination of the books.
522. The question is, whether there is any intercourse of an undesirable character? Not that I am aware of. I do not allow, so far as I am individually concerned, any clerk to communicate with a clerk in the Audit Office upon any matter relating to accounts which should come through the head of a particular branch.

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523. Do the Treasury clerks come to you, or do your clerks go to the Treasury? Both things happen.
524. That must be done? It is inevitable.
525. You say your staff has recently been increased by six officers;—was not that done by the Public Service Board? Yes.
526. That is the only increase in your staff within the last ten years? I cannot speak of the last ten years. I can speak only of the last two years.
527. But generally speaking there has been no great increase in the staff of your Department? No.
528. It can only grow if the public expenditure grew also? Yes. If the public expenditure and the revenue increased, our staff must also increase.
529. If we provide you with adequate accommodation now, we shall be providing you with all you are likely to require for some years to come? Yes; I am quite certain of that.
530. You have been long enough in the office to get a good idea of the staff; supposing you were to place the offices according to your ideas, how many large rooms would you provide, and how many small ones? I should have at least two large rooms, one for checking the receipt of moneys, and the other for the expenditure branch, because we have more officers engaged in those two branches than in any other.
531. You would not throw those two rooms into one? I do not think it would be desirable.
532. Then you would want two large rooms? Yes.
533. All the others would be for gentlemen in higher positions in the Department? For officers engaged in different branches of work. For instance, there is a salary registration.
534. Would there be more than one officer in each of the smaller rooms? Yes; perhaps three or four.
535. In how many rooms would there be three or four officers? In perhaps, five.
536. Is it not this very multiplication of rooms which makes supervision difficult? Yes.
537. And you would still continue having four or five small rooms? There are ten inspectors, and there is no necessity for supervision over them. They are all engaged upon special and confidential work. Then there are the correspondence clerks, who must have a quiet room, and also the officers engaged upon salary registration. There is another small number of officers engaged upon the adjustment of advances made by the Treasury to all public accountants.
538. If you have so many clerks in small rooms, who s to see that they are always on duty? There is a senior officer in charge of each room.
539. But they cannot look through brick walls. You would not diminish the number of small rooms if you had the arrangement yourself? It would be better if we had four large rooms if possible.
540. But that would not be convenient? Not at all.
541. It would be too noisy? No; only so far as the inspectors and the correspondence clerks are concerned.
542. It would not be too distracting? No.
543. Your last answers go to show, then, that you would have more than two large rooms? Yes; if it were possible with these plans.
544. You think the supervision would be better? Yes.
545. Still you are satisfied with the plans as they are? Yes.
546. Have you any documents at all of which there are no duplicates anywhere else? There are some old books of public accounts in regard to which I do not think there are any records in the Treasury. I do not remember their being at the Treasury.
547. But as to current business, is there anything that you get in from year to year which is not in the Treasury or the local Lands offices? There are the disbursement vouchers. The vouchers for expenditure of some of the Departments, of which duplicates are not kept originally. They are retained in the Audit Office, and they contain details which you will not find in any other Department.
548. There are some documents you could not re-duplicate if destroyed? No.
549. If the Audit Office were burnt down to-morrow, there are some documents which could not be replaced? Yes.
550. But the bulk of them you could replace? Yes.
551. Anything which could not be replaced could be kept in the fire-proof strong-room? Yes.
552. And as to those which could be replaced, the keeping of them in an ordinary fire-proof room would be enough? Yes.
553. If every room were fairly protected against fire, that would be adequate? Yes.
554. Provided that, in addition to that, you had a room which would stand if the rest of the building were burnt down? Yes.
555. It is proposed to give you that accommodation? Yes.
556. For the working of your Department, would it be more convenient to have all your rooms on one floor than to have them one above another? I do not think it would make much difference whether they were all upon one floor or upon two floors.
557. But there would be a good deal of running up and down stairs? Yes; that occupies a good deal of time.
558. And it would be inconvenient to your staff? Very inconvenient. There are six or seven storeys where we are now.
559. It is also inconvenient to the public? Ours is not a public office. We see very little of the public. We see only officers from the different Departments.
560. If the running up and down stairs would be inconvenient, would it not be an advantage to have all your rooms on one floor? Yes.
561. If you could get such accommodation, you would be more conveniently placed than you are now? Certainly.
562. One floor would suit you better than two? Yes.
563. It would be a distinct advantage to your Department to be all upon one floor? Yes, as far as convenience goes.
564. So far as that is concerned you are very conveniently arranged for? Yes.
565. You have no objections to urge to the plans which have been shown you? No.
566. No hostile criticism? None at all.
567. *Chairman.*] As to your objection to being associated with the Treasury in a building, I take it that the duty of the Audit Office is to audit the accounts in all the Departments. You are to have three other

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Departments with you in the proposed buildings. Would it not be better for you to be with the Treasury, which is only one Department, than to have three other Departments? I do not think it would be at all advisable for the Auditor-General's Department to be housed with the Treasury. In the Treasury building you would have officers receiving and paying away money, and you would have the Auditor-General auditing accounts.

568. Will not the other Departments be paying away money? Yes, to some extent.

569. Your opinion is that it would be a wise precaution to keep the Auditor-General's officers as far away as possible from the Treasury officers? Yes.

570. There is nothing in your experience which makes it absolutely necessary for that to be done; still you think it would be a wise precaution? I think it would be wise.

571. The duties of the officers who have been transferred to you from the Treasury is to audit accounts throughout the Colony? Yes, including the metropolitan district.

572. Suppose the Government were not proposing to erect a building especially for you, do you think a suitable building could be rented in the city? I am not aware of any that would be convenient.

573. Have you any knowledge at all in that direction? No.

574. Suppose Federation be accomplished in a short time, will not the handing over of a number of Departments to the federal authority have a tendency to decrease the number of officers in your Department, and, therefore, the space required? It is quite possible.

575. It is more likely that the number of officers will be decreased than increased? I think it extremely probable.

576. *Mr. Watson.*] It is to be assumed that the taking over of Departments by the Federal Government would give your Department less work to do? I am not in a position to say how it would affect us; but it is quite probable that it might have that result.

577. The probabilities of the case would point to a reduction in the number of officers? In that event.

578. Do you think the strong-room provided on the two floors for your Department, each room being approximately 16 ft. x 12 ft. x 14 ft. in height, would be large enough in view of the fact that none of the remaining portions of the building would be absolutely fireproof? I think they would be sufficient; but I understand that the building itself is to be made altogether fireproof. Special precautions are to be taken, I understand, in the erection of the building.

579. But assuming that a fire did take place, it would be a great advantage, I assume, to have one particular room which would stand, although the remainder of the building might be destroyed;—suppose the strong-room shown upon the plans fulfilled that condition, would it be large enough to contain the documents which it is necessary should be preserved? I think it would be quite large enough for the more important and valuable documents.

580. I understand that it is proposed to make only one portion of the building into a strong-room with iron plates? Only one portion.

581. And you think that would be enough to store the documents which it is absolutely necessary to preserve? I should not like to speak too positively upon that point; but I think the two rooms would be sufficient.

582. As to the desirableness of having the rooms larger than they are at present, you are provided with one very large room on each floor and a number of smaller rooms;—could the smaller rooms be made into larger ones without interfering with the structural necessities of the building? I could not say.

583. You think it is desirable to have one more large room than is provided on each floor? If it can be done without impairing the strength of the building.

584. *Mr. Dick.*] Do you think there is any reasonable expectation that the duties to be performed by your officers will increase in the future;—is it not more than likely that the public revenue will increase materially within the next five or ten years, and thus increase the work of your Department? I do not think that is likely to happen within the next five or ten years.

585. There is an increase of 10 per cent. in the floor-space given to you;—do you regard that as sufficient for your requirements for some years to come? Yes.

586. *Mr. Levien.*] The Treasury inspectors you have spoken of will not be occupying their room all at the one time? No.

587. How many inspectors are likely to be in the office at one time? There are ten inspectors, and I dare say four of them on the average will be in town at the one time.

588. So that the accommodation is a little more than they would require, because when they are here they have only to report upon the inspections they have made? There is also Departmental work to which they have to attend. They frequently have interviews with officers of the various Departments who consult them as to their suggestions and recommendations.

589. The work of these inspectors is of a confidential character? Yes. When they have made their inspections they send in reports.

590. So that they have not much work to do when they reach the office? They are also inspecting in the city and suburbs.

591. Does it take ten of them to do that? It takes four of them. The Supreme Court offices are inspected every quarter under statute. Then there are the Customs and Taxation offices, and the Post Office and the Police Courts; in fact, all the public offices in the city.

592. *Chairman.*] You being the head of a branch it is necessary that you should have a room to yourself? It is absolutely necessary.

593. What are the reasons? One reason is that numerous interviews take place between myself and public accountants every day, in connection with queries and so forth. It frequently saves time and a great deal of correspondence if they come to the Department. A memorandum is often sent out to officers of the Departments; they to interview me, and if a reasonable explanation is forthcoming the requirements are satisfied. Then I have to arrange matters with the various inspectors when they have returned from their inspection. It is necessary to interview them, and they cannot be interviewed all at once.

594. It is desirable that no third person should be in the room at the time? It is not at all desirable.

595. *Mr. Levien.*] When was the position of Assistant Auditor-General created? On the transfer of the staff from the Treasury by the Public Service Board. The Audit Act provides for an Auditor-General and in his absence a deputy.

596. Has a deputy Auditor-General been permanently appointed? No.

597. There is no deputy at the present time? No.

598. Your designation is Assistant Auditor-General? Yes.

599. And that change you say was made by the Public Service Board? Yes.

Frederick

Frederick William Neitenstein, Comptroller-General of Prisons, sworn, and examined:—

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600. *Chairman.*] You are at present occupying premises in Elizabeth-street? Yes, in Austral Chambers, Elizabeth-street.
601. Do you find the rooms there very unsuitable? Very unsuitable.
602. For that reason, I presume you have made a representation to the Government with a view to your having other rooms;—were you consulted at all in the planning of the proposed buildings? Yes.
603. What rent are you paying for the premises you now occupy? £250.
604. Suppose you had a larger portion of the building you now occupy, would that be sufficient for your requirements? No; the place is altogether unsuitable for the requirements of the Prisons Department. It is an ill-ventilated building, very noisy and very dusty, and unless we took the whole of the floor underneath us we could not utilise any portion of it. It is very necessary that a Prisons Department should be kept entirely separate and distinct from premises occupied for other purposes. If we took the whole of the floor underneath it would add greatly to the expense.
605. What would be the expense? I expect we should have to pay another £250 at least.
606. Then you would have ample floor space? Then, we should have two floors, and some small rooms above for the caretaker.
607. For £500 a year you would have ample floor space for the carrying on of your Department? That is at the present rate; but if property advanced the owner of the building would probably increase the rent. He has reduced our rental at present by £100 a year.
608. Suppose he thought he was going to lose a good tenant—the probabilities are that he would not ask more rent? I do not think he cares much about having us there. I think he could get £250 a year for the place.
609. *Dr. Garran.*] Are you short of room where you are? Yes.
610. How much more room do you want? We ought to have as much again. We are very cramped, and in want of a proper place to put our records, which are increasing yearly.
611. You want to double your accommodation? At least.
612. You have looked at the plan of the accommodation proposed to be given to you? Yes.
613. Will it give you what you want? Yes; it would meet the growing requirements of the Department.
614. It is not any more than you want? Not any more, looking to the future.
615. There has been no increase in the staff of your Department? No; but we have not enough floor space; we have to put up with a great deal of inconvenience.
616. You are upon one floor at present? Yes.
617. If the rooms proposed to be given to you are fireproof rooms there would be sufficient provision for the custody of your documents? Yes.
618. Would it be a convenience to you to be housed in the same building with the Inspector-General of Police? Yes.
619. Do you often have to communicate with him? Frequently.
620. With the Supreme Court? No.
621. What other offices do you communicate with? With the Department of Justice. They send on our communications to the Supreme Court, the Prothonotary, the Registrar in Divorce, and so forth.
622. In the new buildings will you be as near to the Department of Justice? Nearer if anything.
623. You want all the space given you on one floor? Yes.
624. In every respect, as far as you can see from the plans, the building would be suitable? Yes.
625. The subdivision of the rooms is what you want? Yes.
626. They are large enough? Quite large enough.
627. You would not subdivide them differently if you had the planning of them yourself? I should make, perhaps, one or two minor alterations, but they are not very important.
628. You would be content with the arrangement? Yes; we must have a place to ourselves. We must not have persons coming to the Department except on business with the Prisons. We have a very undesirable class of persons coming to see us, and it is not desirable for other Departments to have them on their staircases.
629. Still, they would use the common lift in the proposed buildings? We should not use the lift at all; that is the arrangement I have made with Mr. Vernon.
630. But there is a common staircase? The entrance to the Auditor-General's Department and to the Public Service Board would be quite distinct from our entrance.
631. Your entrance would not lead to any floor but your own? Excepting that occupied by the Inspector-General of Police.
632. *Mr. Trickett.*] Your present offices are very inconvenient as regards persons who are waiting to see officials of your Department? Yes; we have no waiting-room at all.
633. It would appear from the comparative statement handed to us that you now occupy 2,150 superficial feet and that you are to get 5,000 feet;—that would seem rather a large increase, but you say that the buildings you now occupy are utterly unsuited to your requirements? Quite so.
634. The public also experience great inconvenience from having to wait outside in the passage? Yes; it is a matter of continual complaint by public men who come to see me that there is no waiting-room. Officers from the various Departments have frequently to come to our Department, also Members of Parliament and discharged prisoners, and there is no means of keeping the various persons who come to see us apart from each other.
635. Some accommodation is absolutely necessary in consequence of the different classes of persons who have to come to your Department? Yes.
636. That will explain in a considerable degree the large extra space required for your comparatively small Department? Quite so.
637. Your staff is not large? It consists altogether of ten; but we want a waiting-room and also rooms for the caretaker.
638. Do you keep your Department open all night? Yes.
639. For what business? The caretaker is there prepared to receive wires from any of the gaols. He is a confidential officer, and it is often necessary that he should communicate to me the contents of a wire and receive instructions from me.

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640. It is necessary that an officer should be in attendance day and night? Yes; the discharge of prisoners is involved. I have to be informed at once when persons are released. As soon as the bond is obtained I am informed, and I give instructions for release. These things take place at most uncertain hours.
641. Provision must be made for business of that kind? Yes; the caretaker discharges that duty at the present time.
642. You were a member of the Board which inquired into the desirableness of having the Inspector-General of Police, the Comptroller-General of Prisons, the Auditor-General, and the Public Service Board housed under one roof? I was not a member of that Board, but of a Board appointed to inquire into the advisableness of housing the Comptroller-General of Prisons and the Inspector-General of Police with various other Departments upon the block of land opposite the Public Works Department.
643. You and Mr. Fosbery retired from that Board on the ground that you could not agree to the proposal to have your Departments mixed up with other Departments? Quite so.
644. I believe you lodged a strong protest against the arrangement? Yes.
645. Have your objections been overcome up to the present time? In view of the construction of the building with a separate entrance-way for the Inspector-General of Police and myself, and seeing that we are cut off entirely from the Auditor-General's Department and from the Public Service Board, my former objection would not be so strong. Visitors to the Auditor-General or to the Public Service Board would not come near us at all.
646. But with regard to the principle, do you not still think that the Department of the Inspector-General of Police and your own Department would be better kept apart from other Departments? Yes, undoubtedly. That was the original intention. £14,000 was voted by Parliament to put up a building exclusively for the Inspector-General of Police and myself, but I understand that, on grounds of economy, the Government has suggested that the Auditor-General and the Public Service Board might both be housed in the same building.
647. Was the sketch-plan of the offices for the police and your own Department submitted for your approval? Yes.
648. It met with your approval? Yes.
649. It was only a rough plan? Yes.
650. The building covered the same ground, but was a two-storey building? Yes.
651. The arrangement was much the same, so far as your two Departments were concerned? Yes; the Inspector-General of Police was to have the ground floor, and I was to have the upper floor.
652. Mr. Fosbery still holds the opinion that it would be better to keep his Department and yours separate from any other;—I suppose the objection which he has was not so strong in your case as in his? No; I can understand his reasons very well.
653. He wanted to make his establishment a sort of colonial Scotland Yard, but as far as you are concerned, you think you would have sufficient privacy if you obtained the accommodation provided in the proposed building with a common entrance with the Inspector-General of Police? Quite so.
654. I see that you raised one objection before the Board, and that it had reference to time—that is to say, the building for the two Departments would occupy a comparatively short time in erection as compared with such a large building as that proposed. I supposed that objection on your part still holds good? Yes.
655. Is it not a fact that the lease of the building, which you now occupy, will shortly expire? It expires on the 31st May, but we have the right of renewal for one, two, or three years, at the same rental. I was very anxious to get out of the premises we now occupy, and that is the reason I raised the objection to which you refer.
656. As a matter of fact, the £14,000 voted in 1895 was for the purposes of your Department, and for the Inspector-General of Police, and not for this large building? Exactly.
657. The accommodation proposed to be provided for you is enough? Yes.
658. You do not think your Department is likely to be added to by its amalgamation with any other? I do not think so; it could not very well be done.
659. Are there similar Departments to yours in other countries? Yes; there are similar branches in Victoria, Queensland, and South Australia. In South Australia the Sheriff is also Comptroller-General of Prisons. In Victoria, a similar position to my own is that of Inspector-General of Penal Establishments.
660. He holds only one office? Yes.
661. But in South Australia the Sheriff combines the two positions? Yes.
662. That, I suppose, is on account of there being less population? Yes; at one time the Sheriff controlled the Prisons in this Colony.
663. But the growing requirements of the Department made it necessary to appoint a distinct officer? Yes; we have sixty-two gaols in this Colony.
664. Do you think sufficient space is provided for the various exhibits, which are likely to be contained in your Departmental Museum;—would they not require considerable space? I do not think that. In course of time, I should like to see some application of the Bertillon system, but whether it should be in my hands, or in the hands of the Inspector-General of Police, I do not know.
665. What is that system? It is a system for the better identification of criminals. We should want a big bureau with the measurements of the various criminals passing through our hands. They would be secured in cases and boxes. Whether it should be done by the Inspector-General of Police or by our office is a matter for consideration. We are quite prepared to do it; we understand the system and have all the appliances.
666. That opens up the question which the Committee were considering yesterday as to our having a similar establishment to Scotland Yard; that is to say, whether your Department and that of the Inspector-General are not in such a position that from the necessities of the case they must largely increase. Dealing with criminals has now attained a scientific aspect. Do you not think it would be much better to have the two Departments in a building entirely by themselves? That is going back to my objection of some two years ago. I am strongly with the Inspector-General of Police on that point, and I would like to see no one else in our building.
667. If any unforeseen development in police or prison management arose there would be a thorough disruption if other Departments were accommodated with you in the same building? We occupy the whole

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whole of one floor and we have a separate entrance so that we should not interfere with anything going on above us.

668. But suppose there were a necessity to increase your space? In that case, perhaps, the Auditor-General or the Public Service Board could be removed.

669. Upon economic grounds, you are prepared to fall in with the views of the Government; but looking at the matter from your point of view, you still think it would be better that the two co-ordinate Departments should be together? Yes; I quite concur in that view.

670. *Mr. Watson.*] I think you said the number of your staff was ten? Yes.

671. And do you think it would take 5,000 odd feet of space to accommodate ten officers? No. There are our records to be kept, and I want to provide proper waiting-rooms for the accommodation of the various classes of visitors to the Department. Then we want some space for the caretaker, who is on duty all night. We also want accommodation for discharged prisoners who come to see me in great numbers. We do not want to discourage them from coming to see me. At the present time some of them may not like to come, because they do not know whom they are likely to meet.

672. What proportion of the space would your documents occupy? They would occupy a great deal of the space you have mentioned.

673. Your space will be increased by about 3,000 feet? We are a growing Department, and our records are increasing yearly. At the present time our records are packed away in all sorts of holes and corners, and are not readily accessible.

674. Do you think the strongroom provided, having a superficial area of about 192 feet, and being 14 feet in height, will be enough for your records? For the more important ones.

675. You will require other storage room? Yes; we want room to spread them out and to make them more accessible. If we had increased space we should be able to retain records which we do not possess now.

676. Upon the face of it it looks as though one-half of the space proposed to be allotted would be enough for your offices? Then the question arises, what would you do with the other portion of the floor?

677. Your objection comes in as to other persons being in proximity to your Department? Yes; when I was upon the Board referred to by Mr. Trickett, I mentioned the undesirableness of having discharged prisoners going through other Departments under the plea that they wanted to see the Comptroller-General of Prisons. It must inevitably lead to a lot of unpleasantness and awkwardness.

678. You feel certain that you can utilise all the space allotted without having any waste? Yes.

679. What is the real objection entertained by the Inspector-General of Police and by yourself to being associated with other Departments in the building? One of the principal reasons I have is, that prisoners come to see me in such numbers that it is undesirable that they should roam through other Government Departments. I do not think discharged prisoners should be deterred, either, from seeing me from the consideration that they might come into contact with other persons. If they thought that they would have to wander about among a number of strangers who might recognise them as ex-prisoners, they might be deterred from coming to see me.

680. But would there not be quite enough room to prevent any actual contact between persons visiting your Department and those in other Departments? One entrance is reserved for myself and for the Inspector-General of Police, but discharged prisoners might not know of that arrangement, and might enter the building at the wrong door. One of Mr. Fosbery's objections to the arrangement was that he might require to have a number of men in reserve, in which case he would not care to be overlooked.

681. What is the nature of the records you require to keep? They are very voluminous; they deal with the history of prisoners, and sometimes the records in connection with one man will take up a number of pages. There is correspondence in connection with them sometimes when they are in prison, and the whole of that correspondence is put with their records. We have to turn up these records sometimes if persons come into gaol again. Then there are also 600 or 700 officers in connection with the Department, and the whole of their records have to be kept at the head office.

682. You also require a photographic department? Yes; we have a photo. department at Darlinghurst Gaol; but photos. are also kept at head office.

683. Would it not be convenient for you to have your photographic appliances at the Government Printing Office? That would not do at all. We must keep such matters very private.

684. You think the accommodation provided for you in the proposed new building will be ample for a number of years? Yes.

685. *Mr. Levien.*] You are satisfied that sufficient room is provided for the storing of your records? Yes.

686. You think it is undesirable that ex-prisoners who come to see you should be seen? Yes; highly undesirable.

687. Is it not undesirable that they should be seen by detectives, and would they not be liable to be seen by detectives under the proposed arrangement; has there not been a frequent complaint that persons are dogged by detectives after they are released from prison? I have heard so; but I do not know how true it is. Discharged prisoners come to see me upon all kinds of business. I am frequently asked for passes to various parts of the country; sometimes for a suit of clothes; sometimes for money. I am continually dealing with their requests.

688. The passes are generally given them? Yes.

689. And the persons are sent away unknown? Yes.

690. *Mr. Dick.*] Your chief difficulty appears to be that you have no waiting-room? That is one of the inconveniences with which we have to contend.

691. Otherwise you have sufficient space? I would not say that. We are very much cramped for room. If you visited my office you would see the difficulty at once. We have been expecting for some years past to have new offices, and we have been doing the best we can to get along, despite the inconvenience.

692. The Auditor-General will take two floors for the accommodation of fifty-two officers, and you will take one floor for the accommodation of ten officers; can you give the Committee any reason why you require so much more room for each officer than does the Auditor-General;—are there any special conditions in your Department leading to such a state of things? I can only explain our requirements by referring again to the large number of persons who come to see me. I suppose more persons come to see me than go to any other Department.

693. You do not think it would be possible to put you and the Public Service Board, which also has a small number of officers, upon the same floor? No; I do not think the Public Service Board would like that

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that arrangement. It is very undesirable that they should have ex-prisoners roaming through their offices on pretence of seeing me.

694. You think it desirable that your Department should be apart; also even from the Department of the Inspector-General of Police? It would be desirable.

695. If that is so, the objection must have still greater force when you are brought into contact with other Departments? Yes.

696. You think it highly undesirable that your Department should be in the same building as any other Department, even although it is cut off as under the proposed arrangement? Yes; the Inspector-General of Police and I have consultations with each other, and our officers frequently consult with each other. In the original plan it was proposed that we should have a separate entrance.

697. You think that the possibility of discharged prisoners roaming through various other Departments in search of your Department is sufficient to warrant your being isolated from other Departments;—you think it is a very undesirable element in combining various Departments under one roof with you? Yes; I would much prefer not to have any other office with us.

698. It would be possible, would it not, for a person to enter the Auditor-General's Office by your door—that is, to go through your building to reach the Auditor-General's Department? No; it is completely cut off. The objection applies also to the offices I now occupy. There persons coming to see me have to pass through a space occupied by private persons' offices, and that is most undesirable.

699. *Chairman.*] That would be more private than if you were associated with other public offices? I daresay it would, but the objection would be obviated to some extent by our having two different entrances. The Auditor-General's entrance would be in one street and mine would be in another.

700. *Mr. Levien.*] Do you not think it likely that discharged prisoners would come into contact with detectives when visiting your office? Yes; I think it is very desirable that I should have a separate entrance, and I see no reason why a separate entrance should not be provided for me. I think it might be provided in Hunter-street quite easily.

701. *Dr. Garran.*] Does not the question just put to you suggest an objection to your being under the same roof as the Inspector-General of Police? Yes.

702. So far as the general public is concerned, there could hardly be two Departments to which the public have less access that to the Public Service Board and the Auditor-General? Quite so.

703. You could not have two neighbours on other floors who would draw the public less about your building? There is not only the general public to be considered. The Public Service Board have a number of Civil Servants going to see them.

704. *Mr. Dick.*] Would the combination of other Departments with yours and that of the Inspector-General of Police impair the efficiency of your Department;—do you think it would have the effect of discouraging interviews on the part of some persons who might desire to come to see you? I think not, if we had a separate entrance.

705. But that fact would not be likely to be known to those who might wish to see you? They are pretty sharp people as a rule. I think they know a good deal more than many persons give them credit for. I think the Prisons Department might have the entrance in Hunter-street, which is being reserved for the detectives. That is a matter of detail which could easily be got over. We do not want a lift; the staircase would do for us.

706. I suppose the position of the building is not a material element in the consideration of the question? It is. We should certainly be near the Department with which we do a great amount of business, that is, the Department of Justice; the Minister frequently wishes to see me at once. A case may crop up at any time in which he might require my advice.

707. Would it not be desirable to put another storey on the top of the Justice Department for your accommodation? That would be very undesirable, because you would have ex-prisoners coming through the Department of Justice in order to reach me.

708. I find from some evidence by the Government Architect that in a large public building such as that in which we are now sitting, which is amply provided with waiting-rooms and corridors, each officer has practically 146 feet;—upon that basis the officers in your Department would have 1,460 feet? You must remember that we have to make provision for the records and for a caretaker who has to sleep on the premises.

709. Upon your floor? Yes.

710. *Chairman.*] I presume that you and Mr. Fosbery have been in frequent communication as to the accommodation you require? Yes.

711. And you are agreed as to the necessity for your being away from all other Departments? Yes.

712. Have you consented to this scheme merely because it appears to you that you would get accommodation sooner than you might in other circumstances? That has been an important factor in the matter as far as I am concerned.

713. The necessity for increased accommodation has been put before the different Departments by Mr. Fosbery as far back as 1895? Yes.

714. And in that year it was estimated that £14,000 would provide all the accommodation necessary for the two Departments? Yes.

715. Would that £14,000 provide for the requisite accommodation for the two Departments, assuming that they might grow somewhat? I could not go into the question of cost; it would be only guess work.

TUESDAY,

TUESDAY, 24 *JANUARY*, 1899.

Present:—

JOHN PERRY, Esq. (Chairman).

The Hon. Patrick Lindesay Crawford Shepherd.
The Hon. Andrew Garran, LL.D.
The Hon. William Joseph Trickett.
William Thomas Dick, Esq.
John Christian Watson, Esq.
Robert Henry Levien, Esq.

The Committee further considered the expediency of erecting Public Offices on land with frontages to Phillip and Hunter Streets, Sydney.

John William Holliman, Secretary to the Public Service Board, sworn, and examined:—

J. W. Holliman. 24 Jan., 1899.

716. *Chairman.*] It is proposed that the Public Service Board shall occupy offices in portion of the proposed building;—have you examined the plans? I have seen the plans.
717. Do they meet with the approval of the Board? The Board are of opinion that the accommodation shown is sufficient, speaking generally.
718. What space do you occupy now in your building? We occupy eight rooms altogether.
719. What floor-space would they contain? The floor-space we occupy has not been calculated, so far as I am aware; I have no particulars.
720. Have you any statement showing the floor space required? The Board have not been asked to give any estimate of the floor space required. They were asked to furnish a statement of the number of rooms, and the persons for whom the accommodation was required. That information was supplied some time since to the Government Architect.
721. Do you think you are likely to require (say) two-fifths more space than you now have? The present space is not properly sufficient for the accommodation of the Board. The clerks are very inconveniently crowded. We have six or seven clerks—I forget which for the moment—in one very small room.
722. Are you likely to require more or less space? I do not think the present staff is likely to be increased; but, certainly further accommodation than we have at present is required. The present Board-room is not sufficient for our requirements. It is very small, and is often inconveniently crowded by the number of persons who attend inquiries.
723. In the event of some of the public Departments which you now control being handed over to another authority, what effect would that have upon your staff? I could hardly say, unless I knew the amount of work to be handed over.
724. Would it be likely to increase or decrease your requirements? Any step of that kind would be likely to lessen our requirements, undoubtedly.
725. *Mr. Shepherd.*] You say you have eight rooms at the present time? Yes.
726. You are credited with the occupation of 3,024 feet;—have you now sufficient room? No.
727. Will the space provided for you in the new building be ample? Judging from the plans, I should say there would be ample space.
728. In some Government offices large rooms are allotted to single officers;—is that the case with any of your officers at present? That is not the case.
729. What is the number of officers you have in the Department? There is a staff of sixteen, and then there are the three Members of the Board; the staff consists of fifteen clerks and myself.
730. What is the largest number accommodated in any one room? Seven.
731. *Mr. Dick.*] Have you noticed whether ample provision has been made in the proposed buildings for the efficient supervision of the staff? I think so, judging from the way in which the rooms are allotted.
732. At present you find it difficult to exercise efficient control over the Department, I presume, on account of the clerks being housed in so many rooms? The clerks being divided into three rooms, it is somewhat difficult.
733. That difficulty will be removed in the proposed buildings? Yes; there would be one large room there in which we should be able to accommodate a greater number of clerks under the chief clerk.
734. Is there any objection on the part of the Board to being housed in the same building with the Police Department, or with the Department of the Comptroller-General of Prisons? I do not think the Board have any objection to that.
735. *Mr. Trickett.*] Were the plans submitted to the Board for approval? Yes.
736. What is the arrangement of the staff as regards the occupancy of rooms at present? I have a room to myself. It is not a very large room, but it is necessary that I should have a room. Then there are the Registrar and two clerks also in a small room.
737. Has each of the Commissioners a room? Yes.
738. Then there is also the Board-room? Yes; and a room occupied by the chief clerk and six clerks. Then there is another room occupied by five clerks, and a small waiting-room. There are altogether eight rooms and a waiting-room.
739. What number of rooms are to be given you under the new arrangement? We have asked for, practically, the same accommodation, but with larger rooms for the clerks, with a larger Board-room, and also a waiting-room for female witnesses. At the present time, we have no accommodation whatever for female witnesses.
740. Is that space provided in the new plan? The only point on which I am doubtful is whether the Government Architect has provided a room for female witnesses, with lavatory accommodation. The Board would very much like to see that provided. It very often happens that female witnesses have to attend inquiries.
741. How many rooms are shown upon the plan? There appear to be about ten rooms.
742. I suppose a great many members of the Public Service are constantly in attendance upon the Board? That is so.
743. And is it, in your opinion, necessary that a separate room should be provided for the large body of female public servants who have to attend? The Commissioners think it necessary that there should be a waiting-room for female witnesses, with lavatory accommodation.
744. How many clerks do you propose to put into the large room provided? Twelve clerks, with the chief clerk to supervise.

745.

J. W. Holliman. 24 Jan., 1899.

745. It is a desirable arrangement to have all the clerks under efficient supervision? That is very desirable.
746. Had your Board any voice in the arrangement of the occupation of other portions of the proposed buildings? None whatever.
747. Had not the Public Service Board regard to office accommodation when they were going through the various public Departments with a view to their reorganisation? I could not say for certain. I was not with the Board in the earlier part of their work. I may say that the Board are very much in favour of placing clerks together under proper supervision as much as possible. That is one of the arrangements they carry out wherever they can. They do not like to see waste accommodation—one clerk in one room, and that sort of thing. They think the work is better and more efficiently done when the clerks are under proper supervision.
748. Do members of the general public wait largely upon the Public Service Board? A great number of members of the public come to make inquiries at various times.
749. Has the Board considered the question of the contiguity of the Auditor-General's Department and themselves, with two such Departments as the Police and the Comptroller-General of Prisons? The Board are aware that it is proposed to house them in the same building, and they see no objection to it.
750. Your entrance will be in Phillip-street? Yes.
751. I suppose that really the only evidence you are prepared to give is that so far as your Department is concerned the accommodation submitted will be suitable and convenient? That is so.
752. Is the site a good one for your offices? I think so; it is a central and convenient site.
753. *Mr. Levien.*] Are there any inspectors upon your staff directly under the Board? We have an inquiry officer who is styled a registrar.
754. Are there any officers directly under him? There are no officers directly under him; there are clerks who assist him. All the clerical staff is directly under me.
755. Has the Registrar an office to himself? He occupies a room with two clerks.
756. You say there are altogether fifteen clerks? Yes.
757. How many rooms are there for those clerks? Three rooms.
758. Each member of the Board, you say, has a separate room? Yes.
759. In addition to which there is a Board-room? Yes.
760. For what purpose is the Board-room used? Chiefly for the purpose of holding inquiries under section 49 of the Public Service Act. It is also used when the Board meets collectively. Examinations of applicants for employment are often conducted there. Various incidental matters in connection with the Board's business are dealt with there also.
761. *Dr. Garran.*] Have you formed any general idea how you would locate your men in the proposed new buildings? I have looked at the plan and formed a general idea.
762. Will you show the Committee where you would put the different members of your staff? The rooms occupied by the members of the Board will depend upon themselves; but I see a room 835 feet in area which would be very serviceable for clerks.
763. How many clerks could you put into that room? About twelve clerks.
764. Is there anyone to overlook them? The Chief Clerk.
765. He would be one of the twelve? Yes.
766. Where would you provide for the three others of the fifteen clerks? We might use one of the rooms 493 feet in area for the Registrar and other clerks.
767. Those two big rooms would accommodate all your clerical staff? Yes.
768. The rest of the building would be occupied by the Members of the Board, the Board-room, by yourself, and by the public waiting-rooms? Yes.
769. Is that not rather magnificent accommodation? We have not asked for all of that.
770. Do you not think that if you had less accommodation than that the Public Service Board would be most handsomely quartered? The Board would not occupy more space than they would require.
771. What are you to do with all the other rooms which are to be provided? That is a matter for the Government to decide. I take it that if the space was available it would be used for other Government purposes.
772. A floor has been handed over to you, and I understand you to say at first that it would not be too much? I think I said it would be more than ample.
773. You say now that you can put the whole of your clerical staff into two rooms? Yes; but we want a Board-room.
774. You want five rooms, as I understand, and two waiting-rooms, a room each for the Members of the Board, two waiting-rooms, two for the clerical staff, a Board-room, and a room for the Secretary, making nine altogether, whereas the plan shows eleven rooms? Yes; but we have not asked for that number.
775. Your opinion is, then, that you would find yourselves in one or two rooms too many? I adhere to the opinion I first expressed that the accommodation is really more than we want.
776. Would it not be likely to excite a little dissatisfaction if the Public Service Board quartered itself more handsomely than it quartered the rest of the Public Service? I do not think the Board are anxious to do that.
777. But might not their doing so have that effect? All the Board are interested in is to obtain sufficient accommodation for their requirements.
778. But if the Board quartered itself more handsomely than it did any other public Departments, would it not be likely to give rise to dissatisfaction? The Board are not likely to do that.
779. *Mr. Watson.*] Where does the Board usually have examinations conducted for admission into the Public Service? The larger examinations are held in the great hall of the Sydney University, and others are held in the examination-room of the Sydney Technical College.
780. No attempt has been made to provide for the conduct of these examinations in your offices? No.
781. *Chairman.*] Your Department has a lease of the premises you now occupy? Yes.
782. What is the duration of the lease, and the rent? It is a lease for three years, expiring in June next, and the rental is £320 per annum.
783. Is there any urgent necessity for the Board leaving these premises? I am not aware of any.
784. Could the Board get an extension of lease? I have no doubt but that the Board could do so, if it were desired.

785. Do you find yourself very much hampered for want of space in your present offices? I must say that we are somewhat inconveniently crowded. The clerks are in very small quarters and the Board-room accommodation is not sufficient. J. W. Holliman. 24 Jan., 1899.
786. Has the Board occupied these premises from its inception? Yes.
787. And at the earlier stages of the Board's existence, was not its work much greater than it is now? I cannot say that. I have been with the Board two years, and the Board has been in existence three years. I certainly think the work is quite as heavy now as it was when I went there; in some respects it is heavier.
788. You think it is quite as heavy now? In some respects it is somewhat heavier.
789. Do you think there is any necessity for the removal of the Board from those premises? There is certainly a necessity for somewhat larger accommodation.
790. To make the quarters more comfortable for the officers? The floor space for the officers is not sufficient. Some of the rooms are very small; they become very hot in the summer.
791. Have you any idea of the floor space required for each individual in your Department? I could not say without making an estimate.
792. Has the Board made any recommendations as to the housing of different Departments; for instance, there is a proposal to remove the Mines Department from the Lands Department; in a case of that sort, would the Board make the recommendation? Not necessarily, unless they are asked to advise the Government on the subject.
793. It is a matter left entirely to Ministers? Yes.
794. The Board has nothing to do with the question of where the different Departments are to be located? I should not think so. I do not remember any question of that kind being submitted to the Board since I have been Secretary.
795. Has the Board ever considered the question of housing officers of the Department in such a way that they can work better together; everyone, for instance, knows that the Prisons Department and the Department of the Inspector-General of Police can be worked together very well;—has the Board considered any such question in connection with the Lands Department? I am not aware that they have.

Francis Henry Wilson, Chief Clerk, Department of Lands, sworn, and examined:—

796. *Chairman.*] Your Department has complained, I believe, of the want of space available in the present Lands Building? Yes. F. H. Wilson. 24 Jan., 1899.
797. Have you a plan showing the space occupied by your Department? Yes.
798. Can you tell us how much floor space is about to be given up by the Mines Department? I cannot tell you exactly; but I may mention that after studying our requirements, and considering what space would be available if the Mines Department left the building, we have come to the conclusion we should be able to give a total of 6,248 feet—that would be available for the accommodation of any other Department as soon as the Mines left us, and it is allowing for every possible requirement by our own Department.
799. Without spending another penny upon bricks and mortar? Yes.
800. That space is exclusive of the corridors? Yes. There would be altogether twelve rooms.
801. You are not likely to require those rooms at any time? I do not think so. We have endeavoured to base our calculations upon the utmost accommodation the Department will require.
802. Have you any accommodation outside your building? We have only one thing outside, and that is the Forestry Museum. That is in the Domain in an old ramshackle building, and we propose to fetch that down into the head office. There are some very fine specimens of timber. We have also other specimens down at the Circular Quay, which we should also bring up to the Department if we had the necessary space there.
803. I understand that some of the new accommodation you require is mainly for the Forestry Branch and for the Rabbit Branch? We require additional accommodation for the Rabbit Branch, because if the proposed Rabbit Bill becomes law we shall require about twelve or thirteen additional clerks.
804. The museum of the Forestry Department is now in the Domain? Yes. We should bring that down to the head office, and after that we should have 6,248 superficial feet available for any other Department and in a very convenient position.
805. Does that 6,248 feet include any rooms at the top of the building? No.
806. Have you any space there which you do not use? There are some rooms there which we do not want to use if possible. The Metropolitan Surveyor is up in the dome, and his staff is nearly roasted alive on a hot day. We want to bring them downstairs. We have also two photo. galleries there. One is lent to the Mines Department and the other is not used at all. It is too hot for anyone to live up there.
807. *Mr. Levien.*] Do you think that the Forestry and the Rabbit Branches should go together? No, they would be separate.
808. Under whom would the Rabbit Branch come? I look after that Branch; but the Minister is proposing to introduce a Bill which will necessitate the employment of some ten or twelve additional clerks, and we must be prepared to house them whenever the Bill becomes law.
809. Who looks after the museum? Mr. Hay, of the Forestry Branch. I went over it to-day with him.
810. *Dr. Garran.*] Have you any room suitable for a museum in your building? There is a large room there which is now used by the Mines Department.
811. Is it as big as the present museum? I think it is. One-half of the museum in the Domain belongs to the Mines Department. I refer to the geological and mineral portion. The other portion is devoted to forestry and agriculture.
812. You would have two museums instead of one? I understand that in the proposed new building for the Mines Department, provision has been made for the transfer of their portion of the museum.
813. You would have two museums; one in one Department and one in the other? We ourselves look after the timber.
814. Still, you would have two museums? There would be two.
815. Would the light in the room to which you refer be suitable? Quite. It contains 3,490 superficial feet.

816.

F. H. Wilson. 24 Jan., 1899.

816. Would it matter to you, if you had these rooms to spare, what Department took possession of them? I do not think so. The space is all on the western side, starting from the Minister's room, and taking the whole of the western side of the first floor.
817. Would there be a separate staircase and lift? No.
818. That would be no inconvenience to you? No.
819. I understand you to say that a portion of the top storey is really unsuitable on account of the heat? I was referring to the photographic galleries.
820. But the other rooms on the top storey are very hot? Yes.
821. Do the clerks complain? Very often.
822. Do they suffer in health? Many of them have been sick, but I cannot say whether or not that is the cause.
823. Does sickness obtain among the clerks on that floor to an exceptional degree? There is a good deal of sickness among the draughtsmen, but I suppose that would be from their leaning so much over their work.
824. But is there exceptional sickness upon the particular floor to which you refer? I do not think there have been many great complaints, except on account of the heat.
825. Is your Department a growing Department as to the number of clerks? At present it is about stationary. There are 312 upon the staff. 168 are employed in the administrative part of the Lands Office; 131 are clerks and draughtsmen in the Survey Office; two are in the Trigonometrical Branch at head quarters. There is one clerk belonging to the Local Board, three belonging to the Church and School Lands, and seven belonging to the Forest Branch. These are all at the head office, making a total of 312.
826. If there is any increase, would it be likely to take place in the central office or in the district offices? A good deal of it, I think, would be in the central office.
827. Is it not probable that settlement will increase as fast as leases fall in? The principle adopted by the present Minister is that of perpetual leasing, and that involves a good deal of book-keeping—more than we had under the alienation system, when, as soon as the land was paid for, there was nothing more to be done.
828. Under the present conditions of the purchase system, how many years of credit do you give? They go up to sixty-four, I think.
829. Have you to book the annual payments? No; the Treasury keep that record.
830. Then your work is principally correspondence? No; we have to keep a record of everything done.
831. What is done apart from the payment of the money due? There is a large amount of work to be done before anything comes back to the head office. In the case of homestead selection, it has to go to the district surveyor; then the matter comes to the Land Board. The Land Board hears the case in open court, and after it has so dealt with it it is for five years expected to see that the provisions of the law are complied with. All that has to be dealt with before the papers come to the head office.
832. I was speaking of conditional purchase? It is much the same thing until the end of ten years, when the residence time expires. Under the present law the papers then come to the head office, but not before.
833. Then there is no more correspondence? When that is done there is nothing beyond the payment of principal and interest in instalments.
834. Homestead settlement involves much more clerical work than conditional purchase? Yes.
835. If the system of alienating land increases, it will mean the provision of more space for clerks? I think we have provided for that.
836. Could the present clerks do more work? I think so.
837. Then you do not ask for further space? No; we have provided for all the space we think it possible that the Lands Department can require.
838. Is the building you are in suitable to your requirements? We have to make the best we can of the building. A good deal of the space is lost by corridors.
839. Have you the opportunity for supervision which you would like? No.
840. You would like larger rooms and fewer? Yes.
841. If you were building your offices now, you would not build them upon the same plan? No; the offices were built and the clerks were pitchforked into them. The offices were not built to suit our requirements.
842. Are the clerks crowded? In some rooms.
843. Are they unhealthily crowded? I think so. Some officers may object to windows being opened, then the other men have to roast. I visit the different rooms when I have time.
844. You would save some time, then, if you had fewer rooms? It is impossible for me to carry out regular supervision. I have quite enough to do to get on with my own work. It is only occasionally that I have time to get into the different rooms. We tried supervision in our large drafting room at one time. We had one stage in the middle of the room, and the Chief Draftsman used to sit up there, but it was found that the plan did not answer.
845. You mean it was found that the Chief Draftsman could not do his own work and at the same time look after the others? Quite so; and if a man were leaning over it would be impossible to tell whether he was working or not. The best plan is to look into the various rooms when you are not expected.
846. That would mean a separate inspecting officer? I think the different offices are already sufficiently inspected.
847. *Mr. Watson.*] As to supervision, you can form some idea of the way work has been carried on, I suppose, and the amount of work which the men have got through in the course of a day? It is very hard to form an opinion, because a man may have a troublesome case which may occupy him three-fourths of the day; he may send in only one case as a day's work, having been working hard the whole time. On another day he may send in eight, ten, or fifteen cases. When I go into a room and see everyone at work, and no reading of newspapers or things of that kind, I come to the conclusion that the men must be doing their work and that the officer in charge is also doing his work by keeping them up to it. I pop in at all times to the different rooms. No one knows when I am likely to come. If I see everyone at work I conclude that everything is all right.
848. Do you know whether in the Miscellaneous Branch there is sufficient room for the work? There is not. When we made our estimate of the number of rooms which were available we proposed to divide that Branch into two, and to put the Miscellaneous in the one room, and the Miscellaneous Lease Branch into another. The room is too crowded at present. At times you can hardly move about in it. There are

two

F. H. Wilson. 24 Jan., 1899.

two heads in the branch—one is at the head of the miscellaneous leases, and the other at the head of reserves and miscellaneous work proper—parks and things of that kind. I think it would be better if they had two rooms, and if each looked after his own room.

849. You have provided for that? Yes, that is included in our estimate of the 6,248 feet which would be available. The same with regard to the Occupation Branch. It is at the present time unhealthily crowded.

850. As to the museum, you think it is necessary to have two museums—one in the Mines Department, and one in connection with your own Department? Our own officers have to get the specimens of timber, and I think under those circumstances it would be hardly advisable to hand our museum over to the Mines Department.

851. I understand that the Mines museum is mineral and geological? Yes.

852. You have had these timber exhibits since the Forestry Department was taken over by you? Yes.

853. Is the museum for the purposes of public exhibition? Yes.

854. It is not merely for the information of officers of your Department? No. I was recommending to-day to the Under Secretary that one-half of the timber samples could be polished and the other half left in its natural state, showing what could be done with the timber, and he said he thought it would be a very good thing to exhibit samples of that kind in one of our larger rooms.

855. You say that the top storey of the building is not fit for occupation? The portion to which you refer is occupied. We have the contract draftsmen there, then there is the Metropolitan Surveyor, and the Plan-mounting Branch.

856. How does that portion of the building come to be so uncomfortable;—I suppose it is no worse than the floor next the roof in any other building? It is extremely hot.

857. Could not the excessive heat be overcome by proper ventilation? I do not think so.

858. Is it a mansard roof? No; it is an ordinary roof. The portion to which I am referring is under the copper dome.

859. You are not referring to a part of the building proper? No.

860. You think it will be necessary to vacate the dome? I think so, for the health of the men.

861. You have allowed in your estimate for the vacation of that space? Yes.

862. *Mr. Trickett.*] The Mines Department was formerly in a building in Phillip-street? Yes.

863. When did it move from there to the Lands Department? I think about two years ago, but I am not quite certain.

864. What was the state of your staff at that time? It was very little different from what it is now; we had not more than ten or twenty men more than we have now.

865. Were you consulted before the Mines Department was moved down to your building? No. We knew nothing about it until we heard they were coming.

866. Did it cause any inconvenience? Yes; we had to squeeze the clerks into the rooms to find accommodation for them.

867. Was not the Under Secretary of your Department consulted in the matter? I do not think he was. The Justice Department wanted to get the rooms which were used by the Mines Department while their offices were being rebuilt. They managed to get the Mines Department out and put them into the spare rooms of our Department.

868. How does the space they occupy in your building compare with the space they occupied in Phillip-street? I was never in Phillip-street, so that I cannot say.

869. As to the work of your Department, is not the policy of the Department in the direction of decentralisation—that is, getting the work done in the country as much as possible? It does not seem to diminish the work of the head office.

870. How is that? We have to keep at the head office records of everything done by the district offices.

871. But the keeping of records is not a very great work? Everything done at the district offices is reported at the head office, and is entered in the books there.

872. But where is the charting and that sort of thing done? The original plans come to the head office.

873. But the work is done in the local offices? Yes.

874. Do I understand you to say that although decentralisation is the policy of the Department in practice it does not decrease the work of the head office? I do not think it has done so.

875. Does not that seem rather a strange state of affairs? I do not know. I can speak only as to the facts.

876. I asked the question to ascertain whether, instead of the head office becoming larger, it would not in all probability become smaller? I do not think so. We have reduced it as much as we possibly can now.

877. Do you know how many persons in the Mines Department are accommodated in your building? On the floor they occupy principally, there were about eighty-five, I think.

878. How many are accommodated on the other floors? I do not know.

879. But on one floor alone you say there were eighty-five? Yes.

880. You wish the Committee to understand that your staff of 312 men require extra space, a portion of which is used by eighty-five persons from another Department? When we have provided for our requirements there will be 6,248 feet available for any other Department which might require to be housed.

881. Although the Mines Department has crowded you out to such an extent, still there would be room for some small Department? If we got rid of the Mines.

882. Have you any Department in view? No.

883. From your knowledge of the public service, what sized Department could be accommodated in your building? I cannot say; I have no Department in view.

884. Would there be space for a Department with a total staff of twenty? Plenty.

885. You mentioned a museum in connection with the Lands Department—what is the character of the exhibits? Timber; we have a large number of exhibits in the building in the Domain now.

886. The Mines Department also contemplate having a kind of museum? Yes.

887. You do not think the two museums could be accommodated in the one room? No.

888. You think that each Department should have its own museum? Yes; our specimens were collected by the officers of the Lands Department, and therefore we thought we ought to have them.

889. Do the Lands Department and the Mines Department work together at all? We have very little to do with each other.

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890. There is no advantage, as far as you can see, in their being under one roof? No advantage at all
891. The working of the two Departments is quite different? Yes.
892. Is there not often an interchange of official documents between the two Departments? Yes. In just the same way that there is between all the Departments. Sometimes we may ask for a report with reference to a travelling stock route, or something of that sort.
893. There must have been some reason in the mind of the Minister for the time being, or in the minds of the heads of the Departments, in putting the two of them together? I think it was done for economy's sake. There was a floor of the Department of Lands almost empty, and as it was sought to clear the Mines Department out of their rooms in Phillip-street, it was decided that they should be located in the Lands Department. That is the only reason I know of.
894. If you had a floor in the Lands Department almost empty, how is it that you want that floor back again? Because we are so squeezed up. We did not propose to give the whole floor, but only one-half of it, to the Mines Department; but when they got there we found they had so many men that we had to give up every available foot, and to squeeze our own clerks up so much that they could hardly work.
895. As far as one can see the Mines Department is a growing Department? I think so.
896. *Mr. Dick.*] As to the two museums, I gather from what you have said that the only reason, in your opinion, why a museum should be kept in the Lands Department is that your officers collected some of the exhibits? Yes, and we look after them.
897. The museum is intended to be primarily an educational institution? Yes.
898. It does not differ in its constitution or in its ends from that which the Department of Mines has; it is very similar in character to that museum, is it not;—it is intended for the education of the general public, and not for the education of the officers of the Department? It is for the public.
899. Can you see any advantage, then, in this multiplication of museums, having one in the Mines Department, serving the same end? I can only repeat what I have said before, that the only idea in having the museum in the Lands Office was that as the timber was obtained by officers of the Lands Department, and was sent down by them, we thought it would be better to have our own timbers exhibited at the head office, instead of anywhere else.
900. In other words, you prefer to conserve what you might call the selfish interests of your own Department as against the economy of the Public Service? You might just as well put it the other way about, and say that the Mines Department want a museum in their building.
901. We are engaged upon an inquiry as to how we can most economically house various Departments of the Public Service, and I wanted your opinion whether, in view of the nature of the institution, it would be wise to have one museum to serve the double purpose of the two Departments, especially as it is proposed to erect a new building for the Mines Department? I do not think it would make very much difference.
902. Presuming that it was found advantageous to remove the museum from your office, how much more floor space would be available for another Department? Three thousand four hundred and ninety feet.
903. That would make a total of 9,738 superficial feet available? Yes.
904. With the rooms immediately under the dome? Yes; there are four or five rooms which are really part of the dome.
905. *Mr. Shepherd.*] With regard to the 6,248 feet, it is all on one floor? Yes; the whole of it is adjoining.
906. How many rooms are comprised in that space? Ten rooms.
907. I think you said that one of the rooms comprised nearly a half of the whole space? One of the rooms contains 1,616 feet, another 642 feet, another 501 feet, another 385 feet. Then there are smaller rooms.
908. They would be made available for a Department? Quite so.
909. What space would be available in the portion of the building which you say is at present too hot to be occupied? About 1,600 feet. We could bring the men who are working there down into some of the lower rooms without interfering with the 6,248 feet which would be available.
910. Do you know of any means of ventilating the upper portion of the building so as to render it habitable? It is very hot under the dome when the sun is blazing on to the copper. I do not know how you could improve it.
911. Can you give us any idea of the space which is so affected by the heat? I think it would be about 1,600 feet.
912. It is at present occupied by the contract draftsmen, by the Metropolitan Surveyor, and by the Plan-mounting Branch? Yes.
913. *Chairman.*] You have said that 6,248 feet would be available after all your requirements were fulfilled? Yes.
914. Also 3,490 feet, supposing it is not occupied by museums? Yes.
915. And 1,600 feet which is not habitable on account of the peculiar construction of the roof at present? Yes.
916. Suppose another storey were added to the building, what floor space would it give you? I cannot say; I have not calculated it.
917. Would the 6,248 feet be more or less than one-half of a floor? A floor would consist of about 20,000 feet altogether.
918. Then there would be ample accommodation for a Department which would occupy 10,000 feet? Yes.
919. If the roof were differently constructed that could be done? Yes.
920. You cannot say how much space you will occupy when you get all your requirements? No. Part of the basement is underground. Two sides have scarcely any light at all. We use the whole of the basement-floor excepting the Inquiry Branch lent to the Department of Mines. We occupy the whole of the second floor except two rooms lent of the Mines Department, and we occupy at the present moment about one-fourth of the first floor and the whole of the ground-floor.
921. If it were thought better in the interests of the public that the two museums should be in one building, you would have nearly 10,000 feet available as soon as the Mines Department left you? Yes.
922. And if the roof were differently constructed, and another storey were put on, there would be something like 20,000 feet more available? Yes; I should think so.

Critchett

Critchett Walker, C.M.G., Principal Under Secretary, sworn, and examined:—

C. Walker, C.M.G. 24 Jan., 1899.

923. *Chairman.*] Since it has been suggested that the Mines Department should be housed in another building, the idea has been put forward that one or two of your branches could be removed to the space vacated by them—for instance, the Charities Branch, the Fisheries, and others;—would that be advisable or not? It would be simply impossible to accommodate the Charities Branch in the Mines Department.
924. Why is it not advisable? Because the Charities Branch would include the State Children's Relief Department; and as regards the relief of paupers, it would not be pleasant to have a number of persons of that sort roaming through the Lands Department. At the present time they go up to the Government Depôt, near Bourke's Statue.
925. In your opinion those Departments are better where they are? Yes, far better.
926. What do you say as to the Fisheries Department,—they are in a Government building at the present time? Yes.
927. You would not be convenienced by their removal to the Lands Department? No.
928. And as to the Electoral Registrar? It would be very inconvenient to have that branch down there; they are quite far enough away now, and this proposal would put them still further away.
929. Is it absolutely necessary that they should be under the same roof as you? I should like to have them in this building if I could get proper accommodation for them; but we had to remove them because the room was wanted for the Railways. I have the Electoral Office with me now. I should like to have the Electoral Registrar in the building if it were possible to accommodate him. It would involve some alteration in the building, I think, because a great deal of his work is done at night.
930. As to the Friendly Societies? That is only a small matter; I think there are only about four clerks employed. But the Government Statistician's is a large Department; there are some seventeen or eighteen hands employed there.
931. Are they in rented buildings? No; all these Departments are in buildings resumed by the Government. Many of them are in the buildings in Young-street which were originally occupied by the Mines Department.
932. What about the Medical and Pharmacy Boards? They are in Government buildings in the Domain.
933. You do not think any good purpose would be served by moving them down to the Lands building? I do not think so. They are more convenient where they are at present.
934. *Mr. Trickett.*] The present inquiry is with regard to the erection of new buildings at the corner of Hunter and Phillip Streets to accommodate the Inspector-General of Police, the Comptroller-General of Prisons, the Auditor-General, and the Public Service Board in one building;—may I ask you as the permanent official in whose Department the police are whether you approve of such an arrangement? Most certainly not.
935. Can you state why? I do not think the Inspector-General of Police should be housed with any other Department. I think he should be in a Department of his own, and for this reason: In case of disturbance he might want to get massed together a number of policemen in a yard, and that should be done under circumstances which would not lead to much observation. I do not think he should be hampered by the presence of any other Department. If there are other Departments there the clerks will know what is going on, and would gossip about it, and the news will very soon become public property. In certain circumstances that might lead to considerable trouble.
936. You think isolation is a necessary condition to the Department of the Inspector-General of Police? I think he ought to have a building by itself.
937. Was not the site at the corner of Phillip and Hunter Streets purchased for a building for the Inspector-General of Police? I believe so.
938. Were not plans prepared for a building for his own accommodation? I was under that impression.
939. Did they not receive the approval of the Chief Secretary, Mr. Brunker? I would not be positive as to their receiving his approval; but I know that he was consulted by the Inspector-General of Police with regard to the matter. I know it was an understood thing that the building was to be erected there because an extension was given to the lessee of the "Star Hotel," and one reason assigned at one time for not granting an extension of the lease was that Mr. Fosbery wanted to proceed with the building of his new offices. I asume, therefore, that the plans must have received some consideration, if not approval.
940. If it is stated in an official document which has been handed in by Mr. Hickson that a sketch plan had been approved by Mr. Brunker, that would probably be correct? I have no doubt it is.
941. Approval is said to have been given in November, 1895? I do not remember seeing the plans, but they were probably taken in to Mr. Brunker direct.
942. A Board sat some time ago with reference to the question of erecting buildings at the corner of Phillip and Hunter Streets;—were you examined by the Board? No; but I am aware, unofficially, that such a Board existed.
943. The Works Department in submitting this proposal has been governed by the question of economy in construction;—they had not been advised by your Department as to the feasibleness of associating the Department of Police with other Departments? No.
944. You are strongly against it? Yes; I do not think it is a good idea at all.
945. You think the site would be better utilised by having a comparatively inexpensive building erected there for the purposes entirely of the Inspector-General of Police? I think that is the proper thing to do.
946. *Mr. Shepherd.*] You say you were not aware of the arrangement to include these Departments in the one building? I have not been consulted in any way whatever.
947. How was the matter determined? I do not know; I presume it was done by the Department of Public Works.
948. Do you not think it possible for the Department of the Inspector-General of Police and of the Comptroller-General of Prisons to be worked efficiently in one building? I do not think so. I think the Inspector-General of Police ought to be alone, and that the Comptroller-General of Prisons ought to be with the Justice Department. The whole of the prisoners whom it is necessary for the Department to see are usually seen at the gaol; the Comptroller-General has merely an office with the usual official staff.
949. But it appears that prisoners do visit his Department, and it is thought that it is not advisable that they should be seen by the general public? I do not think so. You are speaking probably of released prisoners. They could be brought to the Comptroller-General if he was in the Department of Justice without any interference with that Department.

950.

C. Walker, C.M.G. 24 Jan., 1899.

950. Suppose this site is occupied entirely by the Inspector-General of Police, are you aware of any other site which would be available for the other Departments requiring accommodation? There is not only the site opposite the Works Department but also the site in front of the Education Office. There is no reason why a building should not be erected there.
951. *Mr. Levien.*] You have had considerable experience in police matters? Yes.
952. And in your opinion it is absolutely desirable to keep the Comptroller-General of Prisons and the Inspector-General of Police housed separately? I think so.
953. You think the site at the corner of Phillip and Hunter Streets would be most convenient for the Inspector-General of Police, being central? I think it would be a very good site.
954. It would also afford plenty of yard accommodation? I think so.
955. You are aware that if the two Departments were put together, as proposed, discharged prisoners might frequently be seen by the detectives, and that, I presume, would not be desirable? No; the two Departments should be separate, in my opinion.
956. You know that prisoners have complained of being watched by detectives after coming out of gaol? I believe so.
957. And the two Departments, being under one roof, would give greater facilities to detectives to watch prisoners than they would otherwise have? Yes.
958. *Dr. Garran.*] You have been Principal Under Secretary for many years? Yes, nearly twenty years.
959. What do you consider a fair-sized room for an Under Secretary? I should say that a room of between 17 and 20 feet square would be big enough.
960. You think that would give abundance of space? Yes.
961. A Minister's room would require to be a little larger? I should say that a room 17 feet square for an Under Secretary and a room 22 or 23 feet square for a Minister would answer all requirements.
962. Bearing in mind the Minister has to receive deputations? Yes; a room 23 feet square would be a big room.
963. What is the size of the room you now occupy? Mine is about 25 feet square, and the Minister's is the same; but I think that both rooms are needlessly large. The Board-room down below is, I think, as large.
964. Have you plenty of room for your staff in your present buildings? Yes, but it is not very convenient for them. Some of the rooms are big ones, and some of them are very small ones. The arrangements for the accommodation of clerks are simply wretched.
965. The building is not well planned? Not for the clerks. All the chief officials have very fine rooms but the clerks have very poor rooms.
966. The working staff are not properly housed? No.
967. Good supervision is difficult? Yes. In my opinion, public buildings should be so constructed that the chief clerk could overlook nearly all the other clerks. The head of a room should be able to overlook all the clerks under him.
968. In planning new offices you think we have something to learn? Yes.
969. We have made great mistakes in the past? Very great mistakes. We had not such large staffs in the old days, and they have erected buildings without considering the probable increases in those staffs.
970. You say the Inspector-General of Police ought to have an office to himself? I think so.
971. Supposing he had, would not his premises be overlooked by the neighbourhood? That will not matter very much.
972. Then would it matter if he were overlooked by the upstair windows of a public Department? I do not think so. The clerks would not be there at night-time. You could not altogether avoid overlooking.
973. Supposing there were 100 clerks upstairs, how would that interfere with the work of the Inspector-General? They would be prying and gossiping; that is what I have an objection to. They would be gossiping with the detectives and policemen, and rubbing shoulders with people outside, and everything done by the police would in that way become known.
974. But the residents in the neighbourhood could see what was going on? I do not think that would matter.
975. The corner is a pretty public corner? Where would you put the offices if they were not there.
976. You could not avoid overlooking unless the Inspector-General had a quadrangle enclosed by a high wall all to himself? If he were walled in persons outside would not be able to see much of what was going on inside.
977. Not from the upstair storeys of other houses? They would see persons going in or out from the street, but they would very soon get tired of watching that all day.
978. Is it not rather an expensive piece of ground for the erection of only one set of offices? I do not think so. The Inspector-General is paying a rent of £250 for Detective offices alone, and they will be located in the same building with him, which it is proposed to erect.
979. We have been told that the ground cost £27,000? Yes. I do not think it is worth that now.
980. Is not that rather an expensive piece of ground upon which to erect one comparatively small building? It is.
981. *Mr. Watson.*] Your objection to the removal of the sub-departments which have been referred to to the Lands Department would apply equally to their removal to new buildings at the corner of Young and Phillip Streets? No; some of them would be more handy there, but I should certainly object to the Inspector-General of Police being included, and you could not put the State Children's Relief Department nor the Charities Department there.
982. You think it would be better for the self-respect of persons seeking aid that they should be able to go to an isolated building? Yes.
983. There would not be so great a chance of their recognition? Quite so.
984. As to the Electoral Registrar if he were located in a large public building could it be kept open late at night to give the public access? That in itself would be a detriment, and then again he would have to be accommodated upon the ground-floor, because you could not ask persons to go up three or four floors to get their electoral rights.
985. You think then that it would be more convenient to have the Electoral Registrar located in a separate building; you cannot very well put him in with a lot of other departments. A great deal of his work is done late at night. The massing of departments in one building is good in some instances, but it does not apply to every Government Department.
986. It would not be desirable to keep a number of public offices open late at night? I do not think so.

987.

C. Walker, C.M.G. 24 Jan., 1899.

987. You think it would be better for the sub-departments to which you have referred to remain where they are? Unless you put them next door in the vacant land opposite the Public Works Buildings. It would be very inconvenient to put them further away.
988. Should they be allowed to remain where they are, or ought we to erect new buildings for them? As a matter of economy, I think it would be better for them to stay where they are at present—that is, until you can accommodate them in a proper building. Then you would have to get rid of the Government buildings on the ground in which they are now accommodated.
989. I suppose a great many police matters come before you? Yes, a great many.
990. You quite concur in the view which Mr. Fosbery has expressed that he should be isolated from other Departments? Yes; but I was not aware that he had expressed such an opinion.
991. *Mr. Trickett.*] I should like to ask you a question as to a matter of policy in dealing with the Public Departments;—we are at the present time in this position: We have a number of Departments which are well housed, and we have several vacant sites intended for various other Departments;—do you not think a good way of getting a proper solution of the question of the location of the various Departments would be for all the heads of the Departments to meet together and try to work out a general scheme for the interworking of Departments, and the conveniencing of the public;—would not the available sites be likely to be better utilised in that way than by the present haphazard system attempted in these proposals? Yes. I think it ought to be done in every case when you are putting up buildings for Government Departments. All the heads ought to be consulted to see which is the most convenient course to pursue.
992. Is it not particularly desirable now that it is proposed to utilise these various sites? Yes.
993. *Mr. Levien.*] You are aware that candidates for admission to the police service have to undergo an examination? Yes.
994. Seeing that there ought to be a certain amount of secrecy attending the examinations, it would be advisable, on that ground among others, that the Inspector-General of Police should have separate offices? Yes; it would be very desirable to have candidates examined at the police offices, instead of down at the police court, as is, I understand, sometimes done.
995. *Mr. Dick.*] Your strong objection to the housing of other Departments in the same building with the Inspector-General of Police is not at all modified by the fact that different entrances are to be provided for the different Departments? No; my opinion is in no way modified by that, because if you have 200 or 300 clerks prying about and inquiring as to what the police are doing, you will render their work anything but secret, and a considerable proportion of their work is necessarily of a secret nature.
996. Mr. Fosbery assured us that during the great strike he was somewhat pressed for room in his present yard? If a number of Departments are to be housed there more of the yard will be occupied than if Mr. Fosbery were alone? Quite so.
997. As the Force is likely to be increased, is it not undesirable that the space available for the massing of men should be considerably reduced? Yes.
998. You think it is likely to lead to inconvenience in organising the Force? Certainly.
999. Do you not think that taking into consideration the importance of isolation, the necessity for a large space for the massing of men, and other matters of that kind which have been put forward, that this is, after all, too valuable a site for the purpose suggested? I could not give a professional opinion about the value of the site; it is an expensive site no doubt; but if you cannot see a cheaper one it would be better to put up a building there for the Inspector-General of Police than to erect large buildings in which his office would be included which would defeat some of the ends which the police service must always have in view. The police service is a most important one, and it would be difficult to find a more convenient site for police offices.
1000. You think it would be difficult to find a more convenient site? I think so, decidedly.
1001. Carter's Barracks are to be resumed by the railway? Yes; but that would be very inconvenient, even with a telephone.
1002. *Mr. Trickett.*] I presume the Inspector-General of Police has frequent occasion to interview the Chief Secretary? Yes.
1003. And even if police offices could be erected at Carter's Barracks they would be inconveniently situated from that point of view? Yes.

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

H. McLachlan. 24 Jan., 1899.

1004. *Chairman.*] The Commissioners are in possession of a piece of land at the corner of Hunter and Elizabeth Streets? Yes.
1005. *Mr. Watson.*] What is the area? About 10½ perches. The land commences at a brick building occupied, I think, by a solicitor in Elizabeth-street, and has a straight run of about 21¼ feet; then it curves for another 73¼ feet up to two old buildings taken by the Police Department. At the time we resumed the land they belonged to a man named Curtis.
1006. Did the Commissioners resume this land? We had to resume it when we were extending the tramway to Bridge-street in 1881. The land came to a square, as you may remember, with the "Sir Maurice O'Connell Hotel." We could not go round that, and we had to take part of the hotel to get a good curve round. In pulling the hotel down we were practically forced to take the whole property. Part of it we threw into the tramway, and the other part was unoccupied for three or four years, when a proposal was made to take it on a ground lease. Buildings were then erected upon it, and after about three years they were offered to the Government. This was before the Railway Commissioners took office, and the Government of the day purchased the improvements upon the land.
1007. The tram waiting-room is at the southern end of the frontage? Yes.
1008. What do these premises now bring in by way of rental? At the present time we are getting between £600 and £700 a year.
1009. Is that land likely to be required at any time by the Railway Commissioners in connection with the curve at that point? The only useful portion, so far as the tramway system is concerned, is the waiting-room at the southern end. The land and buildings generally are of no use for tramway purposes; but we make the best commercial use we can of them since we had to take the property.
1010. Suppose the Government desires to utilise portion of the land they own there for a public building, would the Commissioners require the waiting-room? No; it is a busier corner at King-street, where there is no waiting-room. As long as there is a cover of some sort a waiting-room would not matter, more particularly as the tramway in George-street would take a lot of traffic out of Elizabeth-street. The Commissioners

H. McLachlan. 24 Jan., 1899.

Commissioners will take the western suburban trams into George-street, and with the electric trams persons will not have to wait so long as they do at the present time.

1011. So that practically two-thirds of the necessity for a waiting-room which now exists would be done away with by the advent of the electric trams? As long as there is some shelter or cover, all tramway purposes would be conserved.

1012. Is the alteration of the tramway system likely to be brought about within a reasonable time? Yes; the George-street line will make a great difference in the traffic in Elizabeth-street.

1013. There would be no objection on the part of the Commissioners to use this block of land for public buildings? There would be no objection so long as they were credited with its value.

WEDNESDAY, 25 JANUARY, 1899.

Present:—

JOHN PERRY, Esq. (Chairman).

The Hon. Patrick Lindesay Crawford Shepherd.
The Hon. Andrew Garran, LL.D.
The Hon. William Joseph Trickett.
William Thomas Dick, Esq.
John Christian Watson, Esq.
Robert Henry Levien, Esq.

The Committee further considered the expediency of erecting Public Offices on land with frontages to Phillip and Hunter Streets, Sydney.

Walter Liberty Vernon, Government Architect, sworn, and further examined:—

W. L. Vernon. 25 Jan., 1899.

1014. *Chairman.*] Some plans were prepared originally for the accommodation of the Inspector-General of Police and the Comptroller-General of Prisons; you produce a sketch-plan of the proposed buildings, and some plans showing the general design? Yes; complete plans were never prepared. The matter never got sufficiently advanced; but some sketches were made and discussed with the Inspector-General of Police, and the rough sketches were turned into the tracing which I am exhibiting to the Committee to-day. The plan shows three floors, with one entrance at the corner only; and the distinction between this plan and the one now under consideration by the Committee is, that no provision is made for a distinct entrance to the upper floor leading from Phillip-street to those Departments which have since been brought into the scheme. The plan also shows a series of lavatories in the yard-space which was to be devoted to parade purposes for the police. Those have since been taken out and put into the main building, so that the Inspector-General might have the full extent of the yard-space; otherwise the plans are practically the same as those before you. I have also submitted to the Committee a sketch made subsequently, when the value of the site had to be considered with respect to the buildings to be placed upon it. I had prepared the alternative sketches before you, more for our own guidance than anything else, so that we might see what the appearance of a building for the Inspector-General of Police alone would have with a floor overhead for the Comptroller-General of Prisons, as contrasted with the appearance of a building made to include the four Departments which have been mentioned. These are practically all the plans in the office dealing with this matter.

1015. The elevation in the left-hand corner of the plan is in Phillip-street? Yes; and the second is round the corner in Hunter-street.

1016. Was only one entrance provided? There was only one entrance provided for the Inspector-General of Police; but we gave him a private entrance for detectives at the bottom of Hunter-street. It will be seen that the plans provide a separate entrance, if need be, on to the main floor. That facility is provided in the scheme before the Committee.

1017. It was estimated that the building of which you have spoken would cost about £14,000? Yes.

1018. Could you complete it for that amount? I think the building could be put up for that money. The simplicity of the building in that estimate has since been the key of the whole design.

1019. *Mr. Watson.*] If the Committee thought it advisable to provide for the Auditor-General and the Public Service Board somewhere else, at what cost could you carry out the main design to the extent of the first three floors? I think it would cost about £24,000 including accommodation for the Comptroller-General of Prisons.

1020. How do you account for the extra cost of £10,000 as between one-half of the elevation in the main plan and the building which was to cost you (say) £14,000. In the proposal for a building to cost £14,000 you have three floors, a basement, a ground-floor, and a first-floor? I am in doubt at this moment whether the Comptroller-General of Prisons was to be included in the building. The money may have been voted exclusively for the Inspector-General of Police.

1021. Was the amount which was put upon the estimates made upon calculations made by your Department? It was; but I might tell you that a great deal of what took place in the first instance was more in the form of rough negotiation than anything else, and it is difficult to charge one's mind with the exact time when the Comptroller-General of Prisons came into the scheme. Speaking from my own recollection, I do not think he was in the scheme when these rough plans were drawn, although there is the extra floor. I think it was suggested that as there would be an extra floor in the building the Comptroller-General of Prisons should have it, and by that means he came in.

1022. You do not think the £14,000 will cover that extra floor? I should have to look into the matter to find out exactly how that was.

1023. I should like you to put before the Committee at a later stage an estimate of the cost of completing in something like the present design two floors at the corner of these streets with a view to the accommodation of the Inspector-General of Police and the Comptroller-General of Prisons alone, providing for the addition of other floors to the building in the future if the necessity arose? I will have the estimate prepared.

1024. *Mr. Trickett.*] I understand you to say that the matter had not been officially arranged in regard to the design—that is to say, that the design had not reached that stage—I refer to the design for housing the two Departments only? The design had not reached an official stage, but the original instructions were official.

W. L. Vernon. 25 Jan., 1899.

1025. In the *resumé* of the matter put before us by Mr. Hickson, it is stated: "By a minute dated 28th January, 1896, the Government Architect stated that there would be sufficient room in the new building for the Comptroller-General of Prisons, in addition to the Inspector-General of Police;—this minute was forwarded for authority to prepare plans, and was approved by Mr. Young, 12th February, 1897"? The matter remained in abeyance partly in order that the money might become available, and partly because the proposal to house the whole of the Departments down here cropped up. The matter came up while I was absent in England.
1026. *Dr. Garran.*] The sketch plan covers, I understand, exactly the same area as your later plan? Exactly the same.
1027. Does it give exactly the same quantity of yard? It gives slightly more, because the lavatories are put inside the building.
1028. But leaving them out of consideration? Then the area would be the same.
1029. Did the sketch plan provide any rooms on the basement for the massing of police? Yes.
1030. It provided the same basement area, and practically the same yard area? Yes.
1031. In that respect the two plans are exactly alike? Yes.
1032. Is the sub-division of rooms about the same? The rooms have decreased a little in size in order to afford room to get an entrance hall on the upper floor of the second design.
1033. The rooms, you say, will be decreased a little in size? Slightly. The portion coloured grey has had to be taken out in the accommodation on the ground floor to be provided for the Inspector-General of Police.
1034. So far as the overlooking of the yard is concerned it would be the same as though there were neighbouring houses? Yes.
1035. The only difference in your later plan would be that you would have more windows in the clerks' rooms overlooking the yard? That is the only difference.
1036. As regards seclusion there is no other difference between the two plans? None whatever.
1037. You have arranged the rooms on the ground floor to suit the Inspector-General of Police? Yes.
1038. Do not the dividing walls you there introduce put you in bondage to a certain degree as to all the subdivisions above;—have you not to carry the same walls up? Not necessarily. I take some up, but not others.
1039. Then you are free to rearrange the rooms on any floor as you like? To a liberal limit.
1040. I ask the question because, as you will see, every Department wants a somewhat different arrangement of rooms, and when you are putting them one over the other the question is whether you are committing one Department to an arrangement suitable to another, not unsuitable, as far as that particular Department is concerned? That is not necessarily so. The Inspector-General of Police fortunately requires large and few rooms, and that is the key to the whole design.
1041. Since you happen to be here I will ask you a question as to a point which cropped up yesterday;—what do you consider to be a fair size for a room for an Under Secretary? Twenty by 16 feet, if you can get it.
1042. That is not too large? No; 20 feet in depth from the window to the back wall is a fair sized room.
1043. You must take the rooms from the outer wall back to the corridor wall? Yes; for simplicity of design.
1044. You could only make a smaller room by making two long narrow rooms? Yes.
1045. And if you had a long narrow room there would be very defective light for a desk placed, for instance, against the inner wall? We have not much difficulty in managing light in this climate.
1046. What do you consider a fair size for a board-room? Twenty feet by 22 feet.
1047. You are bound to 20 feet if there happens to be 20 feet between the outer wall and the corridor wall? If we start with that depth, of course we must adhere to it.
1048. Even in the case of rooms to be occupied by one person, you cannot make them of a less depth than 20 feet in such a design? Unless the room, for special reasons, is put across the other way.
1049. In that case, would you not have one or two narrow rooms without light? We should have to obtain borrowed light if we adopted that design.
1050. What is a fair size for waiting-rooms? Any size up to 20 feet by 10 feet. Some Departments require more in the shape of that accommodation than do others.
1051. You have provided two waiting-rooms upon the floor to be occupied by the Public Service Board? Yes; one of them is for females.
1052. Neither of those rooms can be less than 20 feet by 10 feet? I fancy the waiting-room for females is rather smaller.
1053. Did the estimate of £14,000, made in connection with the sketch plan, give the same fire-proof construction which you are proposing in the scheme before the Committee? No.
1054. There was no improvement in that respect upon this plan? No.
1055. *Mr. Levien.*] Did your Department ever consult the Principal Under Secretary as to the erection of a building for police purposes? No; I consulted the Inspector-General of Police.
1056. Considering that Mr. Walker is the permanent head of the Department under which the police are placed, do you not think his opinion ought to have been obtained? All the papers and plans would go through his hands; but it would not be etiquette for me to consult with the Under Secretary in another Department in such a matter. I consult with the officials with whom I am put in communication, and in this case I was put into communication with the Inspector-General of Police.
1057. You are aware that the Chief Secretary is the head of the police? Nominally.
1058. Were you aware that Mr. Walker had large experience in the managing of the police in this colony? I was not aware that he had had any practical experience. I presume he has gained some knowledge from his position as Principal Under Secretary.
1059. Were you aware that he was at one time Superintendent of Police? I was not aware of that.
1060. The sketch-plan before us to-day shows a separate building for the accommodation of the Inspector-General of Police? It provides also a floor for the Comptroller-General of Prisons.
1061. What is the date of that plan? It was prepared when it was proposed to provide for other Departments. It was also prepared as a guide to us as to the difference in the appearance of the two buildings.
1062. What is the date of the plan? There is no date upon it. It is not official. It has never been out of the office.

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1063. It was prepared before the plans which are now submitted for our approval? When a Board was specially appointed to inquire into the accommodation of various offices.
1064. Do you not think the building shown in the sketch-plan provides all that is necessary for the Inspector-General of Police? Yes.
1065. What would be the cost of such a building? I am not sure at this moment whether the estimate of £14,000 included accommodation for the Comptroller-General of Prisons.
1066. When you made your estimate of £14,000 in connection with police buildings, you considered all that would be necessary? Yes.
1067. Using only a portion of the site for the purpose, you think that £14,000 is a fair estimate for the necessary building? I do not think that £14,000 or £15,000 is at all an exorbitant sum.
1068. You think that is a fair estimate for a building to accommodate a staff of twenty-one persons, to provide a photographic gallery and a museum, including, of course, accommodation for detectives? It depends upon whether you include the shed accommodation.
1069. I want you to consider the matter apart from that? But you cannot dissociate the two things. The Inspector-General insists upon having a certain amount of shed-room.
1070. What do you call shed-room? The whole of the basement.
1071. I am talking now of the accommodation for the clerks? I should say that £10,000 would provide that accommodation, but the scheme would not be complete. I must not be understood as saying that I could find the accommodation required by the Inspector-General of Police for £10,000, because I do not think I could. You could accommodate the number of officers you mentioned for that amount, but it would be a very incomplete building, judged by the absolute requirements of the Inspector-General. I have seen a thousand special constables massed in that yard.
1072. How much would it cost you to prepare the yard? There is a yard-space under the whole basement. I could not build upon that site without using the basement.
1073. Do you propose to asphalt under the basement? Yes.
1074. Supposing it were intended to make provision for the parading of 500 men? I could not very well give you an estimate unless I had some scheme in front of me.
1075. Suppose you were going to erect an ordinary house for the accommodation of twenty-one persons, what would you consider a fair estimate? I could provide the accommodation at £100 a head, but you could not compare that accommodation with what is required in public offices.
1076. What would a building for use by twenty-one clerks cost, roughly speaking, leaving the basement out of the question? It is extremely difficult to answer your question.
1077. You have prepared plans of a building which you say would cost £14,000 in brick and stone;—how many persons would it accommodate;—how many rooms, for instance, are required for twenty-one persons? It depends upon their location.
1078. But you have a knowledge of clerical work;—how many rooms would twenty-one clerks require? In this case I should say about the number provided upon the plan. The plan was prepared in consultation with the Inspector-General of Police.
1079. How many rooms have you provided for the Inspector-General? Eleven rooms and a strong room, exclusive of the basement.
1080. How many rooms are there in the basement? The basement is one large open space. When I say open, I mean that it is open under the ceiling, of course.
1081. *Mr. Watson.*] Is it not partitioned off at all? Only for constructional purposes. The only partitions are those required to carry the building overhead.
1082. *Mr. Levien.*] Would those eleven rooms you have mentioned include a photo. room and a room which could be utilised for the purposes of a museum? The provision includes three rooms for a housekeeper, and also provision for a photo. gallery on the roof.
1083. There would be altogether sixteen rooms? Yes.
1084. What is the floor space on the upper floor exclusive of corridor? The space averages over the whole sixteen rooms 335 feet each, but that does not give you much information.
1085. Do you mean to say that a building containing sixteen rooms, leaving the basement out of consideration, could not be erected for less than £10,000, supposing it was to be used for police purposes alone? I do not think so.
1086. What do you think such a building ought to cost upon that site? I should think about £14,000. You must remember that the building would cover the whole police administration of the Colony, and the Department is a very large one.
1087. *Mr. Trickett.*] There appears to be some slight misapprehension about this vote—in the minute which Mr. Hickson has handed in he says the sum of £14,000 was voted upon the Loan Estimates of 1896 as the first instalment towards the cost of these buildings, meaning the buildings before us;—that is clearly an error, is it not? The Loan vote was, of course, specific.
1088. The Loan vote in 1896 contains these words:—"Offices for the Inspector-General of Police and the Comptroller-General of Prisons, £14,000"? That makes my mind quite clear upon a point in regard to which I have been in doubt. It is quite clear from the wording of that estimate that it was intended to provide for the Comptroller-General of Prisons.
1089. *Mr. Levien.*] Then you were mistaken in telling me just now that it would take £14,000 to build for the Inspector-General of Police alone;—you now say that provision for the two Departments was to cost £14,000? £14,000 was voted, but there were not to be two buildings.
1090. *Mr. Trickett.*] If a building could be erected for £14,000 for these two Departments at that time, do you think it could be built for that money now? Yes.
1091. Suppose it were subsequently proposed to erect three or four more storeys upon the buildings now required by the police, could they not be erected for £14,000? You would require stronger walls and preparation for lifts, and a variety of things.
1092. But you think a building which would meet with the approval of the Inspector-General of Police and the Comptroller-General of Prisons could be erected for £14,000? I think it could, although there has been a rise in prices since the time to which you refer.
1093. *Chairman.*] Prices are higher now than they were in 1896? Yes; they have gone up.
1094. *Mr. Dick.*] Can you let us have a statement of the number and size of the rooms on each floor in the case of the buildings before the Committee? Yes.

1095.

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1095. Referring to some evidence given by you upon the proposed Additions to the Treasury Building, and which, I think, was repeated by you a short time ago, I find that you stated that about 146 superficial feet per officer was the average in the different Departments? I think I said it was desirable to get that space if it could be obtained; but that was for draftsmen, I think.
1096. That average, I suppose, is taken from the existing state of things in the public buildings? Yes.
1097. Is it not a fact that a number of the large public buildings of Sydney were designed with reference to the needs of the Departments which were to be housed in them? The buildings in which we now are were designed before I came into the office I now hold, so that I could not tell you.
1098. But do you think that in the light of experience you would design these buildings in the same way if the work had to be done over again? I think it would be far better to have a complete scheme for Government buildings. Our present buildings have grown with the Colony, and it is now too late to talk of such a scheme as your question suggests.
1099. At all events the designs of the Chief Secretary's Office and the Lands Office could be improved, having regard to the purposes for which those buildings are used? I think that if larger sites had been provided we might have had lighter buildings.
1100. Having regard to present conditions the estimate of 146 feet per officer would be somewhat unsatisfactory then? I think if every officer got 146 feet he would do very well.
1101. I was wondering whether they might not be doing too well? In many cases draftsmen require large tables. Then the Under Secretaries also require large rooms to themselves.
1102. None of the Departments to be housed in the proposed buildings have any draftsmen under their control? No.
1103. So that that element in any increase of the average would not be present in this case? No. Another item which affects the space is the amount of records and papers. Some offices have to deal with many more than others.
1104. You do not think the average of 146 feet is too high? Not for this climate; besides, the whole of the clerks have not that average at the present moment, or anything approaching it.
1105. Do you know what is the average superficial space afforded in the case of public schools? I think 10 feet.
1106. Do you not think that ten times the space afforded to every child in our public schools should be sufficient for an officer in a public department? You cannot compare the two cases; the conditions are altogether different.
1107. Suppose the Committee decided to go on with only three storeys of the proposed buildings, two storeys and a basement,—is there any objection on the score of economy to delaying the construction of the two higher storeys? The roof would require to be reconstructed and it is undoubtedly cheaper to carry out buildings under one contract.
1108. Can you give us a rough estimate of the increased cost involved by the erection of the proposed buildings in sections as I have suggested? It is difficult to estimate; but I should say there would be a difference of at least £2,000.
1109. You do not think it is desirable to erect the buildings in that way? I do not think so. I have had experience in raising Government buildings lately, and I am starting another work of the kind at the Custom House shortly, at great inconvenience to people occupying the buildings, and adding considerably to the cost as regards mode of construction.
1110. You have had experience in the erection of public buildings in sections in the case of the Chief Secretary's Department, the Lands Department, the Post Office, and the Government Printing Office? Yes.
1111. Your experience in those cases teaches you that it is undesirable to pursue the practice? Yes. I have just completed a specification dealing with the Custom House, where we have to face the difficulty again. We are putting on to the Custom House an entirely new temporary roof and ceilings, and we are carrying out the work in sections in order that the occupants of the building will be disturbed to the least possible extent. The consequence is that the contractors will have to work in three sections instead of in one.
1112. I find, according to the schedule handed in by you, that the Comptroller-General of Prisons will have upon one floor 5,047 superficial feet, while the Public Service Board will have upon another floor 5,543 superficial feet. How does the difference of 500 feet arise between the two floors? It arises partly from the fact that the staircase at the corner leading up to the Comptroller-General of Prisons stops there. Therefore the Public Service Board overhead gets the additional space occupied by the staircase.
1113. Were the number of officers employed by the Comptroller-General of Prisons and by the Public Service Board taken into consideration in providing this accommodation? I have a detailed statement containing every particular af that kind.
1114. I find, taking the superficial feet provided for the Comptroller-General of Prisons, that there are 240 feet per officer, and that there are in the case of the Public Service Board nearly 300 feet per officer;—is that inevitable from the structural necessities of the site? It is inevitable; but I might explain as regards the Public Service Board being accommodated in the building that it is quite possible that the Government Statistician's Department might also be brought in there under present conditions. That would reduce the average at once. I do not know what is proposed, but it is quite feasible that that should be done.
1115. On the floor provided for the Public Service Board there is a room containing 536 superficial feet? Yes.
1116. Do you not think that that could be very well divided by some light partition into two offices providing rooms for two members of the Board? That could be done, but the proposal was to put the members of the Board in the front, and let the accountant or records have the larger room.
1117. Still you think that a room with 268 superficial feet will be sufficiently large? Not for a member of the Public Service Board.
1118. Not for his private office? No; it should be 320 feet; that is a good size.
1119. You do not think that the three large rooms in which you are proposing to put the members of the Board singly are too large for the purpose;—you must remember that the Board has also a Board-room? We propose to make the angle room the Board-room, and the proposition was that the first northern room should be occupied by a member of the Board; also the two eastern rooms. The Board-room will be 421 feet.

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feet. The first member of the Board will have a room with 400 feet, the second a room with 551 feet; and the third a room with 596 feet. It was proposed to divide one of the rooms by a partition, and to devote a portion to the Secretary to the Board and a portion to one of the members of the Board.

1120. What is it proposed to do with the other rooms? They are to be devoted to records, and to clerks generally.

1121. Mr. Holliman said that in a room with 835 feet he intended to put twelve clerks out of the fifteen in his Department;—if that is the case one-half of the floor would be unoccupied by the Board? The Committee will see from the comparative statement that the Auditor-General gets very little additional space, and it is thought that any room which the Public Service Board did not require upon their floor might be appropriated by the Auditor-General.

1122. We were told yesterday that there was not much chance of increase in the Auditor-General's Department;—do you not think it possible to so arrange the floor as to put two Departments upon it? It would be possible to do so; but the object was to get these two special Departments—the Auditor-General's Department and the Public Service Board—into a distinct building by themselves. They consider that they are neutral and independent, considered in connection with other Government Departments.

1123. Can you state how many rooms the Government Statistician would require? I cannot say. The Public Service Board asked for eight rooms. I find that the Government Statistician at present has fifteen officers, occupying 2,705 superficial feet.

1124. Mr. Holliman said yesterday that it was proposed to put fifteen clerks in a room of 854 feet, and three clerks in a room of 502 feet, giving an average of 90 superficial feet to each clerk. If you take the three rooms you get an average of 106 feet for each clerk;—do you think that would be sufficient in the way of air space? They have no papers; they do not require desk space. They could do with the minimum.

1125. Would they be very much crowded? It all depends upon the furniture. If the clerks were all accommodated at one long desk there would be air space. If they had each a separate desk, with pigeon holes and bookcases, they would find themselves very cramped.

1126. Would there be enough cubic feet per man for ordinary breathing purposes? They would have that.

1127. *Chairman.*] I should be glad if you would provide us with an estimate of the cost of a roof to the proposed buildings, supposing it were decided to provide two storeys now and to add three storeys at some future time? I have already explained that the difference between the cost of erecting the building as a whole and the cost of erecting it in sections would be about £2,000.

1128. What would be the cost of a roof itself? I should not like to say without measuring it up.

1129. You think it might involve an extra cost of £2,000 to erect the building at two different periods? Yes.

1130. The cost of the extra accommodation you propose to give is, in round numbers, about £30,000? Yes.

1131. You stated that it would be more economical to put up extra buildings now than to wait until they were actually required? That would be so.

1132. Would not the interest on the £30,000 come to something like £1,000 a year? Yes.

1133. In two years the interest then would amount to the difference between building in sections and building as a whole; so that if in twenty years' time it is considered necessary to extend the building the saving in interest alone would be a very considerable amount? Excepting that the three storeys are intended for Departments which are now paying rental. Immediately they occupied those floors their rent-paying would cease.

1134. You are about to erect other buildings;—if room could be found for these Departments in those buildings there would be no necessity to put them with the Inspector-General of Police? If suitable rooms could be found, there would be no occasion whatever; but I doubt if rooms could be found elsewhere.

1135. Have you gone into the question thoroughly? I have been faced with this state of things—that the Public Service Board and the Auditor-General have distinctly laid it down that they must be in an independent position as regards offices.

1136. According to the figures with which you supplied us just now, you propose to give an average of 240 feet of floor space to each clerk, in relation to the Police Department? No; I was asked to give the average floor space per room, and I gave it as 335 feet. That estimate does not give the Committee very much information, as I pointed out.

1137. The Public Service Board say that they want a Board-room with an ante-room;—do you not think that a Board-room 16 feet x 20 feet would be ample? It should be.

1138. And a room 20 feet x 15 feet should be sufficient for each member of the Board? I think a room giving 320 feet would be a better size. Of course they could do with a room giving floor space of 300 feet.

1139. What is the floor space of Mr. Hickson's office? I think about 560 feet.

1140. He has to be provided with a table to exhibit plans and that sort of thing? Yes.

1141. He would require more room, for example, than the Secretary of the Public Service Board? Yes.

1142. *Mr. Levien.*] The £14,000 voted by Parliament was an estimate to cover the cost of providing for the offices of the Inspector-General of Police and the Comptroller-General of Prisons in one building? Yes.

1143. You know the number of clerks required in each of those two Departments? We have had full particulars from the Inspector-General of Police; but we have not had such full particulars from the Comptroller-General of Prisons.

1144. We are informed by the Inspector-General of Police that he has twenty-one persons employed upon his staff; the Comptroller-General of Prisons says that he has ten employed in his Department. Suppose you were erecting a building for police purposes providing for only twenty-one persons, how much would the building cost;—you have made an estimate of £14,000 for the two Departments, what would it cost you to provide accommodation for one Department, employing twenty-one persons? It is impossible to give you the information. I should want to know about the site, and so forth.

1145. Suppose you utilised the site under consideration? If we occupied the same site it would simply mean a reduction of the upper storey, and that, I should estimate, would mean about £4,000.

1146. So that a building for the police alone would cost about £10,000? Yes.

1147.

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1147. If you had to submit an estimate to Parliament providing for a building for the police to accommodate twenty persons, you would recommend £10,000? I should never recommend a building of that description on that site; but the accommodation you mention could be provided for the amount I have named. I should not like to connect my name with the putting of a one-storey building upon that huge site.
1148. Suppose you occupied the site now taken up by the Comptroller-General of Prisons? Of course, £10,000 would do all that was required in a proper way.
1149. *Chairman.*] You have a design of the Scotland Yard buildings? Yes; it is a four square building. But I should explain that it is for the accommodation of the London County Council police; it has nothing whatever to do with the city police, or with the provincial police.
1150. Can you give us a tabulated statement of the floor space occupied in public buildings in 1880 and 1890 and at the present day, including the proposed additions, and showing also the floor space rented at the same period? I am afraid it would be difficult to get the information; but I will do the best I can to obtain it for you.

THURSDAY, 2 *FEBRUARY*, 1899.

Present:—

JOHN PERRY, Esq. (Chairman).

The Hon. Patrick Lindesay Crawford Shepherd.
The Hon. Andrew Garran, LL.D.
The Hon. William Joseph Trickett.
William Thomas Dick, Esq.
John Christian Watson, Esq.
Robert Henry Levien, Esq.

The Committee further considered the expediency of erecting Public Offices on land with frontages to Phillip and Hunter Streets, Sydney.

Harry Chambers Kent, Architect, sworn, and examined:—

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1151. *Chairman.*] You are an architect, practising in Sydney? Yes.
1152. Have you had an opportunity to examine the plans of the proposed buildings? Yes. I should like to say a few words by way of preface before giving anything in the nature of evidence. An architect, after a necessarily brief inspection of plans such as these, must speak with considerable reserve, and with some feeling of delicacy in the criticism of a design which must have cost a great deal of thought, and upon which a great deal of time must have been spent. As a critic, under such circumstances, an architect cannot have anything approaching a full knowledge of the conditions which may have hampered, to a certain extent, the architect who designed the building. I should, therefore, like anything I have to say to be considered as suggestive rather than dogmatic. I should like that to be thoroughly understood before I say anything at all.
1153. You have examined the plans? I spent an hour and a half looking at them yesterday.
1154. You know the purpose for which the building was designed? Yes.
1155. We should like the benefit of your experience in reference to the durability of stone as compared with brick buildings? Upon the question of durability only, I certainly think that good brick-work is equal to our sandstone, even if it be not more durable.
1156. The design before us shows a basement in Sydney sandstone with a brick superstructure. If, as you say Sydney sandstone is less durable than brick-work, might not the foundations also be in brick-work? Although I say that stone-work is if anything less durable than brick-work, I would still prefer stone to brick-work.
1157. For foundation purposes? Yes, and for the superstructure also.
1158. Why? The question of durability applies more especially to mouldings and dressings, and in this design nearly the whole of that portion of the building is shown in stone. The portion shown in brick is the very portion that would last in stone. I refer to the plain-faced wall work.
1159. It is only the basement that is in stone? The cornices and window dressings I should take to be in stone also.
1160. As to the general design of the offices, could you suggest any alteration? There are three or four points upon which I took notes yesterday, which I should like to mention. It struck me on seeing the plans for the first time, that it was rather a curious alliance to put the Audit Department and the Public Service Board in conjunction with the Police and Prisons Departments, even though they are provided with a separate entrance in another street, because the building will, no doubt, be known always as the Police or Prisons Department, although other Departments may occupy a portion of it. If it is necessary to put other Departments with these two Departments, I should have preferred to see associated with them Departments which, from the nature of their work, are more closely allied to them, still having separate entrances. For instance, there are the Lunacy Department, and the Coroner's Department—I do not know what size they are. I might also mention the Health Department, if it had not been housed as it recently has been in a building of its own. That would be possibly a Department which might have been properly associated with such Departments as the Prisons and Police, because quarantine and other regulations affect the police to some extent, and the Department may be regarded as conserving the public interests in other directions. The Lunacy Department is, to a certain extent, a Department in a similar position. The Coroner's Department is also rather closely allied to the police. But as I said at the outset, I do not know to what extent conditions may have hampered such suggestions as I now make. In regard to planning, there are two points I would like to suggest. In taking any one of these plans it struck me that it might be necessary at some future time to throw some of the smaller rooms into larger rooms. From that point of view, it would have been of advantage if the fireplaces were thrown back to the outer wall. If the fireplaces were transferred to the end walls of the rooms, the other walls could have been so constructed as to be partially or wholly removable at any future time, if one larger room were wanted.

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1161. *Dr. Garran.*] Would not that involve more expense? None whatever. It would be quite possible to arrange for the throwing of the smaller rooms into a large room, by the simple re-arrangement of the fireplaces. Next, I would suggest some additional lighting in the long corridor. It seems to be somewhat deficient, and I think that towards the south end it might be very much improved by cutting a small area in a space afforded by shortening the south-east corner room, leaving, of course, sufficient room for free access. The present lighting of the corridor is confined to the north side. That observation applies to every floor.

1162. *Chairman.*] Is not light obtained from various rooms? You get light from the staircase, to a certain extent, but not enough. You could increase the light in the way I suggest without any inconvenience to any other portion of the building.

1163. *Mr. Watson.*] On the ground and first floors there would be no light from the staircase? No; but on the ground-floor you could carry the corridor through, because the right-of-way slopes gradually as it goes down towards the basement, and when you get halfway along it you are able to get a high light from above it.

1164. *Dr. Garran.*] Is it not proposed to build over the right-of-way? Yes; but you would still get a lighting area. In regard to the general planning, there seemed to me—I may be wrong—to be rather a deficiency of record and strong-room accommodation.

1165. We are informed that every room will be practically fireproof, and that if a fire broke out in one room, it would probably be confined to that room? I should accept that statement with qualification. It is true that all the floors appear to be of fireproof construction, that is to say, the arch or Monier system is adopted; but that is not absolutely fireproof.

1166. If a fire were to break out in one room it would not be a fierce fire, and the precautions to which you refer might be sufficient to confine it? Of course, a great deal depends upon the records. The question, for example, is whether they could be replaced.

1167. We are informed that there is only a small portion of the records of the Audit Department, for example, which could not be replaced in other offices? One is accustomed to associate with an Audit Department rather valuable records, and it struck me upon first looking at the plans that there was a deficiency of record room.

1168. The Assistant Auditor-General informed us that there is only one set of disbursement papers which are not duplicated in other offices? That may be so, but I should still like to increase a little the strong-room accommodation. I think this might partly be done by reducing the size of the ventilating shaft, which I understand is to be worked with an electric fan. This shaft appears to me to be unnecessarily large for the purpose. A flue shaft 2 feet 6 inches or 3 feet square would be large enough, I think, and it would be less likely to get foul with dust and dirt than would an open area-shaft as shown upon the plan. You would still be able to work a fan in it if desired, and the additional space would allow you to increase the strong-room accommodation very much.

1169. What is the superficial area of the space to which you refer? There is an average width of 5 feet by 7 feet in length. If the shaft were made 3 feet square, you would get, I think, a sharper draught than with the large shaft provided.

1170. I understand that the proposed shaft is to be worked in connection with false ceilings? Yes; that was explained to me yesterday by Mr. Oakeshott. It is intended to drag the air from the rooms through the false ceilings into the shaft; but even so, I think, a smaller shaft would answer requirements better than the large shaft proposed. The up-draught would be quicker.

1171. And the alteration you suggest would give greater space for the strong-room? Yes. I think those are all the points to which I have to refer in connection with the planning. There are three small points in reference to construction which occurred to me. Upon three storeys you have long 9-inch walls on which are supported the rolled steel joists to carry the arch system. I think these walls would be better for being strengthened by piers in the corridor, so as to give a little more stability at the points upon which the joists will rest. On the third and fourth floors there are 9-inch walls, and on the ground, and first and second floors there are 14-inch walls, 50 feet in length, and I think a little pier treatment in the corridors opposite the girders would be advantageous.

1172. Would it take anything out of the width of the corridors? No; there would be merely pilasters on the walls. The effect would be to give greater stiffness to the walls. The same thing applies to the walls at the south-east end. There are three storeys of 9-inch walls 30 feet long, and there are two storeys of the same length of wall, 14 inches. That would not apply, however, if the area I have suggested were cut out.

1173. *Mr. Watson.*] That would have the effect of shortening the wall? Yes; and under those circumstances I do not think anything else would be necessary. There is one other suggestion I have to make, and it is in relation to the back wall of the basement. I should prefer to have the piers at the points where there is solid brickwork right up, and allow the lower openings to take care of themselves. Very little alteration is necessary in that direction.

1174. The wall would be weaker where the windows come in? Yes; it is a small point, but it might be well to make the alteration. Another point in construction which occurred to me is that there appears to be no provision for making the eastern wall hollow and preserving it from possible wet gales. My experience tends to show that in some of our heavy south or south-easterly wet weather there is a tendency for the damp to get through walls, unless some such provision as that which I indicate is made.

1175. *Chairman.*] What has been your experience in regard to the damp-resisting qualities of sandstone as compared with brickwork;—you know that it is proposed that the brickwork in this building is to be in cement? Yes. In regard to our sandstone, I may say that in connection with St. Mary's Cathedral and other places at which I saw it introduced when I was at work under Mr. John Young, the impression was that where the water did not run upon it the stone had a tendency to disintegrate much more than in places where the water did reach it. Cornices, as you probably know, are generally undercut, and if you look at any of our public buildings, taking the Custom House for example, you will find that the worst fretting takes place under the deep throatings, where the stone is so protected that the water cannot get at it. When I was working under Mr. John Young we found that the undercut Gothic mouldings fretted much more in the undercutting than on the surface, where the water could percolate. A great deal depends, of course, upon the drying of the stone. The silicate cement in the stone has, I think, a tendency to disintegrate more when it is absolutely dry than when water is allowed to run upon it. Only a year or so ago I took down a casing of what we thought was a solid stone pier in George-street. When we came to strip the casing off we found a heap of sand at the bottom. The stone had fretted away; it had been dropping for years past. No one had any suspicion of anything of the kind until we took off the casing. The fretting had proceeded to a dangerous extent.

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1176. *Mr. Watson.*] Do you think that is due to the sandstone being unreliable, or that it is owing to bad stone being put in? It is hard to say. I am somewhat inclined to think that the overrubbing of stone has something to do with it. With heavy-picked face work such a thing does not happen. It is rather in the case of finely-dressed stone that such a thing will occur. At Home, I believe, a stone of similar character is dragged. They do not chisel it and rub it, but it is dragged, and anything loose comes away under the scraper. But we fine-chisel, clean, and polish our stone to such an extent that if anything is moved the weather finds it and scales it off. An old clerk of works, of whose opinion I think very highly, told me some years ago that he thought that the rubbing of the sandstone was prejudicial to it,—that the constant rubbing had a tendency to impair the surface. If you take the rough-picked face work at the University you find that it stands, whereas the chiselled work shows signs of going. The same observation applies to the Museum building.

1177. *Dr. Garran.*] May not the slow drying have something to do with the progress of disintegration? Stone under heavy overhanging cornices gets exceedingly dry. If the stone shows a tendency to fret it is generally shown underneath these parts.

1178. *Chairman.*] Since no sun reaches the throatings would you not expect to find the stone there very damp? No water will reach the stone in the course of years, and it often gets bone dry. In connection with the substitution of stone for brick-work, I have worked out a small estimate of the cost in connection with the proposed building. In calculating the value of the brick-work, I have taken double-pressed bricks in cement. To substitute stone in the plain-faced walls, taking the frontages of the two streets only, I estimate would make a difference of £2,630.

1179. *Mr. Watson.*] Carried right through the wall? Yes. I have taken the stone-work as 2 feet thick and the brick-work as averaging 22 inches. I think that, seeing that all the parts which are likely to fret are dressings, which are already in stone, it is rather a pity not to make the whole building in stone, especially those parts which are least likely to fret—the plain faced wall-work.

1180. You have made no allowance in your comparison for double brick walls. Suppose, for instance, provision is made for a hollow wall on the eastern frontage, that would add a little to the cost of the brick-work? Yes; certainly. I have also worked out the foot cubing of the building. If you take the building at 1s. a foot cube, it would come to a little over £40,000; at 1s. 2d. it would come to about £46,000. I think you would find that 1s. 2d. would do the work fully. Of course the Monier arch system would add something to the cost. If it were not for that the work could probably be done for 1s.

1181. *Chairman.*] The original proposal was to provide accommodation for only two Departments, the Police Department and the Department of the Comptroller General of Prisons. But it was thought that so valuable a site should have a more expensive building erected upon it. It was estimated that the building as originally designed could be put up for £14,000? I think £14,000 is rather a low estimate for that class of building.

1182. But as far as the design is concerned, it would have more of the appearance of a police building? It would. The point which has struck me is, that this building will always be known as the Police and Prison Department, because they are the principal factors. I do not know whether the Public Service Board or the Audit Department care to be known as part of the detective service of the Colony. It is, of course, purely a sentimental point.

1183. Would a building such as that sketched in the original design look out of place upon the site? The effect of the larger building would be very good.

1184. Does that observation apply to either building? I am not sure that the smaller building looks important enough for the site. When I first looked at the plan, I thought some Departments, more closely allied to the Prisons Department than is the Audit Department or the Public Service Board, might be allied with the Prisons Department and with the Police Department in this building. It would have been, I think, a better arrangement.

1185. If, in the future, the Police and Prisons Department grew larger, requiring more accommodation, would it be very much more expensive to add another two floors at that time than to do the work now? You would have to make the walls stronger to start with. To make the additions later on would be more expensive to a certain extent, but not very much more.

1186. I suppose that it would amount to the cost of the roof? About that. That would be about the difference. A great deal of the roof would go to waste. You could use your roof timbers again; but when you had put up your temporary accommodation for protection, you would find that the difference in expenditure would be about equal to the value of the roof.

1187. Say, £2,000? Probably so.

1188. Do you prefer contract work to piece work in connection with new buildings? Yes, undoubtedly.

1189. What are your reasons for that preference? Contract work has some distinct advantages. I had some experience as a contractor. I spent seven years with a contractor, and, therefore, my sympathies may be a little in that direction. But a good contractor is fully occupied, and you obtain advantages in his foresight and method which it is impossible to find in any foreman or clerk of works, unless they are so highly qualified as to be practically contractors themselves. Take such a contractor for example as Mr. John Young. He saw that we had everything from the start. We obtained our material when we wanted it, and often in the cheapest market, and we saved by that means. But for the advantage of his experience in that direction many buildings which we undertook might have been carried out for very little if any profit. I could put my hand now on contractors who could carry out buildings with an equally good method and equal skill. And another point is that no architect in private practice could possibly devote the time required for each individual building unless he were to be paid for that one building only for a year or six months as the case may be. I recently carried out a building under special conditions in order that the work might be done within a certain time. It did not cost us any less, although I carefully scrutinised all the accounts including the expenditure on material and everything. It did not cost us less, nor on the other hand did it cost us more, than the tenders we should have received for the same building, but it gave me an infinitude of trouble, which I could not undertake in connection with every building.

1190. *Mr. Watson.*] The chief difficulty, it seems, would be to obtain a man to take charge upon whom you could thoroughly rely? Yes.

1191. *Chairman.*] And a contractor must have greater commercial knowledge than an architect could possibly have? Yes.

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1192. That is a very important factor? Yes. Another point is that when an architect is working over a contractor he is watch-dogging him all the time. When an architect is working in connection with day-work, unless he were scrupulous and thoroughly to be relied upon, if he found the building coming out against his calculation he might attempt to scrape and skin things in a way which would not be desirable. Suppose an architect desired to show that it would cost less to work by day-work than by contract, and that he found at a certain stage the work was not coming out to his advantage, he might allow material to go in which he would not allow to go in if he were watch-dogging a contractor, who might be working at a loss nevertheless. I can understand that day-work is advantageous sometimes where you have special conditions to contend with. In a building, for example, which we altered lately we had to work over the heads of all the men employed in it. In such a case there might be some advantage in the system. As a rule a contractor who knows his work thoroughly earns his position.

1193. Would there be much difference between wages paid by contractors and those paid by the Government for day-labour? Not generally. As a rule the labourer himself would be a check upon that. I do not know what rate the Government Architect pays, but I know, as a rule, workmen will not work for less on day-labour than on contract work.

1194. There would be no difference, then, in the cost of the two things? Practically, none.

1195. As to the space allotted to the clerks in the proposed buildings, you have had experience in a number of buildings in which a number of clerks are employed;—about what floor space do you allow for a clerk? I allow about 10 feet square.

1196. If you had to design a public building like that under consideration, what space would you allow? It depends upon the height of the building; but if you take a unit of 10 feet by 10 feet with a height of 12 feet, on the average you would get 1,200 cubic feet for each man working. I think 1,000 feet is the lowest limit.

1197. A draughtsman would naturally require more space than a man sitting down at books, for instance? That is merely the amount of room required. I am talking now of the limit of space required from the point of view of health, and I think that no man should work all day long in a space of less than 1,000 cubic feet.

1198. A space of 12 feet by 12 feet ought to be ample? Yes.

1199. Mr. Fosbery objects to being with other Departments in the same building;—do you think that his objection is a reasonable one? Yes; but, on the other hand, other Departments might object to being associated with Mr. Fosbery.

1200. *Mr. Trickett.*] It is understood that the addition of the Auditor-General's Department and the Public Service Board to this building was suggested by the Public Service Board from an economical point of view? I understand so.

1201. The Government Architect's Department admit that they can erect a building for the Inspector-General of Police and the Comptroller-General of Prisons for £14,000; to accommodate two other Departments they propose to expend an additional £30,000; the building must be debited, I take it, with at least one-half of the land, £13,000, making a total of about £43,000; at the present time the Departments are paying in rent only £820 a year;—in what way do you regard that scheme from an economic point of view? It does not work out very well in figures; but I think that £14,000 is a low estimate for the building originally proposed, and I do not think they should be charged with half the cost.

1202. The staff of the Inspector-General consists of twenty-one, and the staff of the Comptroller-General of ten; there is, therefore, a staff of thirty-one to be accommodated;—what would be a fair price to allow for a building for the accommodation of that number of persons? A great deal would depend upon the importance of the heads of Department. They would be given a much larger area than would the juniors. For the accommodation of thirty-one persons the sum proposed seems very large.

1203. You think £14,000 is a very large sum for the accommodation of thirty-one persons together with the visiting public? Yes.

1204. Have you erected any banks? No; but I have erected private offices and factory premises.

1205. You could not give us a case in point from your own experience? No.

1206. If you were designing a public building for the accommodation of a staff of twenty-one, another Department with a staff of ten, and another Department with a staff of fifteen, what would you think of a proposal to accommodate each Department upon a floor with exactly the same floor space, from an economic point of view? It certainly does not seem to be very economical.

1207. You say that 100 feet of spare floor-space is a fair amount for a clerk? I am supposing that a certain number of persons are associated in one room, and I take that floor space as the minimum.

1208. Taking one of the proposed floors, would not 160 feet seem a large allowance? Yes; suppose you accommodate the head of a Department in a room 20 feet by 18, he would have sole occupation of the room, and would have a floor space of 360 feet. But I was considering the accommodation which would be required where eight or ten clerks are in one room, and I say that the minimum which should be provided is 10 feet square.

1209. In this design no particular room is alloted to a certain number of clerks; but we have it stated in evidence that 146 feet is absolutely necessary, and that 164 feet would be a liberal allowance? One hundred and fifty feet would be a liberal allowance, excepting of course provision for the heads of Departments, and taking the minimum space where officers are associated together in a room.

1210. The Public Service Board has a staff consisting of fifteen officers, and they are given a floor space of 5,543 feet, giving an average accommodation of 369 feet;—does not that seem a large allowance per man? Yes; but included in that accommodation there might be provision for a board-room, or a large room which would be only occasionally used. If you took in a room of that kind it would upset all your calculations of the area afforded to each person in the building.

1211. Suppose eleven out of the staff to which I refer were accommodated in one room? Of course the accommodation does seem large, but it must be borne in mind that the subdivision is regulated to some extent by the requirements down below. That comes of housing the Departments one on top of the other.

1212. This building, although intended for occupation by entirely different staffs, having entirely different work and numbers, has each floor carried up practically upon the plan of the lower rooms? The ground floor regulates, to a certain extent, the disposal of the upper floors.

1213. That being so, and having regard to the unequal number employed in each of the three Departments, does not the arrangement preclude economy? It comes back to the question whether the Police and Prisons Department ought not to be accommodated in a building apart from the other Departments.

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1214. Do you know the plan of the Scotland Yard buildings? I have seen it; but I do not remember the details. The building encloses a court-yard, and there are towers and turrets at the corners. I think there are four frontages.
1215. The building is entirely by itself? Yes; but the conditions are somewhat different.
1216. In what way? You have at Scotland Yard a large central police force gathered at one point to an extent that you would not be likely to have here, with police barracks located elsewhere.
1217. But we are providing for the administrative part of the Department? Yes; but at Scotland Yard they keep a large reserve of men occasionally.
1218. It is intended here that the yard should be used for the massing of men;—do you not think that is an additional reason why the Department should be kept to itself? I certainly think that if you can keep the Police Department by itself it is very desirable to do so.
1219. You have given us an estimate of what you thought the proposed buildings would cost;—I suppose you could not, from looking at the plan, tell us what the original design would cost? No. There are no details upon which I could express an opinion which would be worth anything.
1220. Are there in the proposed buildings any modern ideas which would tend largely to increase the cost? There are the Monier floors; you have practically fireproof floors all through.
1221. Would that largely increase the cost? Yes, considerably.
1222. By 10 per cent? You may take it as increasing the cost by about 10s. per superficial yard on each floor.
1223. It is a reasonable and desirable expenditure, you think? I think so.
1224. Do you think the proposed air-pumping by an electric fan is necessary? I think it is desirable that the building should be thoroughly ventilated, but I do not like the proposed system. However, it is a matter of opinion.
1225. *Mr. Watson.*] You were asked whether you thought £14,000 was not a considerable sum to expend upon the original plan for the accommodation of twenty-one clerks;—I presume you are aware that the plan includes a basement area which would not be occupied, but which would largely increase the cost of the building? That should be deducted, certainly.
1226. With regard to the stone *versus* brick controversy, is it not a fact that there are different qualities of stone round about Sydney? Yes.
1227. You come across some stone of finer texture which is harder than other stone? Yes; there is a closer grain.
1228. Therefore, it is more durable, but also more expensive? As a rule, it is more expensive to get and to work.
1229. It would be possible to employ stone in this building which would not fret or be destroyed within a reasonable time? Quite so. My argument is that it would cost so little more to make the building entirely of stone that stone might be substituted for the brick-work, especially as you would introduce the stone in places where you would get the least fretting from weather.
1230. In the case of plain wall-faced work you prefer rough stone? I think it should be chiselled, but not rubbed.
1231. Harder stone is in general use now? We use hard stone wherever there are special conditions.
1232. Does the difference between the cost of the two stones amount to very much? I am not sure what it would amount to just now. We have been using brick so largely lately.
1233. You say there is not much difference in the cost of the two classes of stone? There is not much difference between the cost of the softer and the harder stone. I recently had an alternative tender for Waverley stone to compare it with the Pyrmont stone. In an amount of £1,400 there was a difference of about £80.
1234. Was that tender for the mere supply of the stone? It was for a completed mausoleum in which I intended to use the best stone, but I obtained an alternative tender for the Waverley stone.
1235. There would be a difference of about 6 per cent.? Yes.
1236. With reference to piece-work as against contractors' work, it has been stated that a contractor would have greater commercial experience than would an architect? Yes; he certainly would as regards material.
1237. But would it not be possible to get a man of experience to take the place of a contractor, if you had a work large enough to justify his employment? You would have to be satisfied as to his *bonâ fides* also. He would have to be so highly qualified a man as to be equal to a contractor, entitling him to a large salary. You would be subject to the risks to which you are always subject unless you happen to know your clerk of works thoroughly. There would be the risk of the man being paid in a secondary way, and the money, of course, would come out of the public purse.
1238. That applies to the position of the contractor himself;—he has to rely largely upon some employee of a higher grade, who would look after many of the details? Yes; but every contractor visits the work pretty often. He is on the work a great deal unless he is very satisfied with his subordinate.
1239. It is, after all, a question of effective superintendence? Yes.
1240. In either case, if you cannot obtain that, the work must fail from an economic point of view? Yes.
1241. You spoke of an architect finding work costing more than he thought it would cost being tempted to complete it more cheaply than he otherwise would do;—would it not be possible also for a contractor to evade conditions? It entirely depends upon the amount of supervision exercised and upon the integrity of those supervising.
1242. In either case you run a risk? You run a certain amount of risk.
1243. *Dr. Garran.*] With regard to the internal subdivision of the rooms, there are special requirements in certain offices, and, of course, when you are going to put four separate Departments one over the other, the difficulty is immensely increased? Yes.
1244. Where you have a corner block, such as that under consideration, there is hardly any other way of planning your rooms than by running a corridor between two sets of rooms, throwing a row to the front and a row to the back? That is the natural subdivision.
1245. And the cheapest? Yes.
1246. Any other plan would involve more corridor space? Yes, I think it would.
1247. The moment you have proceeded upon that plan you are to a certain extent hampered in your subdivision

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1248. If you wanted to make a smaller room your only chance would be to make a narrow one, which would be also misshapen and inconvenient? Yes; because the light would have to travel to the back.

1249. That is one of the difficulties which has to be met in this building;—it seems impossible to adjust the space exactly to the requirements of each Department? Yes. Take the Inspector-General's room. He regulates the disposal of the corresponding rooms above.

1250. Mr. Vernon said that in many cases it would be possible to subdivide the rooms, but that some of the walls would have to run right up to the roof for structural reasons? Yes.

1251. Supposing you were designing a public building, what do you consider a fair size for a Minister—remembering that he has to receive deputations? I should say a room 25 feet square.

1252. What sized room would you give to the Secretary, who would also require room for himself? Twenty-four feet by 16 feet is a well-proportioned room.

1253. Would that not be a large room to be occupied by a single person? Not for so important a functionary as the Under Secretary of a public Department.

1254. Where clerks are associated in one room, you say that there should be 100 square feet to each man? Yes.

1255. We asked the Secretary to the Public Service Board how he would accommodate his clerks, and he proposed to put eight clerks in a room of 835 feet? That is fairly in accordance with my standard. Each man should have 1,000 cubic feet.

1256. In another case he proposes to put five men in a room of 493 feet? That is practically my standard.

1257. You think he ought to find extra room for some of the ten men? Yes.

1258. Another room upon the same floor, 596 feet, is to be given to a single Commissioner;—is not that a very large room? It is rather a large room, but it is determined to some extent by the subdivision of the lower floors. It is necessary to give the heads of the Departments the more important rooms.

1259. Do you know of any case of a building with a stone basement and a brick superstructure where the stone has become unsafe? No; where the stone in rough hewn it seldom frets in the the way I have described.

1260. You think that, in this case the rough, stone basement is likely to last as long as the brick superstructure? I think any stone would do so, except where dressings or mouldings were in question.

1261. In the case of Government House, the stone has peeled where there is no dressing or moulding? I believe that a similar thing has occurred in a portion of the University buildings, but I think that arose because the stone was not built on its natural bed.

1262. To go back to the subdivision of the rooms, when you are endeavouring to accommodate a distinct Department upon each of the four separate floors the subdivision must, to a certain extent, be a matter of compromise? Yes.

1263. You know the character of the site upon which it is proposed to locate this building;—do you not think that the Inspector-General of Police would be rather expensively housed if he had a whole building to himself? Not if he were housed at £14,000 plus £23,000 as against the housing of two or three Departments at the rate proposed.

1264. *Mr. Levien.*] How many rooms do you reckon would be sufficient to accommodate ten persons, such as are employed, for example, in the Prisons Department, in connection with which no Board-room is required? I presume you would have to make some provision for waiting-rooms. Then you would require two rooms, one for the head of the Department and one for the secondary head. I suppose the remainder of the clerks would not want more than two large rooms, and there would be lavatories, strong-rooms, &c.

1265. How much ought the provision of that accommodation to cost? It would depend upon whether you were going to make an independent building, or whether you were going to provide the accommodation as an addendum to another Department. Considering the accommodation as an addendum to another Department, you could provide it from £1,800 to £2,000.

1266. *Chairman.*] The building to be provided for £14,000 was a two-storey building? Yes.

1267. If the Inspector-General of Police were accommodated in a building by himself he would require only one storey and a basement;—as a matter of fact, Mr. Fosbery does not care for even the Prisons Department being put into the same building with him? There seems to be a natural alliance between the Prisons and the Police Departments. I do not think there is so much objection to those two Departments being accommodated in the same building as to the association with them of other Departments.

TUESDAY, 7 FEBRUARY, 1899.

Present:—

JOHN PERRY, Esq. (Chairman).

The Hon. Patrick Lindesay Crawford Shepherd. | The Hon. William Joseph Trickett.
The Hon. Andrew Garran, LL.D. | William Thomas Dick, Esq.

John Christian Watson, Esq.

The Committee further considered the expediency of erecting Public Offices on land with frontages to Phillip and Hunter Streets, Sydney.

Harry Chambers Kent, Architect, sworn, and further examined:—

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1269. With regard to the floor-space which it would be fair to apportion to each individual, have you any knowledge of the floor-space allotted in various offices in Sydney? No, I cannot say I have; but wherever I design offices, I always allow 1,000 cubic feet. Where you have a room 12 feet high that works down to a minimum, perhaps, of 10 feet x 8 feet 4 inches. I think 10 feet x 10 feet is a good space. I do not think anyone, from a health point of view, ought to work in less than 1,000 cubic feet of air, and I think that in nearly all our Banks you will find that fully that space, if not more, is allotted.
1270. In this proposal, would you think that 300 feet of floor-space would be sufficient for an Under Secretary conducting a Department? Yes, just sufficient—not more than sufficient. That would be 20 feet x 15 feet. That is the least, I think, an Under Secretary should occupy. I should myself prefer 24 feet x 16 feet.
1271. There being eight principal officers in the four Departments—four Under Secretaries, and four Chief Clerks—would you think that a floor-space of 300 feet each would be a fair average? Yes, I think it would be a fair allowance. Of course the superior officer would be allowed a little more, and the other a little less.
1272. Do you think that for eighty-nine officers an average floor-space of 265 feet each would be excessive? It seems excessive, unless you have to deduct from that, space for a Board-room or waiting-room.
1273. I am allowing for accommodation in the corridors or waiting-rooms for the class of people for whom provision must be made in connection with the Police Department and the Comptroller-General's Department? It certainly does seem a large amount of space, unless, as I say, you are making an allowance for Board-rooms or waiting-rooms. Of course, if you are taking the whole floor area, that would include a lavatory, a strong-room, and a Board-room.
1274. Exclusive of corridors, lavatories, and places of that sort, do you think 265 feet each for eighty-nine officers excessive? Yes, I should think it was excessive.
1275. If there were a proposal to provide for (say) ten workers, an average floor-space of 500 feet each, would you say that was absurd? I would say that was outside the limit.
1276. Have you any knowledge of a building possessing the same accommodation as that proposed to be given to the two Departments of the Inspector-General of Police, and the Comptroller of Prisons, and could you say what would be its value? I do not think I could give any information on that point that would be of any value without consideration.
1277. You recollect that the original plan was merely to accommodate the Comptroller-General of Prisons and the Prisons Department;—since you were here last, have you seen any reason to alter your opinion as to the cost of such a building, namely, £14,000? No. For the building I saw sketched on the smaller plan £14,000 struck me as a rather low estimate. If the two floors and the basement were originally intended to be built for £14,000, I do not think the three upper floors should cost £30,000, as estimated. The estimate of £14,000 for one portion seems low in comparison with the total cost of the whole building. Because, though there is very little finish in it, the basement work is fairly heavy as regards its structure. Certainly there is not much expenditure internally in the way of finish in the basement.
1278. *Mr Watson.*] That would reduce the comparison, though? It would reduce the comparison; but I cannot see where you are going to spend £30,000 on the three top floors, when the two floors and the basement are to cost only £14,000.
1279. *Chairman.*] The basement is to be all open underneath? Yes; but it is to have Monier arches and to be paved.
1280. *Mr. Watson.*] The absence of finish in the basement, similar to that on the upper floors, might make a considerable difference? Yes; but against that you have the heavier construction in the basement.
1281. *Chairman.*] Roughly speaking, what would be the additional cost of constructing the building in such a way as to make it capable afterwards of being converted into a larger building? Roughly speaking I should say from £2,000 to £3,000.
1282. That would bring the cost up to £16,000? Yes; say, £16,500. I am, of course, only making the calculation on a rough principle.
1283. It would certainly be under £20,000? Taking the £14,000 as granted, it could not cost an additional £6,000 to strengthen the building to enable it to carry the additional stories.
1284. *Mr. Dick.*] Do you think that site is too valuable a site to be used only for the purposes of the Inspector-General of Police and the Comptroller of Prisons? I think it is too good a site for only a two-storey building. I should like to see at least one storey above the present design, if a Department could be found for which it could be utilised.
1285. Would that opinion of yours be modified if you knew that administrative economy demands that these two Departments should be together? I still do not like the idea. As I said the other day, that building will always be known as the Police Department, and it strikes me as not a pleasant thing, when you ask "where is the Audit Office"? to be told, "Oh, it is over in the Police Department." It is, of course, very largely a matter of sentiment.
1286. What I meant to ask was this: Would your opinion that another storey should be added to that building be modified by the fact that administrative economy—that is, as regards time and many other things—demands that these two Departments should be placed in the position proposed, that no other position as suitable could be obtained? Oh, I like that position for these Departments.
1287. Would that modify your opinion as to the site being too valuable a one for a two-storey building? Well, I should like to see another storey on it, as a matter of appearance.
1288. *Chairman.*] From an architectural point of view? Yes; from an architectural point of view. I think it is a little dwarfed for the site. I should like to see one more storey, at any rate, if it could be found useful for a Department which would not strike one as out of accord with the Departments occupying the other floors.
1289. That is, the Phillip-street elevation? Quite so.
1290. What buildings are there in Phillip-street to cause the building to look dwarfed beside them? I do not know that there are many large buildings; but with its long double frontage this building would look of great length. You would not only see the elevation as you do on the drawing, but you would see it as extended on the two frontages.
1291. Would not that give it the appearance of a police building? To some extent it might. If you could

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could add one more storey to the building, which would accommodate a Department of a character in accord with those occupying the lower storey, I think that would be the best solution of the question.

1292. *Mr. Watson.*] The Coroner's Department, for instance? Yes. I mentioned the Coroner's Department and the Lunacy Department merely as an illustration. I do not know whether it would be convenient to house them there.

1293. *Dr. Garran.*] You say your objection is sentimental,—but suppose the Auditor-General and the Public Service Board are not sentimental, and they have no objection whatever to go there, does your objection hold good then? Certainly not, from that point of view.

1294. *Mr. Dick.*] Have you had any experience either in designing or carrying out public school buildings? No, but I have in private school buildings—good-sized private school buildings.

1295. Are you aware that the Department of Public Instruction usually allows 8 square feet per child? Not over the whole room; and the occupation is for much shorter periods.

1296. You do not think, then, that the ordinary distribution of floor-space in public offices is somewhat extravagant? Well, I like to have 1,000 cubic feet per man. Taking that as equivalent to a room 10 by 10 and 10 feet high, or a room 10 by 8 feet 4 inches 12 feet high, I think it is sufficient. I do not think 1,000 cubic feet is too much for a man who has to work all day long in practically the one atmosphere.

1297. But we understand that in this building a constant current of pure air is to be circulated? Yes, I am taking that into consideration. In our hospitals we always like to allow something like 1,500 cubic feet for the sick. From 1,000 to 1,100 is taken as the lowest limit in the case of a hospital which can be largely kept open—a children's hospital. One thousand five hundred feet we take as a standard for a hospital, and to provide for infectious diseases, such as scarlet fever and so on, we go considerably higher. I threshed this question out some years ago with the late Sir Alfred Roberts, and working on the difference of climate as between England and this Colony, and our capability of taking in fresh air here to a very much larger extent than can be done in England, we came to the conclusion that 1,500 feet for a sick man and 1,000 feet for a healthy man were what should be sought after.

1298. *Mr. Shepherd.*] I should like some information as to the comparison between stone and brickwork;—you said that if anything brick was more durable than stone? On the point of durability only—good brickwork—yes.

1299. Have you found that stone is less durable as a foundation? No. I was speaking more especially of mouldings and dressings.

1300. Where it is exposed to the atmosphere? Yes.

1301. I presume you have seen the effects of the atmosphere on old stone buildings? Yes.

1302. Do you not think it possible that it may have been in consequence of inferior stone being selected? That is, of course, a difficult question. In giving my evidence on this point, I was speaking to a very large extent suggestively—not at all dogmatically. But I think that where our sandstone is dressed and rubbed and exposed to the atmosphere, especially in a leafy form, and perhaps I may also add, with the beds to the atmosphere, rather than the faces to the atmosphere, as in cornices and dressings—under such circumstances, I do not think all the fault is to be thrown on the stone. In our Sydney sandstone there is a certain percentage of clay and iron, which gives some ground for the suggestion of an effect by the atmosphere. This, of course, is only theorising, and I do not wish it to be considered as anything more.

1303. Do you think it makes any difference as to the manner in which the stone is prepared—whether it is chiselled, rubbed, or picked? I do; I think the rougher the face the more durable the stone, and the smoother you get the face, the more likely you are to have subsequent action upon it.

1304. Have you had any experience of Bowral trachyte? Yes, some, not a great deal.

1305. What is your opinion of that for foundations? I do not think anyone has a right to express a strong opinion on Bowral trachyte, without more information than we have at present.

1306. There seems to be an opinion that trachyte is liable to damage by fire to a very great extent? That opinion, I know, has been advanced.

1307. But does not that apply to almost any material of which a house is built? To almost any material except well-burnt brick. Well-burnt brick, as a rule, does not suffer from the action of fire, except in the joints—unless, of course, from extreme heat.

1308. With regard to the expense of buildings, have you ever tried the system of divisional contracts—that is to say, a contract divided into the various trades? Yes.

1309. Do you think it is desirable? I do not think it is desirable, in dealing with anything like a large building; in fact, as a whole, I prefer it otherwise.

1310. As regards expense, I have tried it, and I find it saves a great deal? That is where you are able to procure material yourself, to a certain extent, and work on a small contract.

1311. My idea was that the contractor had to make a profit out of each trade, and that where you separate the trades, and deal with each by contract, you benefit to that extent? That may be true to a certain extent, but not, I think, to an extent that would make it at all desirable to introduce the system in the case of anything like a large building. There is another element in reference to the question of day-labour *versus* contract, and that is that where men know they are working by day-labour, I doubt if you get the same amount of work out of them as you do if they know they are working by contract.

1312. *Mr. Watson.*] Do not contractors usually pay their men by the day? Yes; but sometimes when I have had to have a certain amount of work in a contract done by day-labour—apart from the contract, but in the same building—I have asked the contractor not to let the men know it was day-labour. It is human nature, I suppose, but there seems to be a certain amount of easing off that is almost inseparable from the knowledge on the part of the men that it does not matter to the contractor whether or not they are working fully up to strain. At any rate, that idea sufficiently operates in my mind to induce me to ask the contractor not to let it be known that it is day-labour.

1313. Do you not think that a superintendent who is up to his work can tell whether or not his men are working fairly? Yes; a contractor knows by experience whether he is getting the full amount of work out of his men.

1314. So would any other man, I presume, who was appointed—a superintendent, for instance? Yes. Under such a system he would practically become a contractor.

1315. *Mr. Trickett.*] Is there not rather a tendency amongst architects to elaborate designs—to magnify buildings and increase the cost? I can only speak for myself, and I think I may say I have been very faithful

faithful never to do that with any selfish motive. I certainly do not wish to judge any one else; I do not think I am here to do so. H. C. Kent. 7 Feb., 1899.

1316. You have admitted several times that, in your opinion, the Inspector-General's Department and the Comptroller-General's Department should be kept together if possible? It strikes me that they are Departments which might well be allied.

1317. The Inspector-General says that his present offices are quite sufficient. He writes to this effect:

> My suggestion is that the Government Architect should prepare a sketch plan of office buildings of an inexpensive character to cover the entire site, and that portion should be erected as early as provision could be voted. It would not be advisable to pull down the buildings at present occupied as offices, which are fairly convenient, and the adjacent building, the "Star Hotel," has been leased for three years. The 35-feet frontage on Phillip-street might be first utilised.

The cost of that additional building for the Inspector-General was to be £7,000, and another £7,000 was to be added for a building to accommodate the Comptroller-General. It seems now, because we have got the building, we are asked to add £34,000 to the expenditure;—does not that seem a piece of gross extravagance? I would not like to put it in strong language myself, but, as I said before, it comes back to the question of whether you are not housing these two Departments at a cost out of proportion to the expenditure that should be incurred for the purpose. You are going to house the Public Service Board and the Audit Department at a cost of £30,000 merely because you do not know what else to do with that portion of the building, and from an economic point of view it becomes a question of whether or not that is judicious.

1318. If you had been asked to prepare a plan of buildings, as suggested in his minute, by the Inspector-General for his accommodation, would you have run round searching how you could spend £30,000 or £40,000 more for the erection of other buildings—that is what it amounts to? Of course I would not like to say that. I should like to have got a three-storey building above the street, if I had been the architect. I should have been satisfied if I could have got three storeys; and if I could have found one other Department to put there without much additional cost, I should have been glad to do so—from an architectural point of view.

1319. But seeing that the Inspector-General's Department requires a large yard-space, why cover the whole frontage with buildings for his accommodation and that of the Comptroller of Prisons? I presume the question of the accommodation required by the Inspector-General on the one floor has been worked out by the architect.

1320. I do not think it occurred to the Inspector-General that we might have built on the Phillip-street frontage, for instance, a three-storey building and leave the space in Hunter-street as additional open yard-space for the police? He would like to enclose, or partially enclose his yard.

1321. He could follow the plan adopted in Scotland Yard; simply because they have a large piece of land there, they have not set themselves to work to cover that piece of land with buildings; seeing that large yard-space is desirable, do you not think the course I suggested would be better? Of course, that is, provided the wants of the Inspector-General would be sufficiently met by the smaller area; as to that I would not like to express an opinion.

1322. *Chairman.*] Do you think any architect would advise a client who could carry on his business for a rental of £1,200 a year to put up premises at a cost of £44,000 simply because he had a valuable site? No, I do not think I would.

1323. You think it would be the height of nonsense? A man might be living in a cottage of the value of £50 a year, and yet might want to build a mansion costing £10,000.

1324. But suppose a man wanted to carry on business, and he could rent premises for £1,200 a year, what sort of economy would it be for him to put up premises at a cost of £44,000, simply because he happened to own a valuable site? But would not the question of the adequate housing of the Public Departments come into consideration.

1325. But suppose the man could rent premises that would suit him? I should say that the expenditure of such a large sum would not be justified except for some very good reason.

1326. *Dr. Garran.*] If the Auditor-General says he is not satisfied where he is; if the Comptroller-General says he is not satisfied where he is; and if the Public Service Board say they are not satisfied? All that is a question as to whether the Departments are, or are not, adequately housed.

1327. The rental may be low, but they may not be adequately housed? Yes.

1328. Looking at the floor allotted to the Public Service Board on the plan, you see they require, first, accommodation for fifteen clerks; suppose they take the room with 835 feet floor-space, the room with 493 feet, and the room with 349 feet; that would give a total of 1677 square feet; that would be more than enough for fifteen clerks? Yes; that would give them a liberal allowance.

1329. And leave room for an additional clerk, if necessary? Yes.

1330. And are they conveniently placed for supervision as regards juxtaposition? Yes; the rooms could be made to open into each other if necessary.

1331. They are convenient for supervision? Certainly.

1332. Then the room with 215 feet of floor-space will be taken as a waiting-room for ladies? Yes.

1333. And the room with 194 feet will be taken as a waiting-room for gentlemen? Is it not rather far away.

1334. It is near the staircase? That staircase is connected with the Police Department.

1335. The large room of 596 feet might be divided into two, half being used as a waiting-room, and the other half as a secretary's room? Yes, that would answer.

1336. The rooms remaining would be these: 561 feet, 421 feet, 400 feet, 364 feet, 388 feet, and 194 feet. One of these is to be a Board-room, and the others are to accommodate three Commissioners;—does not that seem rather extravagant? It does seem a large amount of space. But then, again, the answer to that is, that you will always meet with similar difficulties when you are trying to house one Department over another of different dimensions.

1337. You might meet with it if you hired a private house? You might. Unless you could get a Department which would almost exactly correspond, as regards the room required, with the Department in the lower floor, such a difficulty might meet you at any stage.

1338. What I want to elicit from you is the fact that there seems to be a surplus of room? There seems to be a surplus of room there, certainly.

1339. If you take the Comptroller-General's Department, with a staff of ten, the room with 816 feet would be about enough? It would practically give an average of about 1,000 cubic feet each.

1340. The room of 215 feet would be a waiting-room for ladies? Yes.

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1341. The room of 175 feet might be made a waiting-room for gentlemen;—that is close to the staircase? Yes.
1342. Then we have the Comptroller himself and his muniment room to be provided for;—which room would you select for that purpose? The room with a floor of 327 feet strikes me as the most suitable.
1343. Then we have left a room of 476 feet, a room of 596 feet, one of 371 feet, one of 400 feet, one of 384 feet, and one of 512 feet? But you have not given the Comptroller his own room.
1344. There are all those rooms for him to choose from? He does not require a Board-room.
1345. No, he requires a room for a caretaker or a night watchman,—taking 194 feet off for that, there is still a large surplus? Yes.
1346. *Chairman.*] You are bearing in mind that in all these rooms the height from floor to ceiling is 14 feet? Yes; but we do not, as a rule, take anything above 12 feet as helping the cubic area for health purposes.
1347. You could put the ten clerks practically in the 816-feet room, and then, as Dr. Garran pointed out, you have to provide a room for the Comptroller himself, and such a room as that of 371 feet suggests itself,—then there are two waiting-rooms for males and females, and a muniment room and a caretaker's room,—that leaves three, if not four, large rooms unallotted,—so that, if there should be any future demand for accommodation, it could be provided on that floor? Yes.
1348. At present, therefore, the plan shows a surplus, or waste of room? That seems to be so.

WEDNESDAY, 8 *FEBRUARY*, 1899.

Present:—

JOHN PERRY, Esq. (Chairman).

The Hon. Patrick Lindesay Crawford Shepherd.
The Hon. Andrew Garran, LL.D.
The Hon. William Joseph Trickett.
William Thomas Dick, Esq.
John Christian Watson, Esq.
Robert Henry Levien, Esq.

The Committee further considered the expediency of erecting Public Offices on land with frontages to Phillip and Hunter Streets, Sydney.

John Kirkpatrick, Architect, sworn, and examined:—

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1349. *Chairman.*] Have you had time to examine the plans that are before the Committee? I have not had a great deal of time to examine the plans in detail. I have had a look through the plans generally.
1350. You know the purpose for which they are designed? I understand that they are designed for several Government offices, including the Police offices.
1351. Has your examination of the plans been sufficient to enable you to give the Committee an opinion as to the suitability or otherwise of the building for the purpose for which it has been designed? Yes, I think so.
1352. Will you kindly give the Committee the benefit of your knowledge in this connection? When I looked at these plans—that is the different floor-plans—I noted that there were no names marked for the different rooms, denoting the purpose for which they were intended. Therefore, there might be some little confusion. I think the names should have been placed on the rooms indicating for what purpose they were supposed to be occupied. Under the circumstances, I am to a certain extent, talking in the dark.
1353. The purpose for which the rooms are intended should have been stated on them, in order to enable you to form an opinion as to whether too much or too little space was allotted to the different officers? Yes. Taking a casual view of the plans, without saying whether the rooms are right, or without saying whether the accommodation is too much or too little, but merely looking at the plan as it stands, and supposing that the method proposed is the proper one by which to distribute the rooms, and that they are of proper size—even then I say that the plan is defective—defective in an ordinary architectural sense. For instance, the corridors—and you can take any of the floors—would be in total darkness. Take the second-floor plan by way of example. Here is a corridor extending from end to end of the building, and it is blocked at one end by a doorway, and at the other end by a staircase; and, singular to say, in that corridor, there is a little, tiny window about 2 feet or 2 feet 3 inches wide, whereas the whole width of the corridor should be occupied with one window as wide as one of the arches at the end of the room. To get light is a great difficulty in planning. It is very easy to block out the light, but it is very difficult after the building is up to get the light. In this corridor there is a doorway of 3 feet—and these doorways, I may say, are rather narrow. There is no light from there right round the corridor for some distance, excepting a narrow window over a staircase.
1354. Is there not a light at the end of the corridor? No.
1355–6. *Mr. Dick.*] Is there not a fanlight over every door into the rooms? That would not give any appreciable light to the corridor. The rule in lighting rooms is that, from a direct street light, one superficial foot of glass will light 100 cubic feet of space; but you must not extend the wall or the width of the room more than 30 feet. It is impossible that light could be transmitted through the window and over a fanlight into the corridor. Take the main corridor in Phillip-street, and how many fanlights are there. There are only three to light that corridor, which is the one that would carry all the traffic. The corridors of public buildings should be the places with most light.
1357. *Dr. Garran.*] Are there not four fanlights? I think there are only three. There is one beside a lift area, but that would not throw any light. In the case of the Australian Club, the site of which is very similar to this, we had bedrooms to construct with larger rooms below, such as reception rooms, with a corridor dividing the front rooms from the back ones. In that case, at the two ends of the corridor, we left an open area, giving ample light, and leaving no dark corner.
1358. But you are not built up against there? Yes; both ends are occupied; that is to say, we are not built up to, but we may be built up to, and we provided the necessary light in case we were built up to. We set those areas back. You will find the same thing in the case of the Mutual Life Assurance building, and also the Equitable Assurance building in George-street. In those buildings, areas are left to-

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to give free light to the corridors. I notice the same thing in the case of the corridor shown on the first-floor plan, and in fact, in every floor in the building there is a long stretch of corridor blocked off at each end. I make these remarks, taking it for granted that every requirement is provided as desired by the officers of the different Departments. When that is done, and the building is carried out, the officers of the different Departments will find themselves in the dark, when they attempt to go out and walk in the corridors.

1359. *Chairman.*] It is your opinion that it would be impossible to procure light from the front rooms to light the corridors? It would be totally impossible; there is not sufficient light. The corridors would be very dark indeed; it would be necessary to have the electric light going all day, as is the case in the front part of the Public Works building.

1360. *Mr. Watson.*] You would suggest, then, that areas should be put in at each end of the corridor on each floor? Yes.

1361. *Chairman.*] The only light provided in the plan in the whole of the corridor is a small window which may be built up against at any time, and one window in the Hunter-street front? Well; that window is about 30 feet away; it would only give light as far as the stairs.

1362. I mean on the Hunter-street frontage? There is no window there. There is a window on the stairs; but it is blocked off by a screen.

1363. I mean nearer to the corner, coming this way? There is a window there; but it is not sufficient to let the light in.

1364. *Dr. Garran.*] Your objections would be met if the wall were recessed, and a part taken out of the corridor? My objection to the plan would not be met, because I do not think the best use has been made of the ground.

1365. But I mean as far as the light is concerned? If you formed a recess at each end and trusted to that and to the window, you would, perhaps, gain sufficient light for the corridors. Then, with regard to the space given on the plans to the strong-room on the different floors, my opinion is that it should be used to gain more light. That is not the proper place for the strong-room. Although it might appear that the centre of the building is the proper place for the strong-room, I do not think it is. Then the general lift for the building is placed at one end right away in Phillip-street.

1366. *Mr. Watson.*] The lift is not to be used on the first and second floors? But the lift is placed in the portion of the building which is easiest to climb by the staircase.

1367. *Chairman.*] I understand that your objection is that where you have furthest to go the lift is absent? If I were to be compelled to put the lift at one end of the building, I am inclined to think I should put it at the deepest end, where there are most floors.

1368. *Mr. Watson.*] Would you do that in view of the objection on the part of the Inspector-General of Police and Comptroller-General of Prisons to anyone going through their floors, or to their having any connection with the other Departments—they want to be cut off completely, and will not use the lift themselves? I am looking at the plan as drawn, and it shows that the lift goes through all the Departments. It starts at the ground-floor, and it runs through the different floors, at each of which there is an opening for a doorway.

1369. *Chairman.*] Is there any other point? The entrance to the Police Department is shown at the angle of the building. I know from reading generally in the papers that Mr. Fosbery thought that the entrance should be private. Well, if you have an entrance at the corner where three or four streets converge, there will not be much privacy in going to the Police office. I should say that the police entrance should be further along in Phillip-street. Where the entrance is at present one man standing away at an angle would be able to watch both streets, and see people coming to give information to the police. They are bound to be seen going in that doorway. Then, coming to the basement and the ground floor, the area occupied by the building is 6,818 feet, and the yard space is given at 6,559 feet. I do not think it likely that anyone would buy a valuable site, such as this is supposed to be, and occupy only half of it with a building, and lose the other half. It may be said that an enormous yard is required for the police in the centre of the city, but I know that in Scotland Yard they have not such an area.

1370. *Mr. Watson.*] They have a court-yard? Yes; but they have nothing like this area. I think there are something like 128 feet frontage to the Thames Embankment, with a depth of 168 feet. On this area there is built a central wing and two side wings, forming a court-yard 55 by 60 feet. It seems to me that there is a terrific waste of space in the room given in these plans for the purpose of a police yard. I called at the Police office on my way up here, and just went back into the yard, and I found no one in the yard. I think this enormous area for a yard would be a wanton waste of valuable ground space in the centre of the city.

1371. *Chairman.*] You think, then, that the best use has not been made of the site in designing this building? That is my opinion. I am quite sure that if the Government were to invite competitive plans, leaving the competition open to Victoria and other places, it would get 100 or 125 designs to choose from, of which I am sure there would be at least twenty infinitely superior to this one. This would fall into a very low and back place when you saw the other plans worked out.

1372. Has that been the practice of the Government at any time? It has been the practice of the Government to do it, and in my experience they have always gained by doing it. In England it is nearly always done. They have a Government Architect there, Mr. Tanner; but all the work is thrown open to competition. Then you have a variety of plans to look at, instead of only one design. The designs are examined by a board of experts, who go deeper into the details than ordinary people are able to go. I do not know the capabilities, for instance, of the officers of the Police Department, in understanding plans, but the result of my twenty-two years' experience is that, as a rule, even my most intelligent clients, after I have tried to explain the plans, have really not understood them. Even though they may understand the plans, they can form no idea of what the building will be like when it is built.

1373. *Dr. Garran.*] But will leading architects compete for mere designs, when they know they will not have to superintend the building? If the prize were made sufficient they would. If it were understood that the supervision of the work was to be by the Government Architect, and a proper prize were offered for the best design, I think architects would compete. That is the principle they have adopted in Germany of late years. A handsome prize is offered, which will pay the architect for getting up the plans. A prize is given of £100, £200, or £300, according to the size of the building. The conditions are not so framed

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framed as to induce the architect to imagine or believe that he is going to have the work to supervise, and, therefore, gain 5 per cent. on the total cost; but if it is definitely understood that the work is not to be given to the successful competitor, the prize should be sufficient to induce competition for the best design. During my experience I have had fourteen or fifteen first-class draftsmen in my office at one time and another, and when I have been very busy, and have not been able to work night and day, I have had to trust to my officers—thoroughly capable men—but I have found that they have not taken the same deep interest in the work of designing that I would do myself. This applies in all directions, and I suppose it is human nature.

1374. *Chairman.*] Could not the Government call for competitive designs, and offer a prize; and in the event of its deciding to go on with the work, and employ its own officers, could it not be arranged that a small percentage could be given to the architect;—I suppose there would be no difficulty in making such an arrangement? There would be no difficulty at all. A very small premium, I believe, would attract designs which would astonish the Committee. There are some very capable young men rising up in the profession in all the colonies. If that were done, you would find there would be different plannings. This planning is defective, as I have pointed out. The corridors are dark, and also the strong-room, and the ventilating-shaft is placed right opposite the front door. The chimney supposed to carry away all the foul air of the place is brought into the centre of the building, and placed opposite the front door. I do not think anyone would like his private house to be fixed up in that way. I could bring you fifty different designs, and show the principle which should be adopted in a ventilating-shaft. It should be at the end or in an angle of the building, and not in front. The foul air should not be drawn to the centre of the building, but should have other means of escaping.

1375. *Mr. Levien.*] Of course, the plans would depend entirely upon the amount of money to be voted for the building; they keep within that expenditure? Yes; in regard to combining these different Departments in one building, and making a gigantic building of it, that could be done, but in these plans I think it has not been done artistically or effectively. I have already pointed out how undesirable it is to have the police entrance at the corner of the building.

1376. *Mr. Watson.*] You see the entrance to the stairway in Hunter-street? Yes.

1377. I understand it is intended that that should be used by persons desiring privacy? At that entrance there is a gate, and, as a rule, such gates are closed the best part of the time. Then again, if the entrance is there, it ought to be denoted in a clearer manner. It would only be known to officers of the Department who knew that such a staircase was there. An ordinary individual going to that entrance would not know where to go. Everybody would make for the corner doorway. The public, as well as all the beggars and loafers and others, would not go in by the side entrance; they would go in by the corner doorway, and this would lead to great confusion.

1378. *Dr. Garran.*] Do you not think that people who wanted to be screened from observation would go round the back way? They would not know there was an entrance there. On the plan it is only a right-of-way, there is nothing to show a doorway. If it is intended to use that staircase as a public entrance, it should be made more public.

1379. *Mr. Watson.*] Would you do away with the archway, and substitute a staircase? Yes, I would make a staircase there. The plan shows swing-doors leading to lavatories and other places. If that gate in Hunter-street is left open all the loafers would wander in by that gate, for there would be nothing to prevent them. If there were a door, and it were fastened or locked, the general public would not be able to go in. These loafers would go in by the gate, and turn the lavatories into public urinals.

1380. You would prefer a staircase in lieu of an archway? Yes; I would have a staircase and a totally different treatment.

1381. *Dr. Garran.*] That would quite get rid of any secrecy, because the staircase would be opposite the street? You could have a doorway, and it would be necessary to place an attendant there. You could not have a staircase leading right through a public building without an attendant. There is no such provision in these plans. Every one of these entrances should have an attendant. When a person arrived at the entrance, the attendant would say, "Whom do you want to see?" and indicate the way.

1382. That would get rid of your objection about the loafers getting into the urinal? That would get rid of that objection. But in these plans there is no space for an attendant, unless he occupies a place in front of the w.c. The arrangement in the plan is very bad. I am sure if the plan were ordered to be revised a very much better arrangement could be made.

1383. *Chairman.*] With reference to provision against fire;—if a fire occurred would it be possible to confine it to one room? I think so.

1384. So that the term "fire-proof building" is not altogether a myth? There is no absolute certainty that a building is fire-proof. The Mutual Life and the Equitable are the two most fire-proof buildings in the city. The Equitable, I do not think, is covered by insurance in any shape, because the building is considered absolutely fireproof. These being Government offices, the rooms would contain nothing but a few chairs and tables, which would cause a blaze only sufficient to go up to the ceiling, and the ceiling could be made fire-proof. There are three or four methods—the terra cotta method, the Monier arch system, and the Tragawellbeck system. The latter method is by the use of bands of iron and concrete.

1385. Has the Monier arch system had a fair trial by fire? Not to my knowledge.

1386. But we have had experience of concrete? Yes; concrete is satisfactory.

1387. And the Monier arch system is one into which concrete largely enters? Yes; but I do not know of a case where it has had a thorough test of fire. It is a very good principle in building. The only system that has had a proper test by fire is the Tragawellbeck system. The terra cotta system has been tested by some very good fires in America, and has stood very well.

1388. With the experience we have had of the Monier arch system, would you recommend the use of that in buildings where it is proposed to keep very valuable records? I would not object to it. I think it would be perfectly safe. I would not use the cheaper methods of construction. I would not make it too thin, but would have a good bed of concrete. The Monier arch system was invented so as to use very little material. But if it were made of a good solid work I think it would stand and have a good result.

1389. With reference to the partitions in the proposed buildings, the plans of the two top floors show 9-in. brickwork, do you think that is strong enough? It is against the City Building Act to build two floors in 9-in. work—walls that are carried up one above the other, and not supported by a girder intervening. If it is not proposed to have girders in this building the walls would be in contravention of the City Building Act.

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1390. *Mr. Watson.*] Girders are provided for, I understand? There are none shown on the plan. There are two floors with 9-in. walls. If I were to put such a thing in a design, and send it for approval to the City Building Surveyor it would not be approved.
1391. *Mr. Dick.*] Are you sure there are no girders shown on the plan? There are none shown.
1392. *Mr. Watson.*] Do you think that a thickness of 9 inches is too thin for those walls? I do, unless girders are used. And just imagine what the girders would have to be. There would have to be a continuation of girders the full length of the frontage. It would be necessary to have a length of girder 88 feet to carry the walls of the corridors on the third and fourth floors. It would be necessary then to have iron columns starting from the very basement of the building right away to the top. You would also require to have four columns on each side of the corridor on those floors underneath that long length of girder. That is very bad construction; it would not pay to do it.
1393. Would you get over the difficulty by making the partitions wider, the brick walls thicker? The walls require thickening out, or else it will be necessary to have girders. Carried one above the other right through as they are, I think it would be perhaps just as well to carry the wall through.
1394. *Mr. Trickett.*] Will you look at the plan of the floor proposed to be occupied by the Public Service Board; according to the evidence, the staff, besides the three Commissioners and the Secretary, would comprise fifteen clerks; it is proposed that one room should be occupied by twelve clerks, with a chief clerk to supervise;—which room would you consider suitable for this purpose? I think the room with a floor-space of 835 feet would be suitable.
1395. Then there is a room each for the three members of the Board, so that really only about half the space provided would be absolutely required? Yes; less than half—a third of the space.
1396. There are also two waiting-rooms required—one for male and one for female employees of the Board;—does it not strike you that the floor-space is very much greater than would be required? Yes; it is ridiculous. As I pointed out in my evidence, these plans are as defective as it is possible for them very nearly to be; that is, judging them from the point of view of the mere planning. The walls are carried one over the other. There is no alteration in the position of the walls to speak of. The walls should have been varied. Girders might have been placed across, and the different rooms reduced.
1397. Are there not many large public buildings in Sydney where very large rooms have been built, and where they have been afterwards subdivided to suit the circumstances? Yes.
1398. Could not something of the kind have been done here? Yes, of course it could.
1399. Take for instance the Equitable Life and the Mutual Life Assurance offices; they are built in a very large way, and the rooms are capable of being separated by substantial partitions, and have been so separated, as required? Yes; by terra cotta partitions. The whole building is fire-proof, with girders, and the partitions are of terra cotta. Terra cotta, being light, can be placed in any portion of the floor, and can be moved 3 or 4 feet away should any such change be found necessary. The partitions of this building should be on a similar plan. If the proper way to plan the building is in the manner here outlined, then I would keep the building together. I would take away all the internal walls and start afresh with it. I should never put a vent in the position selected to draw the vitiated air right into the centre of the building, but I should draw it out at the two ends. I should have two vents—one at each end.
1400. You seem to object to so much yard-space;—are you aware that the Inspector-General of Police has stated that he requires a large yard-space for the purpose of massing a number of constables in case of necessity? No; I know we had a riot in Sydney some time ago when a large number of special constables were sworn in, and that was the first time, I think, they ever found the value of the yard. I think if inquiry were made it would be found that they never wanted that yard until that occasion. The reason was that the drilling hour was between 1 and 2 o'clock, and city men in business who could not afford to take a cab or a tram and go out to the barracks to be drilled, were drilled in the police yard. Previously to that I do not think the yard had been used at all. It has been there a great many years, and I have never seen any gymnastic poles or anything else for the purpose of exercising the policemen. I do not think you would ever want a drill-yard in that position for the police. I do not think drilling ever took place, except on the one occasion to which I have referred, when I saw my friends being drilled as special constables.
1401. Have you considered the question from the point of view of the Inspector-General as to the necessity of his being separated from the other Departments—as to the desirability of a peculiar branch of the Public Service, such as that of the Police, being kept separate? I think the Inspector-General of Police, and the Comptroller of Prisons, should be together in a separate building on the site. Yet there ought not to be such a great objection if the building were properly planned. I think the building could be so arranged that there would be no objection on the part of the Auditor-General or the Public Service Board. The building could be split up and a little more of the yard-space occupied. A totally different treatment should be given to the area. Then the inside angle could be sold by the Government. All angles in the ground left after a building is erected are terribly troublesome things to make any use of. They are generally so much waste space. In this case the angle referred to will come in as absolutely waste space, because it takes a corner out of the adjoining land.
1402. *Mr. Watson.*] Which is also Government land? Yes. Suppose we were to take a line across the site and divide it in the centre; take the Railway Commissioners' place and arrange with them, and give them the western half—you could sell it to them, or give it to them; it would be a transfer from one Department of the Government to another—then there would be plenty of room on this half of the site to do all that is wanted, and it would be better for everybody. When people are building, they very often rush in too hastily. A case occurred the other day, where we nearly rushed in and spoilt the whole business, but luckily it was stopped, or otherwise the whole of the block would have been spoilt. This building is being rushed ahead with the result of spoiling the land it will occupy, and also the adjoining land. Both will be spoilt, because there are angles there that ought not to be left. Sydney is full of these old crooked angles. When we get a chance of clearing them away, we ought to square off things and make them symmetrical. Suppose you want the Police offices somewhere else, and this building is not always used for Police offices. Some day it may be wanted by the Government for something else. Everything changes, and these buildings will change, though perhaps it may not be for 20, 30, or 40 years. Well, there would then be a waste of space, for the building is too good and solid to be pulled down. That is a matter which ought to be thought out. According to the plan, the small piece of land which belongs to the Railway Commissioners will form a nasty

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nasty little angle which will be left, and it will be of no use to the Commissioners. If the whole building were remodelled, there could be a much-improved design. I look upon it at present as an absolute makeshift.

1403. *Chairman.*] What is the usual floor space per clerk given in an office? We generally allow 1,200 cubic feet for one man to work in. I should say about 10 square feet. We allow for children in schools from 7 to 8 square feet; but for a clerk in a room the space would be about 10 feet square.

1404. That would be ample for any office work? Yes.

1405. *Dr. Garran.*] You understand that the Government land—that is the Railway Commissioners' land—goes round into Elizabeth-street? Yes.

1406. If you had the ground absolutely bare, could you so build as to make an entirely-enclosed yard that would be available for the Inspector-General of Police, screened from outside observation? Yes.

1407. And would that in any respect be a superior design? I am sure the Government Department could make a better design if it had the whole ground to work on, and carried the thing completely round, and pulled down the temporary buildings of the Railway Commissioners—even if they supplied accommodation for a great many other officers. The whole block would be better treated if the buildings were carried right round to the lower basement.

1408. The Inspector-General wants the yard, though you do not think he does, and he would like to have it as much screened from observation as possible. Therefore, I ask whether we could give him an absolutely enclosed space by building all round? Yes; it would not be screened from the back windows of the different offices.

1409. But from all the outside places? Yes.

1410. Then you would not construct your building so deep as this one; it would be a shallower building, your rooms would not have the same depth? The depth would vary very little. The front rooms in the plan seem to me to be very deep rooms.

1411. In treating a building like that on that space, suppose we have to go round the corner there,—is there any better way than simply making a corridor running as shown on the plan, with two corridors at right angles with each other? Except that if the corridors are to extend from one end to the other—if that is the proper way—I should cut up the areas at the end.

1412. But otherwise the simplest plan is to make a corridor? That is the simplest plan.

1413. But that compels you to have the rooms in the front and the rooms in the back of the same depth—I meant the front rooms of one depth and the back rooms of one depth? Yes.

1414. So that you can only make a small room by making it very narrow? Not necessarily.

1415. How are you going to make a small room otherwise? You could have a room here—12, 14, or 16 feet on the first floor, and you could put a girder here and a girder there.

1416. If you were designing public offices yourself, what do you think would be a suitable size for a Minister's room; he may have to receive deputations, remember? I should have a room 25 x 20 feet.

1417. A room 25 x 25 would not be too big? That would be square, and it would not, perhaps, be a good-sized room for a Minister. I think 30 x 20 would be rather too long.

1418. What do you think would be ample for an Under Secretary? I should think an Under Secretary ought to be satisfied with a room 18 ft. x 16 ft.

1419. And for other officers who have single rooms and work by themselves, what size would you think sufficient? 16 ft. x 14 ft.

1420. That would give ample air-space for one man? Yes; and also a shorthand-writer or clerk in the same room. In places being utilised now for Government offices in various buildings about the city, I do not think they have that area, and they appear to be perfectly satisfied. In all the new buildings, this building particularly, I think the rooms are too large.

1421. In the rooms we have hitherto been renting for public purposes, which were originally built for private houses, the clerks have this area? Yes; they have about that area. Some of them have 20 ft. x 18 ft. The general run of the terrace houses ranges from 20 feet to 24 feet or 23 feet.

1422. If an officer has had his quarters in a private room for a great many years, do you think that shifting into a public building he wants very much more space? No, I do not. I think he ought to be satisfied with the same space which has been sufficient for so many years.

1423. You understand that on the south end we build up against private property, and that there is a carriage way underneath? Yes.

1424. Would you advise us to build right up, or to leave the carriage way open, so as to get light for the corridor? That requires a moment's thought. One reason why we would build over that area would be to gain more space.

1425. You would not throw away all that space for the sake of lighting your corridor? No; I do not think so. If the area was of no object, I think I should leave it open right away up. If we had no object in saving space, I think that would be better.

1426. But it would require thinking out? It just wants reasoning out, looking at it from a commercial point of view, and from the point of view of meeting all requirements; I mean the question of building right over, and a solid wall brought right up. You would have the advantage of more air. In a building like this no air would get into the yard from the front. They are discovering now, and especially in America, that instead of having central internal areas, it is better to have the areas from the streets. In case of fire they get ladders up much more rapidly than would be possible with internal areas.

1427. You understand that in this yard, there are two carriage entrances? Yes. The matter wants a little reasoning, but I think it would be better to leave the space, because you would have the benefit of greater air space in the internal court-yard.

1428. Still with the two entrances we should have a draught through the yard? You would get a draught at the bottom of the yard. You would get air that is blown down, as it were, and wind has a tendency to blow down rather than to rise. I dare say it would be better to leave that space open.

1429. You say you could not judge as to the distribution of the rooms unless you knew what each room was to be employed for? No. I called on my way down at the Police Department to see how many officers they wanted in the building.

1430. Did you go over the present building? I just had a glance at it.

1431. That office has served them for a great many years? It is too small now, there is no doubt. There are four clerks in one room in which it is not right to have four clerks.

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1432. The question is whether the space provided in the new building would be too much for them? I am not sure how many there are on the staff, but I think I was told the number was twenty-seven. The proposed offices are too large for twenty-seven.
1433. It would be a sudden change for the better? The building would be too large. The men would waste their time in walking from one end to the other. Half of their time would be occupied taking papers from one room to another. It is a mistake to have too much space.
1434. You see it is divided into two departments—the clerical department and the Detective department; they do not have much to do with each other? As to that I could not express an opinion, not having had an opportunity of studying the work of the different staffs.
1435. You objected to the strong-room as being in the wrong place, but does it not strike you that it is the only room without any light, and, therefore, is conveniently utilised for that purpose? I think it is very badly placed. I think that is one of the weakest portions of the whole design. It is just what I would expect from one of my juniors. It is in the angles of the buildings, where light is most required.
1436. *Mr. Shepherd.*] You are aware that it is proposed to construct this building with fire-proof floors and ceilings? Yes.
1437. You think it possible to construct the building in such a way as to be absolutely fireproof—that is, that one storey could be burnt out without injury to the floor either above or below it? The storey would not be burnt out, but the furniture, &c., might be burnt. I do not think it would injure the floor above. That is, supposing the building to be used for the purpose of a Government office. In the case of a warehouse stored with large quantities of combustible goods, the fire would have very great force, and under those circumstances I do not think that anything would be fireproof. In this case, however, there would only be the chairs and the tables, and the floor, and even the floor would not burn if it were properly laid down. I think the building could be made fireproof under such circumstances.
1438. Have you ever been in the *Brisbane Courier* office in Brisbane? No.
1439. You are not aware that in that case it is claimed that it would be possible for one floor to be burnt out without injury being done to the storey either above or below? No.
1440. There is no doubt that a thoroughly fireproof compartment could be built for the purpose of storing valuable documents? Yes.
1441. Would you propose to build a strong-room on the ground-floor, or on each of the other floors? The absolutely perfect fireproof floor should be, of course, the ground-floor, or if there is a basement, then in the basement. The banks do not trust the banking floors, but put all their securities and other documents in the basement. But for all intents and purposes a good strong-room can be built on each of the floors. But I would build stronger walls than those shown in the plan, which I think are about 18 inches. I should be inclined to make the outside walls 2 feet or 2 feet 6 inches. Then I should have a window in the strong-room. There is no window in the angle in the plan, which I think is a terrible defect. Every strong-room should have a window for the purpose of light and air. There should be iron bars and iron shutters in case of fire, which would be made just as strong as brickwork. In this strong-room there is a big area—192 feet. Fancy a room of 192 feet without a single opening in it. It may be said than an opening would be made in the ventilating shaft to ventilate the room, but if that ventilator is going to pump the vitiated air from all the other parts of the building to the centre, and then is going to be connected with the strong-room to ventilate that, it will be found that the strong-room will be so beautifully smelly that you will not be able to go into it. In the case of the Mutual Life of New York building, opposite the Post Office, I had a strong-room shown on the plans, and when they came back from America it was stated that that method was now obsolete; that if you made your building fireproof there was no need for a strong-room away in a dark corner. What we have done in the case of the Mutual Life building is this: we have built a fireproof room, in which there is a large iron safe. There are double doors. Attached to the safe are electrical wires, which are supposed to connect with the Police office—that is the case in America, but not here—so that at night time, if anybody is approaching the room, a bell rings in the Police office, and a policeman soon arrives on the scene with the knowledge that the strong-room is being attacked In America these strong-rooms are not put away in dark corners, but kept open. If this building is not fireproof the strong-room will fall down, where there is only 18-inch work. Therefore, if you are going to the expense of making the floors fireproof with good, strong girders, as intended in this building, why not import one of Chubb's big iron safes, and place it at the end of one of the rooms. That would be just as safe as going to the expense of building a big brick wall as well. You see there is the double expense; and what do you get. You get a dirty, dark room, and you have to burn gas, or perhaps a candle or electric light, which may get out of order, and thus cause risk. It would be far better to have one of these modern safes, and place it in one of the rooms, and have no strong-room at all. You could have one at each end of the building; but if it is proposed to carry out the 18-inch wall, and to have a big, dark place like this strong-room, then you should certainly have a window in it to ventilate it, and iron bars and shutters should be put outside. The shutters could be closed or opened by the turning of a wheel. This principle could be applied to the whole of the building at the back.
1442. You are aware that this building is proposed to be constructed for the accommodation of four different Departments—the Inspector-General of Police, the Comptroller of Prisons, the Public Service Board, and the Auditor-General? Yes.
1443. There is an objection on the part of the Inspector-General of Police to be associated in the same building with the other Departments;—do you think it would be possible, from the plan of the building, to construct it in such a way that the Inspector-General of Police could be absolutely separated from the others—that there should be no communication whatever? Yes; I would take one end of the building towards Phillip-street and divide it off. I would build, as it were, three terrace houses.
1444. *Mr. Watson.*] The Department would not then be all on one floor? It would require only two floors, and in many respects it is an advantage not to have all the offices on the one floor.
1445. *Mr. Shepherd.*] Do you think the building could be constructed more cheaply if built to accommodate the whole of these four Departments than if it were divided so as to give a separate building for the Inspector-General of Police and the Comptroller of Prisons? By the plan just proposed there would be practically one building, and the Departments would be divided off.
1446. I mean if the buildings were entirely separate, would there be any saving? There would be a greater saving by having them all in one building than if they were totally disconnected.

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1447. Have you any idea what the saving would be? No, I could not give an estimate; I have made no measurements.
1448. You could not even give a rough estimate? No.
1449. At what do you estimate the cost per cubic foot of a building of this kind at the present building rates? I think that building ought to be constructed for about 1s. 4d. per cubic foot.
1450. At the present time I think buildings can be constructed at a cheaper cost than usual? Certain buildings can.
1451. I understood that material and labour were at rather a lower rate now than is usually the case? A circumstance that took place the other day does not bear out that supposition. Tenders for the Citizens' Life Assurance offices were called for a considerable time ago, and the present contractors were the lowest tenderers. The proprietors did not call for fresh tenders for the work, but accepted the tender sent in on the former occasion. Of course, the ordinary house-building work and the ordinary stucco work do vary with the times, but where you have really good masonry, really good work, and everything good, I do not think the price varies very much.
1452. Which do you consider the more durable material for building—stone or brick? It is difficult to say. We have stone buildings in the world quite as old as brick, and we have brick buildings quite as old as stone. Our Sydney sandstone is not the best in the world of freestones. It has an inclination to fret and wear away in time. You can see it in this building, and all the public buildings. It is claimed that first-class brickwork, the best quality of brick, will stand better than stone—not the ordinary brick, but the bricks that are called double-dressed. These last longer than stone.
1453. But we have really no evidence as to which costs the more—brick or stone? The stone generally costs the more, from the manner in which it is treated. When we use stone, as a rule, we put a great deal of labour into mouldings and caps and decorations, and this makes a stone building cost more.
1454. *Mr. Dick.*] I think you said that if you were entrusted with the work of designing this building you would denote on the plan the purpose to which each room was to be devoted? Yes; I should denote on the plan what each room was intended for.
1455. Would you be able to do that when you consider the fact that all these various Departments are built one over the other, and must necessarily be almost all exactly the same shape? Yes; I should say that this room was intended to accommodate a certain number of clerks, that another room was intended for a certain section of the police, that another room was to be occupied by the Comptroller of Prisons, and another room by so many of his clerks, and so on. I should also have had the Police entrance marked on the plan.
1456. The structural necessities of such a building would not impose any great difficulty on you in such a matter,—I refer to the fact that all these various storeys must be identically the same in shape, with practically the same superficial area. That would not impose any great difficulty on you in allotting space in that way? No.
1457. None at all? None at all.
1458. Has that been your experience? Yes. Whenever I design a plan, I indicate the purpose for which the room is to be used. For instance, I mark the bedrooms, and I show where the bed is to be placed and also the wardrobe and the chest of drawers and so on, so that I may know that I am putting the windows and doors in the right places. In a plan prepared by an ordinary builder, you simply see the position of the door and the window and the fireplace, and probably when you come to put your furniture into the room, it will not fit.
1459. Then your opinion is that, as far as the allotment of space is concerned, the architect should be a despot? No; I do not say that.
1460. I understood you to say he decided where the bed was to be and the wardrobe and so on? In planning an ordinary house if you did not think of all these things, and suggest the position of the beds and furniture, your client would find himself in a difficulty when he came to occupy the rooms.
1461. You said something about the waste of a valuable site, about so much yard-space not being utilised—when you remember that the Inspector-General of Police absolutely insists upon having a large yard or space on the basements for the purpose of massing his men in the case of an unusual disturbance;—do you think under such conditions this building could be designed in any other way? Yes. There is no reason why that space should not be occupied.
1462. Then you think it perfectly feasible to give the Inspector-General of Police all the space he requires and at the same time build upon the whole of that site? Practically build upon the whole of it. Of course there would have to be space left for an area, but, as I have tried to explain, this is not the manner in which I should treat the design.
1463. In view of the necessity for a large yard-space for the Inspector-General, do you think you could give him that, and at the same time build a structure which would occupy the whole of the available area? Practically so.
1464. In reference to the ventilation shaft, I think you said that if you were asked to design a building, you would not have the ventilating shaft close to the front door as here proposed? Yes.
1465. What reason would you urge in support of such an opinion? I would put the ventilating shaft away towards the end of the building.
1466. What reason would you urge in support of that plan? Because I would do it more effectually, and besides I should not then occupy the centre of the building, the most valuable space, for this purpose. We always look upon the centre of a block of buildings as being the most valuable as regards space.
1467. I thought your previous contention was that you could ventilate the building more easily? Yes; I could ventilate it better.
1468. And this is a further reason;—the other reason was that you could do it more easily? This is valuable space, and there is no need for a strong-room of the description proposed.
1469. Why is the corner at the back more valuable than any other part? All this portion of the building is valuable.
1470. Why is it more valuable than any other part, considering you have three entrances? Nobody would know from the plan that there are three entrances. They would not know unless they were told. Apart from the corner entrance, you would have to hunt along the street to find the other entrance, and the same on the other side.

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1471. Are you not losing sight of the fact that this is not a building which caters for the public;—it is not like a public-house. No one corner is likely to be more valuable than another under such circumstances? It depends upon the position of the different offices.
1472. Have you had an opportunity of examining these plans in detail and at length? No; I have not examined them in detail.
1473. Are you sure that the 9-inch walls on the second, third, and fourth floors are not strengthened by girders—judging from the plan? Judging from the plan, there are no girders.
1474. With regard to this little corner where the strong-rooms are, do you think the walls are strong enough to preserve the whole column of strong-rooms, even if the rest of the building were destroyed by fire? No, I do not.
1475. Do you think there is any possibility, under the scheme as proposed, of the rest of the building being destroyed to such an extent as to endanger the strong-rooms? Yes, I do. And what is more, if that building were for anybody else but the Government, and it had to go before the municipal authorities, the plans would be sent back and not passed, the walls not being sufficiently strong.
1476. I do not misunderstand you when I quote you as having said that 10 square feet in a room is enough for a clerk? That is so.
1477. And you to some extent substantiated your statement by observing that a space of from 7 to 8 square feet was alloted to each child in the public schools? Yes; the space for the teachers and the space in front are included.
1478. If you were entrusted with the duty of designing a building for the same purposes as those for which the Government Architect has designed this building, would you locate the various Departments in terraces; in other words, would you place one block of buildings for the Inspector-General, and another for the Auditor-General, and another for the Public Service Board? I think, if the area were treated properly, there would be no need for any lofty terraces.
1479. Mr. Vernon in his evidence was asked, "What thickness will the walls be?" and his reply was, "They will be in accordance with the regulations of the City Building Act. Although we are not bound by it, we shall necessarily fall in with it. The walls will decrease in thickness as they go up." In view of that statement, do you still hold that these plans are contrary to the City Building Act? Yes, I am sure of it, and have had a good deal of experience of the City Building Act. The Government never has to send its work for approval under the City Improvement Act. If it had to do so, I think a good deal of the work would not be passed.
1480. Then Mr. Vernon was asked this question:—

101. Why are you not bound by the Building Act;—do you not think the Government ought to obey the law in a case of that kind, if only to set a good example? We always build somewhat in excess of the requirements of the Act.

? He has not built this building yet, and he will find that what I am saying is true. If those three walls are only 9 inches as shown on the plan, the building will not be in conformity with the City Building Act.
1481. Then you do not think this evidence of Mr. Vernon's is correct? It is not correct. The strong room is not in accordance with the Act. That 18-inch wall is not in accordance with the Act.
1482. Does the City Building Act make any specific provision for strong-rooms? No.
1483. Do you know the building called Scotland Yard in the old country? I know of it in outline. I had the plans, and I brought a picture of the building here.
1484. Have you had any experience in connection with public buildings in other colonies besides New South Wales? I have been over most of the public buildings. I have been over all of them in Victoria.
1485. Have you had any experience outside of the colonies? No; my experience is confined to Australia.
1486. As to the idea of a window in the strong room, do you think that would in any way act against the room being fireproof? No, not at all.
1487. You do not think that the door and the fanlight would give enough light to the room? No; it is round a corner. Besides you would not get enough light in that sized room from the fanlight over the door. It would be worse than the little window.
1488. You feel positive from your examination of these plans that the corridors on the ground floor, the first floor, and the second floor will be insufficiently lighted? They will not be sufficiently lighted, in my opinion.
1489. *Mr. Trickett.*] Have you considered these plans sufficiently to say whether the estimate of £44,810 represents about what the building would cost? No, I have not. I only had one view of the plans for a short time on Monday, and I did not have a scale and make any measurements.
1490. Seeing that a building of two storeys and a basement was to be erected for the Comptroller of Prisons and the Inspector-General of Police to cost £14,000, does not £34,810 for the three top storeys seem rather a large sum? Yes. The two estimates do not seem to agree. I think the error is apparent; it can be seen where the difference comes in. If £14,000 were sufficient for the Prisons and the Police, then £34,000 seems a large sum to add for two other Departments with only half the number of people to be accommodated. These other Departments have three more floors. I do not think they want the space. My own opinion is that there is too much space given for the whole of the Departments.
1491. Do you not think the buildings are too much spread out? Yes. There was a very similar sort of thing in connection with the new Parliament Houses, in reference to which I was examined before a previous Committee. After my evidence was given, the building was reduced from one of £500,000 to one of £250,000, though it was said at first it could not be done. This is a very similar thing. The area is altogether excessive in all the Departments, I think.
1492. *Mr. Watson.*] You stated that if you were designing the building, you would put the lift somewhere about the centre, and have an additional entrance at each end? Yes.
1493. Would not that opinion of yours be modified by the knowledge that positive instructions are given by the heads of the two Departments concerned that they must be isolated from the other Departments;—suppose you got instructions to keep the two lower floors isolated from the rest of the building, would not that modify your idea as far as the lift is concerned? I would still place the lift in the centre of the block. But I would not treat the building in that manner, I should treat it in a totally different manner.
1494. The Inspector-General tells us that he does not want a lift, that he only wants a staircase, and the Comptroller-General of Prisons, who occupies the floor above, also does not wish to have a lift;—consequently the only use of the lift is to give access to the second, third, and fourth floors;—in view of that would you still insist on having the lift in the centre? If you put the lift in the centre you would have to remodel the whole design. When once you touch it you have to remodel the whole thing, and the sooner it is remodelled the better.

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1495. But you would be guided to some extent, I suppose, by the desire of the people who are to occupy the building? Yes; but as I have already explained, it invariably happens that the people who are to occupy these buildings do not understand the plans. People do not really understand plans, and this is not an easy plan to understand;—it is an intricate plan.
1496. You said that the 9-inch walls on the second, third, and fourth floors were not sufficiently thick to be in accordance with the City Building Act? That is so.
1497. They would be sufficient if girders were provided? Yes.
1498. Are you speaking of cross girders or longitudinal girders? Longitudinal girders; and for those it would be necessary to have columns coming from the centre to support them.
1499. But you say longitudinal girders are not provided for? I do not see any marked on the plan? In the case of the Mutual Life building I had girders on every floor, and I showed them on my preliminary plan.
1500. *Chairman.*] With regard to the floor space required, taking out some of the figures, I find that the Comptroller of Prisons requires room for ten men—say one large room for himself and nine others. Does it not strike you that an average of 500 feet for each officer is somewhat in excess of the requirements? Yes; a great deal in excess.
1501. Then the Public Service Board requires room for fifteen men, and a Board-room. For these there will be an average floor space of 369 feet. Is that also excessive? Yes; that is more than is required.
1502. Do you think that one room of 369 feet is more than is required by an Under Secretary? It is larger than is necessary. I gave as an estimate for an Under Secretary's room an area of 18 by 16.
1503. Then there is the Auditor-General;—have you ever been in the Auditor-General's Department? Once, some time ago.
1504. I suppose it would be necessary to give one large room to the Auditor-General and another to his Deputy? Yes.
1505. It is proposed to provide for fifty-two officers in this Department, an average floor space of 254 feet; is that still excessive? Yes, I think so.
1506. Beyond all reasonable requirements? I think the whole thing is excessive.
1507. Looking at the plan of the smaller building, would that strike you as being a building suitable for housing the Inspector-General of Police, and the Comptroller-General of Prisons, bearing in mind the fact that these two heads of Departments have a strong objection to being housed with anybody else? I do not see that it is necessary for a great architectural triumph to be made. You do not want a great architectural feature for a useful public building. If it is more convenient to the Police and Prisons Department not to have other people connected with them, why not have a small building alone; why not put up a building for those Departments separately, instead of trying to make a mess of the building? It is better to do one thing well, than to make a mess of them all.
1508. Would you, on account of having a valuable site there, insist upon putting a big pile of buildings upon it—bearing in mind that the Inspector-General wishes to be isolated from any other Department? I am of opinion that a proper building, not altogether out of place there, could be designed, still giving the Inspector-General separate treatment.
1509. Considering that it might be necessary at some future time to add to that building, would it be advisable to erect that smaller building—say, those two floors;—would that look out of place in that corner—would it look too mean? The plan is drawn to a small scale.
1510. Bearing in mind the general character of the buildings in the street, would such a building detract from the appearance of the street? No; I do not think it would. Hunter-street is very narrow. A building by rights never should be higher than the width of the street, and I think Hunter-street is only about 40 feet wide.
1511. Bearing in mind that it may be necessary to accommodate a much larger staff in the future, would you recommend the construction of a building occupying that space, or a smaller building taking, say, half the frontage, and then adding to that afterwards? I should sooner take half the frontage, and add to it afterwards. I would take the Phillip-street frontage, and add a further wing in the Hunter-street frontage afterwards. If you built according to the present plan, you would not be able to do much hereafter with any portion of the land.

THURSDAY, 16 *MARCH*, 1899.

Present:—

JOHN PERRY, Esq. (Chairman).

The Hon. Patrick Lindesay Crawford Shepherd.
The Hon. Andrew Garran, LL.D.
The Hon. William Joseph Trickett.
William Thomas Dick, Esq.
John Christian Watson, Esq.
Robert Henry Levien, Esq.

The Committee further considered the expediency of erecting Public Offices on land with frontages to Phillip and Hunter Streets, Sydney.

Walter Liberty Vernon, Government Architect, sworn, and further examined:—

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1512. *Chairman.*] It has been suggested that a design should be got out, showing a building which would meet the views of the Inspector-General of Police and the Comptroller-General of Prisons, with reference to having a court-yard, which would be isolated? Yes; I produce a plan in accordance with your instructions, with that object in view. The revised plan consists in the removal of the internal rooms on the yard side of the main corridor on both sides of the building, and placing them, or their equivalent, as much as possible on the extreme boundaries of the property on the southern and western sides. The corridor in the original scheme is retained, and is continued round to meet those new rooms by means of an outside balcony. The consequence is that a square court-yard, obscured from all observation, is gained in the centre of the building, but the superficial area of the basement for police purposes is the same, practically, as it was before. The open air-space is also about the same. The result of producing this scheme is as follows:—It has necessitated a reduction in the office floor-space on the two floors

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floors—that is the floor for the Inspector-General of Police, and that for the Comptroller-General of Prisons. It has resulted in a decrease of accommodation amounting to 633 feet of floor-space. It has increased the corridor length on each floor from 138 feet to 317 feet, making an excess of 170 feet in corridor length. Attention should be drawn to the fact that that means a loss of time in control in regard to the occupants of the offices. The longer the corridors, the greater the distance to travel, and the more spread the officers. As regards the cost of the altered plan, I would point out that there is more external building now than there was before. For instance, there were only two external walls, the corridor being the centre of two sets of rooms; but under the present arrangement there are four. The roof also, instead of being simple, and constructed over one building only, as in the original plan, has now to be divided up and taken over the whole of the new rooms, involving, of course, more gutters, more cutting, and additional cost. There are also several other points to be considered. There is the construction and the cost of the balcony on each floor, whereas the corridor would have answered the purpose of the whole of the rooms. The additional cost I value at one penny per cube foot over the whole building, and I am inclined to think that that is a fair and reasonable estimate. The result is that the cost would be exceeded by £2,046, making a total cost, under this scheme, for the basement, ground, and first floors of £18,046. In prolonging the scheme to the upper floors—to add the three upper floors shown in the original scheme—that increase of cost shows more explicitly than it does in the smaller buildings. The loss of floor-space also shows. In the first place, the cost is increased by £5,624, and the floor-space is decreased by 3,374 feet. The disadvantage also of carrying the building up so many floors—five floors in height—is shown by the narrow construction of the building, which would be somewhat weak; and it is a most unusual form of construction to take a building a single-room deep to that height. If I might be allowed to express an opinion to the Committee, I would state that I think the first scheme is the better one from a construction point of view, and also from a monetary point of view, if it be carried up just to the height required for the two Departments.

1513. You speak as an architect when you say that that is your opinion? Yes.

1514. Supposing you happened to be the Inspector-General of Police, and wanted isolation, what then? The Inspector-General would still get it, because the proposition for the moment is to carry up only his first floor, and that of the Comptroller-General of Prisons.

1515. But what is wanted is a yard free from observation? I omitted to say that the yard will in every respect be as private as under the first scheme. I would point out that, under the revised scheme, the Inspector-General would have his entrance at the corner of the building, and the Comptroller-General of Prisons would have a distinct entrance altogether by a staircase and lift, if necessary, on the corner which is intended for the use of officers overhead. The detectives will remain on the north-west corner, as before.

1516. Have you an estimate of the cost of the original scheme—two-storied? The original estimate was £14,000, and that was increased to £16,000.

1517. I think you said you would not be quite positive about that? I find that that is the fact. It was £14,000; but when it was intended to produce a scheme showing upper storeys, I had at once to thicken the walls, and take other precautions, which increased it by £2,000.

1518. That is £16,000 for a scheme with thicker walls, as against £18,046 for the revised plan? Yes.

1519. *Mr. Watson.*] The additional cost of £2,000 for the alternative scheme is only in respect to the basement and first two storeys? Yes.

1520. So that, in addition to being an unsuitable building for raising up to the extreme height, it would cost a great deal more to raise it? It would cost, if built at one time, £5,624 in excess of the £44,000, but, if it were built in portions, it would probably cost £1,500 or £2,000 more for a temporary structure.

1521. *Dr. Garran.*] With regard to the question of isolation, I rather understood Mr. Fosbery, when giving his evidence, thought most about the officers in the Department looking out from the upper windows and talking to prisoners below. If you carried out the plan of taking the building five storeys high, you would still have these people looking over the balcony and seeing what is going on? That is so.

1522. You would not get isolation from the clerks on the upper floor? No; the yard would be open to observation from upper tenants.

1523. With regard to neighbours—could you, under the old plan, by making a narrow room and balcony round the west and south sides, give the same absolutely enclosed yard as you give now, and still allow all the underspace about the basement to remain the same? It would cut the yard too small. The basement would be the same, but the lighting area would be smaller, and there would be no one to occupy the rooms, because the Inspector-General is provided for in the main building.

1524. Supposing we try to accommodate Mr. Fosbery's desire for secrecy as much as possible, what degree of sacrifice is it worth while going to in order to obtain that secrecy. You made a plan, under which you give him an enclosed court-yard, with no windows overlooking it but the windows of the offices of a suite of rooms? That is all.

1525. You have shut the outside public out completely? Yes.

1526. Could not you shut the outside public out even as well by means of a small and narrow building on the two other sides? I could probably shut them out with screen walls, but I would like to look at the site more closely to ascertain. I do not think very much has been overlooked, but Mr. Fosbery may know more than I do.

1527. I do not think the place would be overlooked at present, but it might be overlooked by lofty buildings erected hereafter. Even if they were erected could you not put up a small balcony round the two sides? Yes.

1528. At no great expense? Under the scheme I do not think the yard can be overlooked in any shape or form by lofty buildings. The angle of vision would strike across the roof of the balcony.

1529. If you put up a building of two storeys, it would practically give you an isolated yard? I think it would.

1530. Supposing that at present there is seclusion enough from the outside world, and more seclusion is required hereafter, you can make it at a comparatively moderate expense? That is so. It might require some small alterations in the arrangement of the first building, but not much.

1531. *Mr. Trickett.*] Will you explain what has been done with the 960 feet of space on the western side; that is floor-space which is provided, as against the loss of rooms on the inner section;—what would that be used for? Offices. The whole floor would be devoted to Mr. Fosbery's administration. It is a *quid pro quo* for what has gone.

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1532. *Chairman.*] Under the original design, a clerk sitting in his office could overlook anything going on in the yard? Yes.

1533. Could he do it under the new plan? Not so easily.

1534. Could he do it at all? Not sitting in his office; he could come out on the balcony and look down.

1535. Then he would have to leave his room, where there is supposed to be some sort of supervision? Yes.

1536. You were asked if you could give a tabulated statement of the floor-space occupied by public buildings in 1880 and 1890? I have it as near as it can be obtained. I hand in the summary and details, as follows:—

Summary.

Department.	Rentals.	No. of Officers Accommodated.		
		1880.	1890.	1899.
Mines and Agriculture	£1,739 10s.	69	132	164
Crown Law	Government premises	18	27	42
Public Instruction	£400	61	92	94
Justice	£750	173	273	265
Postal and Telegraph	£4,154	.....	76	1,350
Grand Total	£7,043 10s.	321	600	1,915

MINES AND AGRICULTURE DEPARTMENT.

Premises.	Rental.	No. of Officers Accommodated.		
		1880.	1890.	1899.
Mines Department	Government premises	34	96	†108
Museum, Domain (Mines)	do	.....	.....	4
Forest Department	do	1	.....	.....
Stock and Brands, Young-street	£175	10	10	13
Tanks and Wells	Government premises	1	.....	.....
Public Watering Places	£52 (for Stores).	.....	8	5
Old Naval Stores (Agriculture Department)	£150*	.....	15	11
Lands Building Do	Government premises	.....	.....	5
Museum, Domain Do	do	.....	.....	2
Works Building Do	do	.....	.....	5
Vine Diseases	do	.....	3	.....
Board of Exports, Young-street	£32 10s.	.....	.....	2
Assay Works, Clyde	Government premises	.....	.....	9
Occupation of Lands	do	23	.....	.....
Diamond Drill Stores	£130 (George-st. West)	.....	.....	.....
Board for Exports, Stores	£1,200 (Darling Harbour)	.....	.....	.....
Totals £	£1,739 10s.	69	132	164

* Rented from Treasury Department. Except where otherwise specified those branches are housed in the Lands Building. † A few of these officers are mostly employed travelling.

CROWN LAW DEPARTMENT.

Premises.	Rental.	No. of Officers Accommodated.		
		1880.	1890.	1899.
Macquarie-street	Government premises	12	19	35
Chancery Square (office of Clerk of the Peace)	do	6	8	7
Total	.....	18	27	42

PUBLIC INSTRUCTION DEPARTMENT.

Premises.	Rental.	No. of Officers Accommodated.		
		1880.	1890.	1899.
Bridge-street	Government premises	11	61	65
Macquarie-street	Rented premises	42	.....	.....
Elizabeth-street	Do	8	.....	.....
42 Young-street	Government premises	.....	18	.....
46 Young-street	£200	.....	7	11
54 Young-street	£200	.....	6	18
Totals	£400	61	92	94

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JUSTICE DEPARTMENT.

Premises occupied.	Rental.	No. of Officers Accommodated.		
		1880.	1890.	1899.
Ministerial Office	Government premises	13	29	38
Registrar-General	do	47	65	77*
Prisons	£250	8	9	12
†Supreme Court	Government premises	59	62	34
District Court	do	13	15	12
City Coroner's Office	do	2	4	3
Central Police Office	do	13	21	19
Water Police Office	do	10	26	13
Insolvency Court	do	8	.....	.....
Patent Office	do	.....	7	.....
Copyright Office	do	.....	2	.....
Chancery Square	do	.....	30	33
Weights and Measures	do	.....	3	.....
Registrar-General, Branch Office	£500	.....	.....	24
Total	£750	173	273	265

* Including Patents and Trades Marks officers. It is now intended to rent separate offices for these Departments. † Including Judges.

POSTAL AND ELECTRIC TELEGRAPH DEPARTMENT.

Premises.	Rental.	No. of Officers Accommodated.		
		1880.	1890.	1899.
* General Post Office	Government premises	.....	.....	1,090
† Australia Hotel	Free	.....	.....	1
† Burns, Philp, & Co.	Free	.....	1	1
* Elizabeth-street South	£90	.....	.....	4
* George-street North	£650 (including stores)	.....	.....	26
† Grosvenor Hotel	Free	.....	1	1
* Haymarket	£250	.....	11	14
* King-street	£300	.....	5	5
* Miller's Point	£130	.....	3	2
† Oxford Hotel	Free	.....	1	1
* Oxford-street	£260	.....	10	12
* Park-street	£400	.....	6	5
* Parliament House	Government premises	.....	1	3
* Pyrmont	£50	.....	4	5
† Redfern Railway Station	Free	.....	2	2
† Royal Hotel	Free	.....	1	1
* Surry Hills	£100	.....	5	6
* Sussex-street	£156	.....	3	3
† Tattersall's	Free	.....	1	1
* The Exchange	£200	.....	8	8
* Ultimo	£78	.....	2	3
* William-street	Government premises	.....	9	14
† Stock Exchange	Free	.....	2	2
Martin-place (Telephone Workshops)	£250‡	.....	.....	37
Castlereagh-street (Stables)	£650	.....	.....	95
Barker-street (Telegraph Stores)	£390	.....	.....	4
Kent-street (Telegraph Stores)	£200	.....	.....	4
Total	£4,154	.....	76	1,350

* Post and Telegraph Office. † Telegraph Office. ‡ Ground rent paid to Treasury.
The number of persons employed in the year 1880 is not ascertainable.

1537. *Mr. Trickett.*] Do the post offices include the country post offices? No; only those of the metropolitan district. I also put in a tabulated statement respecting the revised scheme:—

PROPOSED NEW OFFICES, PHILLIP AND HUNTER STREETS.

COMPARISON between Scheme, as submitted originally, and Revised Scheme, as suggested by the Chairman, Public Works Committee.

Original scheme.	Revised scheme.	Results.
1. Building, including basement floor, ground floor, first floor.		
452,440 cub. ft., @ 8½d. £16,000	444,559 cub. ft., @ 9½d. ..... £17,596 Balcony 450 £18,046	£2,046 cost in excess of original scheme.
Floor-space— Inspector-General of Police ..... 4,510 feet Comptroller-General of Prisons ... 5,047 ,, 9,557 ,,	4,057 feet. 4,827 ,, 8,884 ,,	673 feet super. less than in original scheme.
Length of corridor per floor—138 ft run.	317 ft. run.	179 feet run. in excess of original scheme.
2. Building, including basement floor and five upper floors.		
Total floor-space—26,739 sup. feet	23,365 sup. ft.	3,374 sup. feet less than in original scheme.
Total cost, £44,000	£49,627	£5,624 cost in excess of original scheme.

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1538. *Dr. Garran.*] Is this building a shell building, or are the dividing walls structural walls all the way up? Structural all through.
1539. Then you cannot alter the walls? I can alter them now, but not afterwards.
1540. The dividing-wall on the first floor is the dividing wall right through? Yes.
1541. You have made this new plan so that you cannot alter the size of the rooms, whereas in the case of the Young-street building we are going to put in temporary partitions, which we can shift about? I am dealing now with smaller Departments, and I know, to a great extent how the heads of those Departments wish the rooms divided.
1542. You are going to suit four Departments, and, of course, they cannot all want the same-sized rooms exactly? That is true; but they are all much of a size. The Public Service Board is, perhaps, the smallest of the four. They are all capable of being dealt with almost on original plans.
1543. Would it be more expensive to leave the rooms of a skeleton character;—in other words, do you want the walls for structural purposes? Yes, particularly under the new scheme.
1544. But do you want them for structural purposes under the first scheme? Yes.
1545. If you had to do without them, would you have to make the outer walls stronger? To some extent I should, and I should have to build internal piers to carry the floors.
1546. At some additional expense? Yes.
1547. With regard to the Public Service Board, when you were showing us how you were going to allot the space, did you say whether you thought it necessary to give that body a separate board-room? Yes.
1548. Do you think, where each Commissioner has a large room to himself, there is any necessity to have a fourth room in which the three may meet together? I acted, not exactly on the instructions, but on the information given me by the Board itself. I did not question their requirements.
1549. Have they a Board-room separate from their own rooms at present? I do not think so. I think they meet in the Chairman's room, but I am not quite sure.
1550. I believe their rooms are not very large at present? No.
1551. Do you not think, considering the size of the rooms you are giving them, that it is a little extravagant to give them a Board-room as well? I do not think the Board-room is too large. The intention was to divide one of the rooms as a room for the Secretary as well as for a member of the Board.
1552. It would appear then that there are two or three rooms on that floor which are to spare? Yes, that is quite true. The idea was that the Government Statistician would be there, or that the Auditor General, as his accommodation on other floors became too small, would also go there.
1553. But his Department is not an expensive one, excepting for documents? That is so. It is impossible to construct a building with four Departments, on four different floors, so as to accommodate an unequal number of officers on each floor. The buildings are too rigid.
1554. If it is necessary to put the Statistician, or some one else requiring three rooms, on the floor occupied by the Public Service Board, there will, I suppose, be no difficulty in making the Chairman's room also a Board-room? None whatever.
1555. Have you given them space enough to allow of that? Yes.
1556. *Mr. Watson.*] In estimating the additional cost of the alternative plan, have you allowed for any extra piers in the basement? I have based the estimate for the revised plan upon the estimate for the original plan for the full building; and as the full building is estimated to cost £16,000, I add what I think is a fair additional rate to that basis, when I make the estimate £18,000.
1557. Supposing the Committee favoured the adoption of your original scheme to the extent of the two floors and basement, the cost would be £16,000? Yes.
1558. What would be the additional cost necessary to complete the building after a lapse of time—the difference between the cost of construction, as a whole at once, and the construction in two portions? About £2,400 would be the excess cost of constructing the whole now, and a portion hereafter.
1559. So that, in the event of the Government, a few years hence, desiring to raise the two-storied buildings to five storeys, it will cost an additional £2,000 above the original estimate? Yes. I may say that that process is an extremely costly one, and, unfortunately, it has been carried out lately in the Government Printing Office, and the General Post Office. It is also to be carried out at the Custom-house. It is a most expensive way of adding to the accommodation of a building. I have taken out some particulars with regard to the Lands Office, in order to see what is the cost, as compared with the cost of the building itself, and I am surprised at its expense.
1560. *Dr. Garran.*] Is it not a very wasteful plan? Very; and it is a great disturbance to the work of the offices as well.
1561. *Mr. Watson.*] The immediate saving then by the adoption of the two-storied building, as against the five-storied building, will be £30,000? Yes.
1562. And the extra expense involved in the completion of the building, at a later date, would not represent more than a couple of years or three years' interest on the extra £30,000? That is so—about £2,400.
1563. That £2,400, then, would be actually saved if there were not a necessity for the erection of additional storeys at the present time;—it would be saved in interest on the capital sum involved? Of course it would not have to be spent if the whole of the building were carried out at one time.
1564. But the interest on the extra £30,000 would have to be paid, and that would be considerably more, in the course of a few years, than the £2,400? Against that one must put the rents which are being paid for those two Departments—£800 a year, I think.
1565. If it is allowed that the additional three storeys are not at present required, then the extra £2,400 which would be required to complete the original building three years hence, is not a matter which is worth considering? I do not think it is.
1566. Have you read the evidence given by Mr. Kent with reference to this building? Yes.
1567. I notice that Mr. Kent stated in his evidence—

> It might be necessary, at some future time, to throw some of the smaller rooms into larger rooms. From that point of view it would be an advantage if the fireplaces were thrown back to the outer wall so as to allow of doing away with the central partition if necessary.

? That is quite true in the abstract, but there is always a limit to the size of a room for a small Department, and I do not think the occasion to which he refers will ever arise. There is one difficulty in carrying a fireplace up on the outer wall, and that is that the flue very often interferes with the architectural appearance of the building.

1568.

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1568. Mr. Kent contemplated the possibility of doing away with the inner wall, which you say is necessary for structural purposes? I should like to keep it there.

1569. Might it not be possible that, at some future time, when the city has developed, say, to the westward, it might be thought advisable by the Government to shift the location of the offices of Police and Comptroller-General of Prisons altogether, and so render it necessary to use the site of the proposed building for some other set of Departments;—in that case I should imagine that it would be of advantage to have the dividing walls as few as possible, consistent with structural stability? That is so; but I think you will find that the plan is a very suitable one for almost any Department of not too large a staff. If you compare that building with the private offices in the city, you will find that the advantage is all on the side of this design as against those, and yet they are all divided up.

1570. If it were proposed to put a Department there which employed a great number of clerks, it would be an advantage to have a few long rooms, and they could hardly be secured whilst the dividing walls remain;—of course, if they were carried right up they could not be taken away? Not very well, but I have provided for long rooms at the back.

1571. Are the structural necessities greater in the case of this comparatively small building than in the case of the larger building proposed to be erected in Bridge-street, where you have such long rooms without dividing walls of a structural character? They are both equally correct in construction; but I have applied the construction differently in each case, because the circumstances are so different. I have considered that that large building is one to accommodate two large Departments, and there must be the greatest elasticity possible as regards floor space, so that those controlling the Departments may not be hampered by more walls than are absolutely necessary. I do not think that applies to the case of the smaller Departments which we propose to put into the smaller building. I do not think it is necessary to go to the extreme construction which is required in the larger building.

1572. Is it simply a question of expense whether you can do without dividing walls for structural purposes? Not altogether. I knew before I started the plans the accommodation Mr. Fosbery, for instance, required, to a pretty fair extent, and I felt I was meeting his views by putting the walls in these positions, and that enabled me to carry out the ordinary construction of the building.

1573. It enabled you to save money in the dimensions of the outer wall? It does that, certainly. I do not say I had that in view when I designed it.

1574. Would it cost much extra to so build an outer wall that you could do without any in the nature of a structural dividing wall? If the cross wall on the east side were left out, I should require to put a pier in the long front wall, because it would have to be tied back, and the cost is about six to half-a-dozen; it is as broad as it is long. I must apply more strength in one place as against the ordinary construction in another, and I would require a pier in the centre of the building.

1575. Would that cost much extra? I should have to make it a certain section, because a pier under a certain area is weak in itself.

1576. What I want to know is whether it is possible to do away with two of the dividing walls—one on the Phillip-street and the other on the Hunter-street frontage—and substitute temporary walls similar to those to be used in the Bridge-street building, so as to leave it possible that the offices may be altered in the future? There is no doubt that that may be left out as easily as possible.

1577. Mr. Kent made a statement with respect to the lighting of the long corridor, which he thought might be improved? I read that statement carefully, and I produced a plan which I hope satisfies the Committee that I had provided sufficient light.

1578. Another suggestion he made was that he thought the strong-room accommodation might be increased a little by the reduction of the area allowed for ventilating purposes? Yes.

1579. He said he thought a shaft of 2 feet 6 inches, or 3 feet square, would be large enough;—he seemed to think, indeed, it would be a little better, as offering less opportunities to be fouled with dust, and so on, and giving a quicker up-draught, and at the same time increasing the size of the strong-room accommodation? It is a very small matter of detail; but all those gentlemen who have been examined in regard to the shafts have misconceived the scheme; in fact, the scheme is not shown on the plans. It was considered too small a matter of detail for it to appear there. All the air conducted from the rooms and corridors to be exhausted on the roof is carried through a special metal shaft. The brick shaft is simply the locality through which the metal shaft is carried. If there is a 12-inch tube for instance, all I shall want room for is for that tube, and a man to travel up and down by what are called hand-irons, in order that he may have control of it. But beyond that the shaft is very useful, under a system which is now adopted in America, for fire purposes. That shaft is used for manipulating all the stand pipes, hose and hydrants of each floor. If a fire breaks out, the shaft is intended for the use of the firemen to get to the storey in which it breaks out.

1580. Mr. Kent also suggested that on three storeys you have long 9-inch walls, and he thinks that they would be all the better for being strengthened by means of piers in the corridor? I know the walls to which he refers; they are on the upper storeys. I have my construction for the floors, independent of the walls, excepting the cross structural walls, and I have only intended them for partitions, as distinct from walls. They would not come under any building Act, if that is the point, because they are not the supporting walls of the building, but divisional walls.

1581. Do they carry joists? They will to some extent, but they are only subsidiary helps. Every building with a long corridor has these long walls.

1582. The suggestion was that an occasional pier, where the greater weight would come upon the joists, would be an advantage? Of course, all these matters of construction are gone into very carefully when we prepare working drawings. At the same time, I do not see the necessity for piers.

1583. If the Committee were favourable to the construction of the building under the original plan, to the extent of two storeys and basement, would you still recommend the construction partly in stone and partly in brick? It is altogether a matter of taste. There is a good example of a stone and brick building opposite the "Hotel Metropole." That will give you a good idea of the class of building intended. I really have been guided by Mr. Fosbery's express wish in the first instance—that I should not spend more money on the building than is absolutely necessary.

1584. *Chairman.*] Supposing Mr. Fosbery were a client and you a private architect, and he told you that he required a building with as much isolation as possible, and a quadrangle where he could place men at any time, free from observation, which of the two plans, under those circumstances, would you recommend

W. L. Vernon. 16 Mar., 1899.

to him? I would recommend the first plan, but I would take special precautions to shield him as much as possible from observation on the off-side of the court-yard. The first plan is the more economical and the better of the two.

1585. *Mr. Shepherd.*] Could not some of the space in the yard be utilised by building on piers—round the corridors for instance? The size of that area is such a good fault that it would be a pity to destroy it. If you compare that building with similar buildings in other cities—Brisbane for instance—you will find that the court-yards are much larger than the one on the plan. In Brisbane and Victoria they have a much wider view in regard to Public Offices, and they get as large areas they possibly can. Here, however, we are, unfortunately, cramped for space.

1586. It seems that you lose 673 feet of floor-space, and you increase the expenditure by £2,040? On the whole building.

1587. The corridor really takes up more than one-third of the floor-space? Of course it is necessary to have access by corridor to all the rooms.

1588. I suppose the balconies will project over the yard? Yes.

1589. *Mr. Dick.*] What about a photographic gallery in the reduced plan? That I shall have to provide. I should build that on the roof.

1590. *Dr. Garran.*] Could you put it at the back? Yes.

1591. *Mr. Watson.*] The understanding is that the Comptroller-General of Prisons could do with a little less space than is proposed to be allotted to him. If that is so, a small portion of it might be set aside for a photographic gallery? It could be used. I might point out that difficulties have arisen through fitting these Departments too closely. In past times it has been a source of constant expenditure to provide what might have been provided for in the first instance at a cheaper rate. Therefore these plans have been prepared upon a scale which allow of a certain amount of enlargement. They are not fitted tight like a glove. We have given in all cases a liberal allowance of floor-space to save future expense.

Edmund Walcott Fosbery, Inspector-General of Police, sworn, and further examined:—

E. W. Fosbery. 16 Mar., 1899.

1592. *Chairman.*] You have expressed all through the investigation a desire for isolation? Yes.

1593. We have had a revised scheme prepared, having regard to your wishes;—how do you view it? I do not think the new plan would be anything nearly so convenient for office purposes as the old one. Under the new plan the detectives will be accommodated in an office which is inconveniently situated. The accountant and clerks connected with the Correspondence Branch would be separated, and people coming in to make inquiries would have to travel along corridors to rooms at the back. I think the plan of having the Inspector-General's office in one of the chambers, and the Secretary's office adjoining, is an advantage, especially if you have the clerks' and accountant's office on the opposite side of the passage. I am afraid, with regard to the advantage in respect to the court-yard, that we pay a little too dearly for it by the disarrangement of the offices.

1594. Then you would prefer the original design? Yes; I quite concur with Mr. Vernon in thinking that the original design is far more convenient for office purposes.

1595. *Mr. Trickett.*] In the original plan it appears that all the clerks in your Department and that of the Department of the Comptroller-General of Prisons will be able to look into the court-yard from the windows. I suppose you do not object to that so much as to the outside public, from whom you want to be sheltered? I perhaps laid too great a stress upon that matter when I was examined before. I only meant to convey that there were certain matters of business connected with the Department, and a certain class of visitors who came to see us, and certain occasions for the parading of police in connection with emergencies, which rendered it necessary, perhaps, that the Department should keep to itself, and not be made too public.

1596. Mr. Vernon's object in the new design is to shut off the public view on the western side. If that is carried out by means of what he calls a big, blank wall, it will, I suppose, suit you? I should think a wall of a reasonable height would answer all the purposes. Some sort of enclosure would have to be made.

1597. *Dr. Garran.*] How long have you been in your present premises? From 1865.

1598. How often during that time have you required on emergencies to concentrate an unusual number of police? I have had to make use of the yard on hundreds of occasions.

1599. But I mean for the purpose of concentrating a large number of men there for special secret service? For a large number of men very seldom, but for a force of police very frequently.

1600. I mean in cases of emergency and expected disturbances? There are all sorts of emergencies, of course, and I have frequently had from twenty to fifty men waiting in the yard. Only on few occasions have there been any very large numbers.

1601. Twenty or fifty men would be sheltered in the basement from the windows above? I do not object to the basement; I approve of it.

1602. Then apart from the open yard, Mr. Vernon has given you ample accommodation for the concentration of a moderate number of men? Both men and horses, I think.

1603. Then you will be better off in that respect than you are in the present building, because you have no covered basement there? We have a covered space in the present building.

1604. Is not that a large shed in the yard, which is overlooked by the back window? Yes.

1605. In the other case it would not be overlooked? It would be enclosed.

1606. Therefore, so far as the concentration of a moderate number of men is concerned, the new structure will be of advantage to you? Yes.

1607. When you applied to the Government to buy the premises in which you are situated, you only meant, I suppose, that they should buy the exact property you occupy? I only suggested that as the Government owns the property in Elizabeth-street it would be as well to purchase the other property if it went cheaply.

1608. It is the fact of the Government having gone beyond your wish, and bought the additional property, which has created the necessity for making a larger building with a view to utilising it? To accommodate other Departments as well.

1609. The area has outgrown what you originally applied for? For myself.

1610. And because it has so outgrown, the necessity for a larger building has cropped up? It was contemplated from the first that the building should be utilised by other Departments besides my own.

1611.

1611. You agree with Mr. Vernon that the spreading out of your offices, under the new plan, would be a daily inconvenience dearly purchased? Quite so. E.W.Fosbery. 16 Mar.,1899.
1612. I suppose that in the new building you would not have much more room than you really require? No; it is barely sufficient for our requirements; but it is much better than we have at present.
1613. There is no waste? Not a foot.
1614. You will not require to go to the floor above to borrow a room? I do not think that we shall require more room in this generation than is allotted, unless my successor is a man of very large ideas.
1615. *Mr. Shepherd.*] What is the largest number of men you are likely to require in the yard at one time? I have had 500 there.
1616. Would the yard be ample to accommodate that number? It is only right that I should say that there is not any essential necessity that there should be a large gathering of men there at all, because I could really have them in other places, as I have done before, according to the locality in which their services are likely to be required.
1617. Would a smaller space than that allotted be suitable? Yes; I should not complain if it were necessary to curtail it a little. I want room to take in about twenty horses under cover, and I should like to have room in which to put 100 men. I think the plan has been liberally dealt with by the Government Architect, and if it were curtailed I should not complain.
1618. Would it suit you if the suggestion which has been made were carried out, namely, to enlarge the building on two sides by building on arches; it would leave you the same space of yard underneath the first floor, and would, perhaps, be better for you than the proposal in the original plan? That is what the Government Architect provided for. There was to be a space on the basement for me.

TUESDAY, 21 *MARCH*, 1899.

Present:—

JOHN PERRY, Esq. (Chairman).

The Hon. Patrick Lindesay Crawford Shepherd.	William Thomas Dick, Esq.
The Hon. Andrew Garran, LL.D.	John Christian Watson, Esq.
The Hon. William Joseph Trickett.	Robert Henry Levien, Esq.

The Committee further considered the expediency of erecting Public Offices on land with frontages to Phillip and Hunter Streets, Sydney.

Walter Liberty Vernon, Government Architect, sworn, and further examined:—

1619. *Mr Levien.*] Will you tell us what would be the cost of the building similar to that presented on the plan (basement, first floor, and upper floor)? £23,332—that is, taking that portion as the base of the larger building shown in the main scheme. W.L. Vernon. 21 Mar., 1899.
1620. In giving evidence on a former occasion, you were asked the question:

> Have you an estimate of the cost of the original scheme—two storied?

Your answer was:

> The original estimate was £14,000, and that was increased to £16,000.

? That is the small-scale scheme, a plan of which was laid before the board of Departmental officers.
1621. Then that is not a similar plan to the one showing a basement and two storeys? It is the same plan; but it is a very differently constructed building altogether.
1622. The next question asked you was:

> I think you said you would not be quite positive about that?

Your answer to that was:

> I find that that is the fact. It was £14,000; but when it was intended to produce a scheme showing upper storeys, I had at once to thicken the walls, and take other precautions, which increased it by £2,000.

You were also asked the question:

> That is £16,000 for a scheme with thicker walls, as against £18,046 for the revised plan?

Your answer to that was in the affirmative;—how do you reconcile those statements? I do not recognise the £18,046 for the moment.
1623. *Mr. Watson.*] I think £18,046 was for the rejected scheme shown in the plan tinted blue, whilst £14,000 was for your original scheme? Yes, that is so; but in answering that question I had in my mind the first scheme of all. The estimate of £14,000 was for the plan which was submitted to the board of Departmental officers. I expressed a doubt as to whether this included an upper storey; but I have since referred to the papers, and I find it did include an upper storey, which, at that time—during the initial stages of the scheme—was not appropriated. It was only a matter of unofficial conversation as to whether the building could not accommodate the Comptroller-General of Prisons. Subsequently the Comptroller-General of Prisons was added, but the plan was not altered.
1624. That was not explained to us the other day; therefore, you will admit it is an important omission? I will not say it is an omission.
1625. *Dr. Garran.*] I should like to know what the plan, as presented to us in the sketch, showing a basement, a first floor, and upper floor, would cost to erect? You have put a very difficult question. I would not build a design of that kind that height, and I will give reasons why.
1626. *Mr. Levien.*] Tell us what it would cost, and you can give us what reasons you wish afterwards? Roughly speaking, it will cost £24,000 as it stands.
1627. Look at Question 1557. You were asked:

> Supposing the Committee favoured the adoption of your original scheme, to the extent of the two floors and basement, the cost would be £16,000?

Your answer to that was "Yes"? That—the plan submitted to the board of Departmental officers—is the original scheme.
1628. But that was to cost only £14,000? Yes, in 1895, when the cost of building was considerably less than it is now.

1629.

W. L. Vernon. 21 Mar., 1899.

1629. Was that ever intended to be conveyed to the Committee? It was intended to convey partly that, and partly the cost of thickening the walls.
1630. Had we that in our minds when we were considering the matter? It is impossible for me to say what is passing in the minds of the Committee.
1631. *Chairman.*] What we had under consideration was the revised scheme, and Mr. Watson put the question:

Supposing the Committee favour the adoption of your original scheme—

referring to the plan showing the basements, first floor, and upper storey—

to the extent of two floors and basement, the cost will be £16,000?——

your answer to that was in the affirmative? That—the revised plan showing basement and two storeys—is not the original scheme.
1632. You were asked the question:

If the Committee thought it advisable to provide for the Auditor-General and the Public Service Board somewhere else, at what cost could you carry out the main design to the extent of the first three floors?

Your answer was:

I think it would cost about £24,000, including accommodation for the Comptroller-General of Prisons.

What did you mean by the first three floors? Those restricted to the Inspector-General of Police and the Comptroller-General of Prisons, because the other two Departments—Auditor-General and Public Service Board—are struck out.
1633. If you were asking a question about the first three floors, how would you describe them? I should say, a basement floor, a ground floor, and a first floor.
1634. The answer to that question shows that the confusion through the application of the term "original scheme" arose subsequently? It would be wrong to build a design of the height of the revised scheme, showing a basement, first floor, and upper floor, with that enormous doorway, as it would be out of proportion to the rest of the building.
1635. *Dr. Garran.*] The £14,000 includes no interior fire-proof arrangements? No.
1636. And only one entrance and one staircase? Yes.
1637. And thinner walls? Yes.
1638. The building would in every way be of slighter construction? Yes.
1639. Would there be any stone walls for the first floor? No, not included in the £14,000 scheme.
1640. But, in what I may term the third scheme, we have all those conditions? That is so.
1641. You have a better basement, arched over for Mr. Fosbery's purposes, you have a stone wall, a fire-proof interior, two staircases, and two entrances? Yes, and ventilation apparatus.
1642. *Mr. Watson.*] If the second scheme is cut down to the two floors and basement, will there be a lift? There will only be provision for a lift then.
1643. *Chairman.*] Will you explain whether there is any difference between the accommodation you are offering the Comptroller-General of Prisons and the Inspector-General of Police in the original design, compared with the one first submitted to the Committee? Practically very little, because they both cover the same area. There is a difference with regard to the archways on the southern end, but so far as actual floor-space is concerned, there is no difference, excepting that an additional staircase is put in the second design which is not in the first design, in order to provide for the upper storeys.
1644. I think you stated that, in order to accommodate other officers, extra floors were put to the design? The design was only prepared to show the Board the effect an alteration in the building would cause. There was no other object in view.
1645. Then, I think, you were asked a question as to the extra cost involved in putting up, say, the first two floors—that is, two floors and a basement—now, and also at some future time raising the building, and I think you stated it would cost £2,000 more, inasmuch as you would have to put thicker walls into the basement? That is so.
1646. And that it would cost £14,000 for a building similar to the one shown in the original design, and that if it were intended in the future to make the building larger you would require to thicken the walls, which would cost £2,000 more, which amount would include the removal of the roof, and the substitution of a fresh one? I think I said that with the alteration of the roof, the cost would be about £2,400. I said that provision for an additional floor would cost about £2,000. That was partly owing to the thickness of the walls, and partly owing to the rise in price of material, and so on. That estimate was given in December, 1895, when the building trade in Sydney was at its very lowest.
1647. Could you put up a building now similar to the first or original sketch for £14,000? I could do it for £16,000. I could probably do it for £15,000. I have to judge as to what the rise in prices has been since 1895.
1648. Then, for £16,000 you would not design a building similar to the one under the consideration of the Committee? I could not do it for the money.
1649. You would not design a building two storeys high, with a front elevation similar to that shown on the third plan? No; I should alter the proportions very considerably.
1650. *Mr. Watson.*] Then, the position would be that a building costing £16,000 could not be afterwards raised or its accommodation increased? Not very well.
1651. For £16,000 you would put up a building which would be sufficient to carry its own weight, but which would not accommodate any additional storeys? That is so.
1652. I believe there has been some confusion about the matter;—I understood that the £14,000 required to complete the original plan—which has never been before the Committee officially—was sufficient only to build a basement and two storeys, without making provision for raising the building by means of other storeys. You have stated that the increase in the price of material since the original plan was made, accounts for the difference? And the increased thickness of the walls in case you add to the building.
1653. Do I understand, then, that the cost of the original sketch or plan, with provision for carrying up to an additional height, would be £16,000, whilst the cost of the second sketch or plan to the same height, also with provision for carrying additional storeys, would be £24,000? Yes.
1654. There is a difference of £8,000, although each building would have provision made in it for carrying an additional storey? Yes.

1655.

W. L. Vernon. 21 Mar., 1899.

1655. How do you explain that difference? By the difference in the cost of the building, and by the fireproof construction in one, and the ordinary construction in the other. There would be stone in one and brick in the other.
1656. Stone in one storey and the basement would not make a great deal of difference? It all tells.
1657. *Dr. Garran.*] There are lifts and strong-rooms in one plan and not in the other? There would be a strong-room in the other. My office estimates, which I made in the original design, I put down at 7½d. per cubic foot; but when I designed the second building, I at once put down 10½d. per cubic foot from the very basement. I was then designing a different class of building altogether; it became a building of six storeys instead of three storeys.
1658. To what height could you carry that building with safety, if the original scheme were carried out at a cost of £16,000? It should not go as high as the other.
1659. To what height should it go? I would rather leave a storey out of the original design.
1660. Do you think you could take it two additional storeys higher? Yes, by thickening the walls.
1661. I am speaking of a case in which you spent £16,000 in putting up a building in connection with which the thickness of the walls was included? Yes, in that case you could take it up another two storeys.
1662. One building you could put up for £24,000, and the other you could put up for £44,000? Yes.
1663. And if we are content with the original sketch-plan, with no intention of building upon it hereafter, you can erect the building for £14,000? Plus the difference in the cost of building material at the present moment.
1664. How much would that be? I should think £1,000.
1665. *Mr. Shepherd.*] You were asked the question:

> If the Committee thought it advisable to provide for the Auditor-General and the Public Service Board somewhere else, at what cost could you carry out the main design to the extent of the first three floors?

Your answer was:

> I think it would cost about £24,000, including accommodation for the Comptroller-General of Prisons.

That refers, I suppose, to the original plant? No; that refers to the large scheme which is before the Committee.
1666. But you say now it will cost that amount—£24,000—for three floors? The Committee have been calling it two floors and a basement—that is really three floors.
1667. *Mr. Levien.*] There is no dout that the small building, shown on the plan, can be erected for £16,000? There is no doubt of it.
1668. And the other plan submitted to us contains the same air space and accommodation? Yes.
1669. Therefore, the Comptroller-General of Prisons and the Inspector-General of Police could be accommodated there? Yes.
1670. I believe the original plan, designed for £16,000, was submitted to the Department? Yes, but only in connection with the Board meeting which dealt with the whole of the accommodation of the public offices.
1671. When was that submitted? As a matter of fact there was no one to submit it to.
1672. Was that plan prepared for the Colonial Secretary? No; that was merely an office plan to guide the Board as to where the accommodation should be placed.
1673. When you submitted that plan to the Board, was it thought that it would be sufficient for the purposes required? No, because I pointed out to the Board that I thought the land was too valuable to put a building of that description upon it.
1674. But was that plan thought sufficient for all the purposes of the Comptroller-General of Prisons and the Inspector-General of Police? That was a drawing showing what had been already estimated as the accommodation they would require by themselves.
1675. Did you think it was sufficient for those two Departments? I prepared a plan to show it was insufficient to cover the ground.
1676. At any rate you thought it was sufficient for the two Departments? The ground floor-space is sufficient for them.

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1899.

LEGISLATIVE ASSEMBLY.

NEW SOUTH WALES.

DEPARTMENT OF PUBLIC HEALTH.

(REPORT OF THE BOARD OF HEALTH FOR 1897).

Printed under No. 5 Report from Printing Committee, 29 March, 1899.

The Chief Medical Officer of the Government and President of the Board of Health to The Right Honourable the Premier and Colonial Treasurer.

Sir,

The Board of Health, though created by the Infectious Diseases Supervision Act in 1881, and incorporated by the Noxious Trades and Cattle Slaughtering Act in 1894, has never rendered any account of its proceedings. The magnitude, public interest, and importance of the business now transacted by it make it necessary for the future that it should present an Annual Report. This First Report, then, deals with the work of the Board during the year 1897. For reasons which appear in the course of it, it has neither the scope nor the form which it is expected to assume ultimately; and that being the case it may be usefully preceded by a brief account of the manner in which the Health Department was evolved, as well as of the present constitution and functions of the Department of Public Health.

2. It is necessary to mention, first, that the Department has always included two distinct branches—one directed by the Board, the other directed by the head of the Medical Department. The former has always been in the Department of the Minister at the Treasury; the latter in that of the Chief Secretary. The functions of the Board have always been administrative and executive, under several Statutes; but those of the Medical Department, though in relation to a variety of Acts, are not performed directly under any Act. The duties and powers of the Board have gradually increased from its first appointment; those of the Medical Department have remained very much what they always have been, the volume alone of its work having increased with time.

3. These two branches were always under the same official head. Down to the middle of 1896 the successive holders of this office had been the Hon. Dr. C. K. Mackellar (1882-1885), the Hon. Dr. H. N. MacLaurin (1885–1889), the Inspector-General of the Insane, Dr. F. Norton Manning (1889–1892), and the Professor of Physiology in the University of Sydney, Dr. T. P. Anderson Stuart (1893–1896). But at the time mentioned a Civil Servant was appointed, with the rank of Permanent Head of Department. The following table shows as fully as possible the nature of the business transacted by these two branches at beginning of the year 1897:—

TABLE I.

To June, 1896 ...	President of the Board of Health. Medical Adviser to the Government. Health Officer.	
From June, 1896 ...	Chief Medical Officer of the Government President of the Board of Health. Health Officer.	Permanent Head of Department.

A.

Minister: The Treasurer.

THE BOARD OF HEALTH.

Administers—
- Dairies Supervision Act, 1886.
- Noxious Trades and Cattle Slaughtering Act, 1894.
- Public Health Act, 1896.

Executes—
- Quarantine Acts.
- Abattoir Act, 1850.
- Infectious Disease (Small-pox) Supervision Act, 1881.
- Leprosy Act, 1890.
- Diseased Animals and Meat Act, 1892.

Miscellaneous—
- Advice to Minister on matters referred.

Establishments—
- Quarantine Stations, Sydney and Newcastle.
- Glebe Island Abattoir.
- The Lazaret (Coast Hospital).
- Microbiological and Pathological Laboratories.

*B.**

Minister: The Chief Secretary.

MEDICAL DEPARTMENT.

Examination of candidates for admission to Public Service.
Examination of public servants for retirement on ground of ill-health.
Vote for relief of the Destitute Sick.
Police Surgeoncy—
- The Gaol Medical Service.
- Government Medical Officers.
- Medical Police work.
- Medical care of Aborigines.

Public Vaccination—
- Public Vaccinators.

Analytical Branch—
- The Government Analyst.

Accountancy—
- Payment of all Medical witnesses' fees—
  - Coroners' Courts.
  - Police Courts.
  - Lunacy.
- Regulation and payment of fees for casual medical relief rendered through the Police.
- Payment of salaries to medical men employed partly or wholly in the Government service.
- Regulation and payment of casual medical and nursing relief in country places—epidemics, &c.

Miscellaneous—
- Payment of all other medical fees.
- Advice on matters referred by Ministers.
- Advice touching management, &c., of subsidised country hospitals.

Establishments—
- Chemical Laboratory.
- Coast Hospital.
- Hospital Admission Depôt.

*No further reference to the work of this branch is contained in the present Report.

4. It will be seen on perusing the table that the occupations of the Board and of the Medical Department differ widely in some respects. In other respects they are cognate, though rather in the practical detail of executive work than in a manner easy to describe briefly; in some others still they actually overlap; while, lastly, the division of subjects under the two Ministerial heads seems to be arbitrary rather than rational. It is clear, for example, that public vaccination should be a concern of the Board; and, while the Analytical Branch is under direction of the Chief Secretary, its head, the Government Analyst, is, by the Public Health Act, an officer of the Board.

5. At the beginning the Health Department was installed in a large private house in Macquarie-street. This it shared at one time with a branch office of the Department of Public Instruction, and at another time with the Parliamentary Draftsman; but in 1889 the whole house was occupied by it. In 1893 its attics were adapted to accommodate a pathological and bacteriological laboratory. In 1895 it neither furnished room enough for the staff any longer, nor room arranged so as to suit the punctual transaction of business, nor accommodation of the kind requisite to a Health Department conducted and equipped on modern lines; moreover, it never had been able to house certain branches with which it was necessary to maintain constant communication—the Analytical Branch, for instance, and the Hospital Admission Depôt. Under these circumstances you gave instructions towards the end of 1895 for erection of a new building on a plot of land already for many years allocated to the use of the Department, and occupied by the temporary building which served the Government Analyst for a laboratory.

6. These premises were erected, and began to be occupied by the Department of Public Health, although they were not quite completed, on 1st October, 1897. The building is constructed of red brick with freestone dressings, and covers an area of 60 by 66 feet. It has three storeys and a basement, and, as it stands on a rather steep slope, the ground-floor is raised slightly above Macquarie-street, by which it is bounded to the east, while the basement opens at the ground level at the rear. The ground floor affords accommodation for a large public office, the Board-room, and separate rooms for the various branches of clerical work, for notification of infectious diseases, and for the permanent Head of the Department. The first floor is almost entirely occupied by the Analytical Branch, one room only being devoted to use of the Veterinary Staff. The second floor is entirely occupied by the Micro-biological and Pathological Laboratories. The basement which, as already explained, is partly below the ground level in front, furnishes on that side store-rooms, and a room containing a crematory furnace and accommodation for certain rough work occasionally necessary in connection with the laboratories. In its other part it gives accommodation to the Hospital Admission Depôt and the Public Vaccination Station (which are in the Department of the Chief Secretary). These rooms open on a large yard, in which hospital ambulances can wait. The laboratories were not completed during the year, and they remained unoccupied. The building is lighted with gas, but power will be supplied to the laboratories by electric motors. In addition to the accommodation mentioned, quarters for a resident secretary have been contrived in one angle of the structure. Telephonic communication between the several rooms is provided, while externally the outlying establishments controlled from the Department, as well as the general telephone system, are similarly connected with it. The Board desire to acknowledge here the excellent construction, handsome proportions, and adaptation to special purposes which have been attained under direction and supervision of the Government Architect (Mr. W. L. Vernon) in this building.

7. There are now no other means of indicating the manner in which the usefulness of this Department gradually increased than is furnished by the recorded number of registered documents which were dealt with, and the number of meetings held by the Board in successive years. The former increased from 1,511 in 1883 to 12,014 in 1897; the latter increased as shown below:—

TABLE II.

Year.	No. of meetings of Board.	No. of registered papers.
1882	32	.....
1883	9	1,511
1884	9	4,002
1885	25	5,220
1886	20	6,489
1887	44	7,263
1888	36	5,528
1889	41	6,417
1890	42	6,745
1891	50	7,141
1892	48	9,258
1893	47	9,116
1894	44	10,536
1895	51	11,425
1896	48	10,754
1897	51	12,014

The progressive importance and scope of the work thus indicated at successive dates may be inferred from Table 1 A, and from a long series of annual reports on certain sub-branches, and of Parliamentary reports on special topics, to which no further allusion can be made here.

8. All the special provision for care of the public health which had been made down to the beginning of 1895 lay in the Acts named in Table 1 A; other provision being of a general character and contained in the City of Sydney Corporation, City of Sydney Improvement (Building), the Municipalities, the Nuisances Prevention, and the Police in Towns Acts. You then perceived that the time had come when something further must be done to extend and define the powers and duties of municipal authorities in relation to public health matters, to bring unincorporated areas under some definite and legal control in the same connection, to organise the various bodies which theretofore had been almost independent health authorities each within its own sphere, and to co-ordinate the whole under effectual direction of the central Board. Accordingly, towards the end of 1895, instructions were given for preparation of a Public Health Act which was introduced during the ensuing year; it received assent in November, 1896, and it took effect on and from 1st January, 1897.

9. This measure enacted much new matter on a variety of topics. As regards administration, it brought the whole of the country under local Authorities which, within municipal districts, were the municipal councils, and in unincorporated districts such officers of police as might be appointed by the Board. It enjoined local authorities to execute its provisions; and it gave the Board power to regulate, examine, direct, and control the operations of those bodies or persons. It provided funds to defray expenses incurred by local Authorities in carrying out the Act as follows:—Within municipal districts from municipal funds as to one moiety, and from the Consolidated Revenue as to the other; and in police districts wholly from the Consolidated Revenue.

10. The Act, as a whole, is a measure which provides for administration on broad lines. Even the new matter contained in it is framed with a view to local Authorities taking the initiative in executing it; and hence, with few exceptions, its effects are not likely to be fully felt until after a lapse of time during which those authorities will have become accustomed to it, and shall have learned to discharge the duties devolved upon them by it. Thus, it consists of ninety-two sections, which may be analysed from the present point of view as follows:—Sections 1 to 18 and 77 to 92 are almost purely administrative; sections 35 to 47 are executive as regards local Authorities, almost entirely administrative as regards the Board; 48 to 50 are executive as regards the Board; 51 to 70 (being the Adulteration Part) are capable of being executed by a variety of persons, though in the main designed to be executed by local Authorities; 71 to 76 amend the Dairies Supervision and Cattle-Slaughtering Acts, and consequently are administrative as regards the Board, whose powers in respect of those two Acts are extended or adjusted as the case may be. Remain sections 20 to 34, which deal with the notification and prevention of infectious diseases. These, though executive as regards local Authorities, require a much more minute and close direction by the Board than any others, and, in a sense, are even executive as regards it as well. An Act having such features will prove, and has already shown itself, to be of great practical, and of high educational value. It represents, and well represents, a stage in intelligent care for the public health through which every people has, or at some time or other has had, to pass; but necessarily it does not give scope for many striking executive innovations. It is inevitable that this should be so, though not apparent, perhaps, to those who have not given special attention to domestic legislation. In short, while it is commonly known that scarcely any other branch of such legislation gives occasion for more frequently repeated amendment than that which deals with the public health, it is less well known that the necessity for it arises, not in extension of scientific knowledge nor in defects discovered in the earlier enactments, but in the need there is to await the progress of popular education on a subject which nearly touches individual freedom of action and the family life.

11. The Act also reconstituted the Board of Health. This body, called into existence under pressure of an outbreak of smallpox, originally consisted of the Mayor of Sydney, the Under Secretary for Finance and Trade, the Inspector-General of Police, the Health Officer, the Government Architect, and Sir Alfred Roberts, M.R.C.S. In this order the members were mentioned in the Executive Minute of appointment. In succeeding years the number of members gradually increased to eleven, mainly by addition of medical men, but also by appointment of three additional lay members, namely, the Principal Under Secretary (Mr. Critchett Walker, C.M.G.), Mr. E. W. Knox, and the late Hon. Sir William Macleay. The Public Health Act provided that on the day when it took effect the members of the old Board

Board (except the President) should vacate their seats; and that the new Board should consist of not less than seven nor more than ten members (including the President), of whom four should be legally qualified medical practitioners. Four members of the Board were to constitute a quorum.

12. The six gentlemen named in the list below were accordingly appointed to be members of the new Board. An asterisk indicates those who had seats on the old Board, and a dagger those who have occupied the chair. The first meeting took place on 5th January, 1897, and the attendance of members at the total number of meetings held during the year is shown in the following table:—

TABLE III.

Members.	Meetings attended.	No. of Meetings held.
†* Dr. Ashburton Thompson (President)	51	51
* Edmund Fosbery, Esq.	51	
†* The Hon. Dr. MacLaurin	51	
* Edward W. Knox, Esq.	44‡	
†* Professor Anderson Stuart	20‡	
Dr. William Henry Goode	51	
James Powell, Esq.	44§	

‡ Absent abroad during part of the year. § Absent on other official duty.

13. The duty of the Board during 1897 was, first, to continue to administer the Acts with which it had previously been charged, and to continue to transact the incidental business to which some reference has already been made; and, secondly and additionally, to organise and introduce the administration of the new Act, which, while it consisted of many parts each of which might be regarded as an Act by itself, was also in many of its administrative provisions entirely new to the bodies who were created local Authorities under it, and to the people they served. This was a task of some delicacy; but it had to be borne in mind also that it was one of very great importance, capable of far-reaching consequences for good or ill to the future public health administration of the country. The Board entered on these undertakings with a full sense of its responsibilities; it decided to lay the requisite foundations with care and due forethought.

14. At this critical period, when its responsibilites and administrative work were increased threefold, the Department was placed at a serious disadvantage owing to the reorganisation of the Civil Service which was then in progress. It was unavoidable, doubtless, and it is not worth while to enter into detail concerning it. The important facts are that, whereas there had been at service of the Department three professional and (in their respective capacities) directorial officers, namely, the President of the Board and Medical Adviser to the Government, the Chief Medical Inspector, and the Pathologist and Micro-biologist, during the whole of the year now reported upon the sole official attached to it capable of exercising such directorial functions was its official permanent head, the Chief Medical Officer of the Government and President of the Board.

PUBLIC HEALTH ACT, 1896.

15. *Application of the Act, section* 2 (ii).—The Act applied from its inception to the whole country; but it was necessary that rivers, harbours, and other waters should be allocated to districts, so that they might be under jurisdiction of the local Authorities having charge of such districts. This was done by placing such waters under jurisdiction of one or other police local authority whose districts they adjoined.

16. *Appointment of Local Authorities, section* 9 (*b*).—Municipal Councils were appointed to be local Authorities within municipalities by the Act; but extra-municipal lands were to be placed under such officers of police as the Board might appoint. In this matter the Board acted with concurrence of its member, Mr. Edmund Fosbery (Inspector-General of Police), whose presence is essential to execution of the Acts, and whose officers, both in this and many other important relations, have always rendered both the Board and the Health Department in general most important executive help, without which, indeed, its work could not at any time have been successfully carried on. After much consideration eighty-five officers of police of various grades were appointed to be local Authorities to execute the Act in the eighty-five police districts into which the country was then divided.

And of Sanitary Inspectors, section 11.—But these districts had usually a very wide area, over which it was impossible for any local Authority to exercise the necessary supervision without assistance. Accordingly, police local Authorities were requested to nominate as many sanitary inspectors to execute the Act in distant parts of their district as seemed necessary. 289 such sanitary inspectors (being subordinate police officers) were nominated and appointed by police local Authorities, with the advice and concurrence of the Inspector-General of Police.

17. *Appointment of Medical Officers of Health, section* 10.—The desirability of taking advantage of the power to appoint legally qualified medical practitioners to be Medical Officers of Health in the various districts into which the country was now divided for purposes of sanitary administration was, of course, recognised. The districts, their area, and population, were tabulated, and after prolonged consideration the name of some medical man was attached to each, who would have been considered suitable for appointment if, on being approached, he should consent to act. The next step was to consider what salary should be attached to the post, proportionate to the population and presumed needs of different districts. It was thought that no such salary should be less than £50 a year, while many must much exceed that sum; but there were 176 municipal and 85 police districts to be provided for, and the annual cost of this staff, it was perceived, would amount to not much below £12,000 or £14,000 a year. It therefore fell to be considered whether, at that early stage, there was prospect of reaping a practical return adequate to so large an expenditure, and it was decided that, on the whole, it would be more prudent and more profitable to begin in some other way. The section now referred to gave power to appoint these officers to individual districts "or groups of districts," and it was thought that advantage might be taken of this provision. But at first it did not seem that the difficulty could thus be overcome. Grouping of

districts

districts could be carried out, it appeared, only in the more populous areas—in short, only in the metropolitan and Hunter River districts; for elsewhere population was too scattered, and distances between populous centres too wide to allow of more than one being placed under care of a medical officer of health who, under the necessities of the case, must also be actively engaged in the general practice of his profession. This point having been reached, the next step was not difficult. It was decided that the best way of beginning would be to appoint to each of the last mentioned districts a medical officer of health whose whole time should be given up to discharge of his duties under the various local Authorities comprised in it. This plan was accordingly submitted to you, and you approved it. It is well to point out here with reference to tenure of these officers, that while they are municipal officers and not Civil Servants, they will be appointed by you, and will be paid from Consolidated Revenue. (P. H. A., sec. 77.)

18. *Legal forms, &c.*—Notwithstanding the care which had been bestowed on its preparation, the Act turned out to be difficult of interpretation in some respects; and at all events there were many and various proceedings which might be taken under it, as well as many directions to be given to local Authorities for their guidance in executing it, which it was desirable to arrange briefly in legal form for current reference and use. Twenty-one of such forms, authorities, advertisements, &c., were drafted, and, after being perused by the Crown Solicitor, were adopted. (*Appendix* A.)

19. *Notification of Infectious Diseases, Part III, sections* 20 *to* 34.—It has already been mentioned that the Act came into force over the whole country from 1st January, 1897; but the part now under notice was an incidental exception, since it gave power to proclaim any disease an infectious disease, and could not take effect until some disease had been so proclaimed. Apart from any objection there might be to naming particular diseases in the Act itself, this arrangement was premeditated. It was foreseen that while it might be very easy to obtain reports of cases—nothing more being necessary to that than a declaration of what were infectious diseases (for the method in which reports were to be sent to local Authorities was sufficiently prescribed by section 21 of the Act itself), yet it would be a matter requiring much labour and thought, and repeated critical revision, to organise such reporting so that the resultant information might be available for practical purposes; and so that the necessarily elaborate scheme, in working which more than 261 local Authorities, as well as the medical profession and the public in general were to share, might perform its functions smoothly and completely from the beginning. Nothing is more damaging to the success of such schemes than their commencement on lines which speedily require revision and alteration; confusion, and loss of confidence promptly result, and they are inevitably followed first by irregularity and then by grave deficiency in the returns. This business, also, accordingly occupied much time. In the first place the Board had to decide which of the long list of communicable maladies met with in this country should be proclaimed to be infectious diseases within the meaning of the Act. It was thought best to begin with a short list, to which additions might subsequently be made; and diphtheria and membranous croup, typhoid or enteric fever, and scarlet fever, were decided upon. In designing the machinery the objects kept in view were the following: To record medically certified cases alone; to secure prompt notification to local Authorities; to cause local Authorities to record it, and then to promptly transmit the information to the central bureau; there to distribute all cases to the districts to which they rightly belonged; and, once a fortnight, to show on a diagrammatic map how many cases of each disease had occurred in each police district and in each municipal district within it, and the deaths which had been thus caused. In order to attain these objects it was necessary to make certain regulations under section 83, and to prescribe forms of register, procedure, instructions, &c., &c. This was successfully completed before the end of the year, and the necessary *Gazette* notices were so published that Part III of the Act could take effect from January 1st of the ensuing year. (*Appendix* B.)

20. *Common Lodging-houses* (Part IV).—The Board's advice and intervention had often been asked in former years by persons who lodged in this class of house, by ratepayers who thought the state of certain such houses in their neighbourhood was likely to cause occurrences of infectious diseases, and occasionally by municipal councils which found their powers of regulating such houses insufficient. It therefore seemed important to frame a set of model By-laws at as early a date as possible, and to design a scheme of registration for such houses. This was done, and, after the By-laws had been approved by the Attorney-General as By-laws which might be made under the Part now referred to, a copy was sent to every local Authority in the country, with an invitation to all which it might concern to adopt them. The local Authority for the district of Paddington alone took advantage of this opportunity during the year. (*Appendix* C.)

21. *Sanitary Areas, Section* 48.—One object of proclamation of municipal districts to be sanitary areas under this section is to give local Authorities power to abolish cesspits, and powers relating to more thorough collection and safer disposal of nightsoil than they have under the Nuisances Prevention Act. Another object, when the area proclaimed is outside a municipal, and therefore within a police, district, is to enable the local Authority to establish some system of scavenging nightsoil, which, on such areas, is usually entirely wanting at present. Seven municipal districts were so proclaimed during the year on request of their Authorities, namely, those of—

Goulburn	26th March,	1897
Waratah	"	1897
Tumut	4th August,	1897
Newcastle	17th "	1897
Raymond Terrace	28th October,	1897
Dubbo	2nd November,	1897
Greta	14th December,	1897

22. *Unwholesome or Adulterated Food and Drugs, Sections* 51-70.—This Part VIII of the Act is so designed that it can be executed either by any purchaser, or by any officer appointed to take samples by the Board, or by a local Authority, by any inspector of weights and measures, or by any officer of police authorised by the Inspector-General of Police. It gives the Board power to establish standards of strength or purity for articles of general consumption; and power to appoint persons to be analysts within the meaning of the Act, such appointment conferring on such persons the privilege of testifying before a magistrate by certificate, all others being obliged to put in a personal appearance. Seven gentlemen were accordingly appointed and gazetted. (*Appendix* D.) Standards of strength and purity were fixed

after

after consultation with members of the trades affected for five articles of common consumption; and, after due consideration, it was decided not to fix any standard for flour. (*Appendix* E.) These standards were recommended to you for publication in the *Gazette*. They were first of all made known in an informal way. Deputations from the wholesale and retail milk trade, and from the Licensed Victuallers' Association, waited upon you subsequently. During the year the proposed standard for milk was gazetted. Such standards will, no doubt, prove useful; but from the relation in which the section which gives power to fix them stands to the rest of this Part and to the Act, no prosecution would lie which was based on failure of the article in question to comply with the standard for it, and, in fact, they can merely furnish indications of the composition which articles should have in opinion of the Board, by which magistrates may guide their decisions if they choose.

23. There seems to be no doubt that the adulteration part of the Act was designed to be chiefly executed by local Authorities within their respective districts. Its provisions were in many important respects taken from English Acts, and were for the most part introduced in Committee; but they were modified in some others by reference to the Draft Bill proposed by the Society of Public Analysts. The designed method of executing it was consequently that suited to the conditions of England, and is, perhaps, not exactly suited to the conditions of this country. The Board's experience during the year has resulted in an opinion that while there is a very general desire, both among the public as a whole, and also among the commercial section of the public, that its provisions should be strictly enforced and, if enforced, that it would be very largely beneficial not only to the public, as retail purchasers, but to various traders as manufacturers and importers, there is also a strong and general conviction that it should be systematically executed by the Board. No instance has come to notice in which advantage has been taken of the Part to institute proceedings by any local Authority, nor, it need scarcely be added, by any private purchaser. As regards local Authorities such action scarcely could be taken by them except in the metropolitan area within which alone are competent food analysts to be found; while the expense of systematic analysis of numbers of samples, a few of which alone would furnish evidence necessitating prosecution, and the expenses of prosecuting in country districts under the circumstances just referred to, make it little likely that this matter will be taken up by them. The Board was pressed to undertake this business by deputations of commercial men, and by individual traders, many times during the year; and it did cause fifty-five samples of articles to be taken by its officers, and it caused proceedings to be taken in eight cases, which resulted in convictions being obtained in all. (*Appendix* F).

24. Upon the whole the Board has concluded that it is desirable and necessary that provision should be made for the systematic inspection of the food supply by its own officers, and that there is no present prospect that any tangible benefit will result from this part of the Act under any other arrangement; but to do this it will be necessary to substantially increase the staff. The Government Analyst's duties include a variety of subjects. It is enough to say that he performs all those analyses which are necessary in connection with the public stores and contracts, and with many criminal cases, as well as the gradually increasing number which are more strictly connected with the public health. It would be necessary to appoint a second Government Analyst, whose chief concern should be the analysis of foods and drugs, as well as two or three other minor assistants. The value of the work which might be done, and which it is on all hands admitted should be done, would very soon become apparent; and it is possible that the fines inflicted might amount to a sum which would go far to counterbalance the expenses. A summary of the work done by the Government Analyst during the year will be found in *Appendix* G.

QUARANTINE ACTS.

Port Health Officer, Sydney—Dr. W. Peirce.
Port Health Officer, Newcastle—Dr. G. E. Miles.

25. All vessels arriving from ports outside Australasia were boarded between sunrise and sunset and inspected in detail, all persons on board included; except such vessels as had already received pratique at an Australian port, and had not on arrival, nor within fourteen days before arrival had had, any case of infectious disease on board. Against ports in certain parts of the world proclamations were in force, and vessels arriving thence were inspected with especial care, and detained for a few hours while being cleansed, &c. The proclaimed ports were "China, Hongkong and other ports and places in the East," and "ports or places on the east coast of Africa between and including Delagoa Bay and the northern boundary of Natal." Practically all such vessels were treated in the same way. If they arrived from cholera-infected ports, drinking water was discharged and the tanks lime-washed, bilge-water pumped out, ballast discharged at sea, and a general cleansing of the vessel was done, together with disinfection of such special parts as seemed to the Port Health Officer to require it. If they arrived from ports where malaria or yellow fever existed, then, in addition to the above measures, masters were obliged to discharge ballast and send it to sea. In all such cases the log was scrutinised, and the general history of the voyage specially inquired into; and in the case of clean ships arriving from ports where small-pox or plague was prevalent, these latter steps constituted all that it seemed necessary to do as a rule.

26. Under these circumstances the following number of vessels alone fell under routine inspection, all Australian shipping, and all foreign shipping for which Sydney and Newcastle were secondary ports of call in Australia being excepted:—

TABLE IV.

	No. of Vessels.	No. of Passengers carried.	No. of Crew carried.	No. of Vessels detained for special action.
Port Jackson	392	3,914	18,828	87
Newcastle	151	131	3,571	33
Total	543	4,045	22,399	120

27. *Small-pox.*—Two vessels were quarantined for small-pox during the year:—

S.S. "Nineveh," Aberdeen White Star line, arrived at Melbourne from the Cape direct, carrying a person suffering from small-pox. Two others of those taken to the quarantine station in Hobson's Bay afterwards developed the disease. Pratique had been given before the presence of the disease was discovered, and efforts to arrest the dispersed passengers were unsuccessful as regards thirty-two of them. The vessel arrived at Sydney, her terminal port, on 13th February, carrying crew, 60; passengers, 31; all well. She was cleansed and disinfected, and, with her cargo, handed over to the agents for unloading at the quays in ninety-two hours. No further case occurred. It was necessary to detain only nine of the quarantined persons for the full term of twenty-one days, being persons who either declined revaccination or in whose cases revaccination had failed.

S.S. "Himalaya," Peninsular and Oriental Company, having already landed some passengers at Albany, Western Australia, arrived at Adelaide carrying a bedroom steward suffering from small-pox; no further case occurred among passengers, &c., landed in quarantine at Adelaide and Melbourne. The vessel arrived at Sydney, her terminal port, on 23rd April, carrying crew, 268; passengers, 61; all well. She was disinfected, cleansed, and handed over to the agents as above in ninety-eight hours (twenty-four hours having been lost owing to the unusual violence of a gale, which rendered it unsafe for so large a vessel to take the course necessary after entering the harbour to reach quarantine waters). No further case occurred. It was necessary to detain only ninety-nine of the persons quarantined for the full term of twenty-one days.

28. In the case of this disease the routine as regards detention and release is as follows:—Persons who have been successfully revaccinated during the voyage are released fifteen days from the date of successful revaccination under all circumstances; persons who have been successfully revaccinated at some earlier date may be released after disinfection of their effects, provided they show objective evidence (redness, &c., of cicatrices) that the revaccination had really been done within six months at furthest. Persons in whom revaccination fails, and those who decline it, are detained for twenty-one days from the day of leaving the ship, unless a fresh case occurs. In that case they may or may not be compelled to begin a fresh term of detention of twenty-one days, according to the circumstances under which they are lodged in relation to the new case. Every case of illness occurring at quarantine is instantly isolated, unless it be of kinds which obviously have no possible connection with small-pox.

THE MARITIME QUARANTINE STATION, PORT JACKSON.

Superintendent of Quarantine, James Vincent.

29. At the beginning of this financial year a sum of £1,000 was appropriated for improvement of the sewerage. It remained unexpended for the following reason: it had been proposed merely to improve and extend the existing methods, which were, collection of excreta in pails and disposal of slop-waters in part in the sea and in part on land. For this plan there is much to be said, more especially in connection with possible occurrence of cholera, when it would be necessary to collect excreta and to disinfect them or to destroy them by fire, unless some safe outlet to the sea were at command. Such an outlet could be found, but to reach it would necessitate a long tunnel through the rock, for which work the sum mentioned of course would not nearly suffice. The increasing size of steam-vessels, and the proportionately larger number of persons carried in them, as well as the increasing liability to imported disease which speedier passages involve, caused it to appear that the time was come when the size of the station must be materially increased, and when, consequently, a proper system of sewers safely discharging as above mentioned must be laid down. In the meantime it was decided that the existing plans of conservancy and disposal would serve for another year as they had served during the previous ten or twelve years; the appropriation referred to was consequently set aside until the larger sum necessary to complete the required work should be made available. This, it is hoped, will be the case during the ensuing year, when some extensions of the passenger accommodation must also be made. It is also urgently necessary that the ground and buildings should be to some extent still further subdivided, some difficulty having arisen during 1896 in providing separately for three companies of persons who were all isolated for small-pox, but who had ceased to be exposed to infection on three slightly different dates.

30. During 1896 attention had also been drawn to certain matters relating to the boundary fence on the land side, and it had been proposed that the line followed by it should be altered for reasons attaching to its security; and also that a rubble-wall, 7 or 8 feet high and provided with a few watch-towers, should be substituted for it. The altered line is very much to be desired and even necessary. The altered construction of the fence would greatly relieve the permanent staff and the police patrol outside the boundary.

31. Towards the latter end of the year the several Quarantine Acts were arranged in a consolidating statute and, in that form, re-enacted. This was a most useful and important improvement in laws which, in part from their number and in part from the ancient form of some of them, were extremely difficult to understand and interpret.

ADMINISTRATION OF MARITIME QUARANTINE AT NEWCASTLE.

32. The conduct of quarantine at this port has been satisfactory, but done under serious difficulties which have repeatedly had attention. The chief of them is physical. The port is just within the mouth of the Hunter River. The expanse of water apparently available to shipping is very large on the map; but on the chart it is seen to be limited to certain channels where alone there is deep water and, in fact, is very small. In short, this port furnishes no area of water which could be set aside for quarantine purposes without seriously interfering with the trade and local traffic of the port. Under these circumstances it was thought that a station might be established at some neighbouring part of the coast-line where, indeed, suitable spots at no great distance could be found. But the mouth of the river is extremely exposed towards those quarters whence foul weather is experienced; and although a considerable number of steam vessels enter to load coal, and others to take coal for their own use, still

these

these for the most part are not the ships from which danger is to be apprehended, because they have already entered at Sydney or some other Australian port; while the vessels from which there is danger are almost entirely sailing vessels which arrive direct. Now it is not until a vessel has entered and been boarded that the need for quarantining or cleansing her becomes known; and while a steamship might without danger usually be turned round and sent to some adjacent spot on the coast for detention, it is considered that sailing vessels would as a rule be unable to do this at the time when it would be most necessary they should do it (that is, immediately after their arrival), but would very often indeed be prevented by the weather for days together.

33. These being the physical necessities of the case, vessels which anchor in the stream for boarding are compelled to remain there for quarantine. Even as regards traffic this course is not without inconvenience, while as regards isolation it is not satisfactory. But the case is accidentally mitigated by the circumstance that the largest sailing vessels to be dealt with seldom carry more than from twenty-two to thirty hands; and in point of fact no such vessel required detention for longer than was necessary to disinfect and cleanse her. During 1896, however, vessels did arrive whose companies it was necessary to isolate at quarantine; and other such vessels must from time to time be expected. The course actually taken in those cases was to transfer the persons detained to a vessel chartered for the purpose which, as soon as the weather rendered it possible, was towed to Port Jackson, a distance by sea of 70 miles only; the infected vessels being cleansed and disinfected at their anchorage in the stream, about which there is (in the case of sailing vessels or empty steam vessels) no great difficulty and no danger.

34. After protracted consideration it was decided that all that was necessary for the present, and all, in any case, that circumstances permitted, was to establish a land station at some suitable point on the shores of the river, whither infected persons might be removed from their ships. Such a place has for some years been reserved on the Stockton side; but it exists as a reserve merely, and is neither enclosed nor furnished with any of the necessary buildings. The reason for this is, perhaps, that while suitable in most respects, there is one very serious objection to it, namely, that close to the shore a high road runs at this point, which must be crossed by persons landing there before the quarantine reserve could be reached. This objection might be sufficiently removed by furnishing a tunnel or subway between the wharf, which would have to be erected, and the reserve itself. The plan thus indicated seems to be the only one which circumstances permit, and it should be carried out without further delay, against the probable contingency of recurrence of the difficulties met with in 1896. But there is another reason why it should be carried out: this is, that if small-pox occurred at Newcastle—an event always to be apprehended by an unvaccinated community, though hitherto it has not happened—there are at present no means at all of isolating small-pox cases in that district, and without such means an epidemic of small-pox scarcely could be successfully managed. It is true that by very great exertion and with a very free command of money, such an epidemic might be controlled by house-to-house vaccination, but for this to be effectual alone some law of compulsory vaccination and revaccination would be necessary. No such law exists, however, and consequently, isolation of patients and their families, aided or supplemented by voluntary vaccination, would be the only resource. Under all these circumstances—the need of a quarantine station to which the crews of infected ships might be removed, and the need for prudently providing against a calamity which, as universal experience teaches, is to be greatly feared by every unvaccinated community—it is now strongly recommended that the quarantine reserve at Stockton should be put in a condition to serve its intended use, unless some other site entirely free from objections can be found.

35. Supposing, however, this station were established and ready for use, yet it properly stands on the far side of the river, and remote from thickly inhabited neighbourhoods. Consequently, almost all the shore cases to be dealt with would have to cross the river, and to cross it by water. This being so, it is indispensable that a small depôt should be established on the hither or populous side, where there should be room for two or more ambulances, a steam-disinfecting plant, and a caretaker's cottage, together with a wharf for embarkation. At beginning of the year inquiry for a suitable site for such a depôt was made, and the President having visited a point at which it might be safely established, in company with the District Engineer for Harbours and Rivers, it was decided that an area which would consist in part of existing land and in part of reclaimed land would serve, if it could be allocated to this purpose. This scheme was recommended to you, and you approved of it as regards site, but it has not been possible to do anything further in the matter, because the reclamation has not yet been completed. The uses of this depôt would ultimately be the following: the quarantine staff would reside there, and thence would leave by boat to board ships; the disinfector would serve the neighbouring municipalities in connection with Part III of the Public Health Act; the ambulances at the stables could in part be utilised for removal of ordinary cases of infectious disease to the Infectious Diseases Hospital which will at some early date be seen to be necessary, or to existing hospitals. In case of epidemic small-pox, however, the whole establishment would be devoted to that disease alone, with which, it is known from experience, it would be entirely occupied. It will be seen from what has now been said that (*a*) this district is entirely unprepared to deal successfully with any serious outbreak of disease and (*b*) that establishment of the depôt lastmentioned is an essential preparatory step as regards any landward epidemic, which, also, would be of immediate and essential service in connection with sea-borne disease.

TABLE V.

36. The following were the prosecutions directed by the Board to be undertaken during the year:—

Name.	Offence.	Result of Prosecution.
Hughes, Richard	Boarding of barque "Sumatra" before pratique granted ...	Fined £10, with £5 7s. 6d. costs.
Evans, John	" " "Cambronne"	" 5s., with 10s. 6d. costs.
Trelevan, Chas.	" " "Cambronne"	" 5s., " 10s. 6d. "
Godfrey, Oliver	" " "Cambronne"	" 5s., " 10s. 6d. "
Farrell, Thos.....	" " "Cromdale"	" £10, with 8s. 4d. "

INFECTIOUS DISEASES SUPERVISION ACT (SMALL-POX), 1881.

37. Only three cases were reported under this Act during the year as being reasonably suspected to be small-pox. They occurred in the following places:—

Wagga Wagga,
George-street Asylum for the Infirm and Destitute, Parramatta.
North Sydney.

All of them turned out on investigation to be cases of chicken-pox.

DAIRIES SUPERVISION ACT, 1886.

(Amended by Public Health Act, 1896, Part IX, Section 71–4.)

Veterinary Staff.

Chief Inspector	Mr. E. Stanley, F.R.C.V.S.
2nd „	Mr. S. T. D. Symons, M.R.C.V.S.
3rd „	Mr. F. W. Melhuish, M.R.C.V.S.
4th „	Mr. H. Bowker, M.R.C.V.S.

38. This Act, which contemplated milk only, was amended by the Public Health Act so as to extend its provisions to cream, butter, and cheese, with the proviso that persons not engaged in the manufacture of butter and cheese (but merely selling them) should be excepted. It was also provided that registrations should lapse on December 31st of every year, and should be renewed annually.

39. The annual lapsing of registrations had been introduced in the Public Health Bill in connection with a proposal that local Authorities should be empowered to charge some small fee for registration; but this was opposed in Committee, on the ground that the smallest fee would press heavily on dairy farmers, and was rejected. Local Authorities throughout the country have, nevertheless, asked for this power almost from the time the Act came into force, eleven years ago; the fact being that it threw extra work on their officers, to whom, for want of funds, they felt unable to grant any extra remuneration for this additional duty. The consequence has been that local Authorities as a body, and with some, though few, exceptions, have not executed the Act with the desired diligence, and the Act itself has not taken quite the full effect it should have taken. It is difficult to believe that a fee of (say) 10s. a year would be felt by any cow-keeper.

40. The Act has effect only in districts within which it has been proclaimed. During the year it was extended to twelve new districts. The total number of such districts is now 220, and includes all that part of the country in which dairying is carried on—almost the whole of the coast-country from north to south, as well as nearly all populous districts elsewhere, in which, speaking generally, milk is merely retailed for household use.

41. The proclaimed part of the country was mapped and divided for administrative purposes during the year into sixteen administrative districts; all of them, with the exception of Balranald, contain sub-districts under both municipal and police local Authorities.

42. The number of such districts visited and inspected by the Board's officers during the year was eighty. The number of dairy premises contained therein was approximately 3,297; the number of cattle attached to them was just below 61,000. Both premises and cattle were inspected, and 420 of the latter were condemned for various diseases, chiefly tuberculosis. Local supervision was classed as "fair" in a majority of cases, the scheme of classification including the grades "efficient, fair, inefficient"; however, the statutory requirement that such premises should be visited once in three months at least, and the result entered in the prescribed register, was found to be almost always fulfilled.

43. The functions of the Board in relation to this Act are purely administrative. By its veterinary staff it inspects districts with a view to ascertaining whether local Authorities are executing it efficiently; and according to the reports of these officers it directs, advises, or admonishes local Authorities as may be necessary. For some years this plan sufficed; but as the Act was gradually extended to larger and larger areas, and more especially as development of the dairying industry and the export butter trade progressed so as to increase very largely the number of registered premises even in the old districts, it gradually became impossible for the veterinary staff to visit more than a small proportion of the total districts in any one year. Thus their visits to any one district became separated by longer and longer intervals. Secondly, since they actively carried out the Board's instructions at these widely-separated visits, and since in the intervals the appointed local Authorities did not execute the Act with the same diligence (in municipal districts, for reasons already adverted to; in police districts, because of the multifarious occupations of the police local Authority which, in any important dairying district, did not leave it the necessary time), it came about that the Board got to be regarded as the executive authority, and as one which acted somewhat oppressively, because it made itself felt only intermittingly. Thirdly, it became apparent that the efforts of the Board's inspectors as regards cattle were handicapped by their presence in a district becoming generally known, and by dairy farmers in some cases taking the precaution of picking out diseased or suspected animals from their herds, and turning them out into the bush, whence, of course, they could not be brought in for survey during the time at the inspector's disposal.

44. In order to meet this state of affairs, the Board had the honor to report to you that a radical change in this matter was necessary, if the inspection of dairies were to continue as efficient as it had been in former years when the business to be done was much smaller, and if the dairy industry were to be furnished with that guarantee of health in the cattle and of cleanliness in the surroundings, without which exported dairy products could not permanently maintain the place already won for them in the world's markets. This opinion was very greatly and conspicuously enforced as soon as the Board, by its publications and reports, had brought farmers to understand that tuberculosis was a source of great loss to them; that it could be eradicated; that in connection with meat, milk, and butter it constituted a danger to human life; and that for commercial as well as for humanitarian reasons, the attempt to eradicate it from herds must be at once and seriously commenced. For it became clear that the necessary instruction

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of farmers, and testing of their herds, could only be effected by agents of the Board who, being qualified veterinary surgeons, should be appointed to charge of the more important districts, within which they should reside. Gentlemen so placed would become acquainted with the premises, cattle, and business methods of dairy farmers in a way and with a fulness impossible to them as touring inspectors; they would also have opportunity of giving valuable instruction to farmers on a variety of points, either individually or at informal gatherings of neighbours, or on more formal occasions by delivery of regular lectures at central villages. It was accordingly recommended that three such appointments should be made in the first place, to be increased after trial if found expedient. Some large districts, and very many thousand of milch-kine, being thus provided for, the headquarters staff would once more be placed in a position to make annual inspection of all the less important remaining districts.

45. A form of record, together with certain brief instructions to facilitate application of the tuberculin test, was issued and made known during the year (*Appendix* H); and memoranda, both on the prevention of tuberculosis in man and in animals, and on the application of the tuberculin test to the ox, were widely circulated (*Appendix* I). The Board also undertook to supply tuberculin gratis to qualified persons making application for it, with some guarantee that it would be put to proper use. Many testings of special herds were carried out, at request of owners, by the staff in different neighbourhoods both in the country and in Sydney. Those of such testings as occurred towards the end of the year were recorded, and the results are analysed below (*Appendix* K).

46. In the former of the documents just referred to, which was presented by you to Parliament, certain points were mentioned in respect of which the law required amendment; of which the most important was the need of legal power to apply the tuberculin test systematically to dairy cattle. This necessity was conspicuously shown by a case in which the Board discovered that no less than nine cows of a herd of seventeen in use at a suburban dairy were seriously affected with this disease, the milk of the whole herd having been mingled and retailed. It is worthy of special note that the cow whose condition first attracted attention was far advanced in consumption, and, in opinion of the Board's veterinary inspector, must have been in a state in which it should have been condemned by the inspector to the local Authority for several months before; and yet that it was detected only when the Board's inspector made his annual tour in the district. Once made known to the Board, prompt and decisive action was taken. The dairyman's registration was cancelled by the local Authority within twenty-four hours, and was not renewed until, about a fortnight later, all the other diseased cattle had been detected and slaughtered and the infected premises thoroughly disinfected. It is to be hoped, therefore, that the power asked for in the memorandum referred to may be granted without much delay, so that the tuberculin test may be applied to dairy herds as a matter of routine and without having to wait for the occurrence of circumstances which justify the Board in declining to allow a dairyman to continue his business—circumstances which, in the nature of the case, are not made manifest until long after purchasers of the milk have been exposed to an imminent danger. It is also to be hoped that gradually local Authorities will appreciate their responsibility under this Act as regards the health of dairy cattle a little better than, as a rule, they do at present, or at least will better discharge it.

47. It is believed, as a result of experience and for reasons which cannot be here mentioned in detail, that were the tuberculin test systematically applied to dairy herds in towns, there is but slight hope that many of them would be found entirely free from tuberculous animals.

48. "The Manual of Advice to Dairymen," &c., which was first issued in 1896, was revised, brought into accordance with the law as amended, and in other respects improved. (*Appendix* L.) About 3,000 copies were forwarded to local Authorities for distribution within their districts, and further copies are still being distributed. It is much appreciated by those to whom it is addressed, and is regarded as a valuable educational aid.

49. A good deal of complaint was made by dairymen during the year on two subjects—a requirement that the flooring of all cowsheds and bails should be constructed of impervious material, as far as might be, and that no cesspit should be allowed to continue on dairy premises. As to "impervious" material, what is meant by the term is properly squared and bedded stone slabs, or hard bricks on edge set in cement or concrete, though hardwood planks, squared, securely fixed, and carefully caulked, are also allowed; in short, a material which is not freely absorbent on the one hand, and which, on the other, can be swilled down and kept clean with a minimum of trouble. There is no difference of opinion among dairy experts as to its necessity, nor as to its value as an aid to the production of a milk which will keep sweet long enough for the ordinary purposes of trade; and, if there were any such difference, then there is no doubt that a knowledge of country and town dairies as they were ten years ago, and comparison with the present state of the improved majority, would adjust it. The requirement was not new, but during two or three years past the Board has advised local Authorities to act with a little more stringency than had been customary before, though, at the same time, to do so with discretion and without inflicting hardship in any case. As regards such advice it has, of course, been faithfully carried out in all districts which are under police local Authorities. Municipal Authorities have not been as punctual, and probably a great part of the discontent expressed arose in a consequent feeling of inequality among neighbours who were divided from each other by the municipal boundary. The truth is that this requirement can be easily complied with—that is, without difficulty or considerable expense, or even much labour, by all dairy farmers—and that it is in reality a matter of interest to the whole country in as far as the sale of dairy products is a factor in its prosperity. For instance, the slovenly milk-producer is almost compelled to use preservatives in order to carry his milk even so short a distance as to the creamery, and so as to deliver it in a condition in which it will be received there. The clean dairyman is not under any such necessity. Now, the use of preservatives is bad in itself, but it is worse still in as far as it serves to cloak a fault which carries with it other and even more serious dangers than premature putrefaction of the milk.

50. As to the abolition of cesspits on dairy premises, the portentous fact is this: in those few districts where dairy farmers cling to their cesspits, and from which appeals against the order to remove them have been received, there is a small proportion of premises which are returned as having no convenience at all of the kind; and these are not premises occupied by some solitary man, but ordinary homesteads, occupied by families which consist of persons of all ages and both sexes. What is implied by carelessness of decency in such a matter need scarcely be described at length; it is enough to say that such persons must be of a class least fit of all to be numbered among milk-producers. But, as to those

premises

premises which are provided with cesspits and whose owners protest against removing them, the dangers of cesspits by this time should be generally known. The usual ground of application for permission to retain them is that they are placed so many yards from the house, the dairy, and the source of water. Thereupon it may, perhaps, be considered that the safety of the milk from direct contamination is more or less thoroughly provided against by distance. But it is entirely forgotten that the danger is to man; that man goes to the pit, wherever it may be; and, if he fall ill, is thereafter in contact with the milk, and liable to infect it. The reply from individual experience will, no doubt, be made, that cesspits are and always have been common enough, and that they have not caused illness. But this answer, it must be said, runs contrary to accumulated experience, as individual experience so often does. The objections to substituting a pail-closet for the pit are usually two: that a pail-closet is more offensive, and that to dig the soil into the earth at various points of the garden or cultivation paddock is, in fact, "scattering" it about the premises, instead of storing it "safely" in one place. Both of these arguments are entirely fallacious. A pail, properly supplied with dry earth, is as nearly inoffensive as anything of the sort can be; to keep it so supplied is within the power of every willing householder. And, as it is said that for every ill, Nature provides a remedy, so the mixture of earth with nightsoil is the method prescribed by Nature for getting rid of a dangerous and offensive waste which is continuously produced as long as vital functions are performed. For excreta so disposed of do not remain where they are dug into the ground, but begin forthwith to be attacked by those natural processes which convert them speedily into other forms in which they are not merely harmless, but actually useful to vegetable forms of of life. It may be difficult to state these simple and well-worn facts so as to convince those to whom they are at present strange, though no agriculturist can be long successful who has not at least some inkling of them. It is the function of the Board, however, first, to be acquainted with these truths; secondly, to spread knowledge of them; thirdly, to make good defects by judiciously exerting such influence as it may have to bring its knowledge to the necessary practical bearing. In this, and in other such tasks, to successfully perform its functions it must be always a little in advance of current knowledge, and hence must continuously meet with a certain amount of opposition, which, enduring but for a time in connection with any particular subject, will be successively renewed in connection with others as they arise. It is aware, however, that in educational matters violence is seldom successful, nor has it ever thought compulsion the most useful method for it to follow as a rule.

51. Nevertheless, it must not be supposed that the opposition last referred to has been general, or that it has emanated from districts within which the Act has been long proclaimed. On the whole, though the same slight pressure has been equally applied over the country during the two or three years referred to, opposition has been expressed almost entirely in districts where the Act has been recently proclaimed; and it is not doubted that public opinion will soon reach in them the same level it has already reached elsewhere, and that the wisdom of the Board's advice on the two points last referred to will be generally admitted before long.

52. Cases of infectious diseases reported on dairy premises during the year were as follows:—

TABLE VI.

Number of districts affected.	Total number of cases reported.	Kind of disease.	Number of cases.
24	43	Scarlet fever	20
		Typhoid fever	13
		Diphtheria	9
		Syphilis	1
			43

The following persons were successfully prosecuted by various local Authorities for breaches of the Act:—

TABLE VII.

Name.	Offence.	Result of prosecution.
Morris, R.	Trading without license	Fined £5 and costs.
Meeke, Dr. W. M.	Failure to report infectious disease on dairy premises	" £1 and 10s. 4d. costs.
Sawtill, W. F.	Do " " ...	" " "
Gourlay, E.	Do " " ...	" " "
Solway, H.	Do " " ...	" " "
Reid, J.	Storing milk in unsuitable place	" £1 and 4s. 10d. costs.

LEPROSY ACT, 1890.

53. During the year seven cases of illness were reported to the Board under this Act. It was found that 3 were cases of leprosy, while the remainder were of other kinds of disease. Of the 3 patients who were declared to be lepers 2 were admitted to the lazaret; one, who had recently arrived for medical treatment from Queensland, expressed his wish to return home, and was allowed to do so. All were whites—one of native, two of foreign, birth.

NOXIOUS

NOXIOUS TRADES AND CATTLE SLAUGHTERING ACT, 1894.

(Part I., Noxious Trades.)

Sanitary Inspector—Paul E. A. L. Getting.

54. Noxious trades were placed under supervision of the Board by the first part of the Act mentioned. The Board's function in this matter is, briefly—(*a*) to declare which trades shall be reckoned noxious; (*b*) to frame By-laws for regulating them; (*c*) to issue or withhold licenses after inspection of premises recommended for license by local Authorities; and thereafter (*d*) to supervise execution of the Act and By-laws by local Authorities. The general policy pursued in considering recommendations for license has been not to decline to issue licenses for any other reason than unsuitability of premises or machinery, or some such unsuitability of site as must necessarily prevent due observance of the By-laws; and to leave all other considerations attaching to locality to decision by the local Authority within whose district the proposed premises are to stand. As to execution of the Act and By-laws, local Authorities are year by year improving in thoroughness, and emancipating themselves from the hampering influence of local interests; but, it must be added, they have not yet in all cases reached that stage at which execution of this Act would be thoroughly efficient if it were left to their unassisted efforts. The Board's sanitary inspector has, consequently, to report regularly on these establishments.

55. The Act applies only to those parts of the country within which it has been proclaimed, and for the present it has been so proclaimed only within the county of Cumberland. The trades which had already been gazetted at the beginning of the year were those of—

Fat-melter,	Blood-drier,
Fat-extractor,	Glue-maker,
Bone-boiler,	Pig-keeper,
Bone-grinder,	Poultry-farmer,
Blood-boiler,	

and there were added to the list during the year the two following:—

Soup-drier,	Gut-scraper.

56. By-laws already in force were applied to the trade of soup-drier (which consists in evaporating the liquor produced in the course of extracting fat from flesh and bones by digestion under steam-pressure, to a consistency at which it can be mingled with other matters to form a manure), and fresh By-laws were made to control that of gut-scraper.

57. The necessity for this Act arose chiefly in the stenches caused by fat-extractors, who chiefly operated on putrid butchers' wastes, and who, in blowing off their steam-digesters, discharged large volumes of extremely offensive watery vapour, which, having first ascended into the air to a considerable height, made itself felt after condensation by falling towards the earth again at distances which were often at least as great as 2 miles. This nuisance had existed and been a subject of agitation and of Parliamentary inquiry for years; and the reason that so simple a matter had not been dealt with as soon as its regulation appeared necessary seems to have lain in the recommendation—the only one which had been made until the Board took the matter up—that all noxious trades should be relegated to some remote area, as well as governed by a special law. And although certain members of the trades more or less directly affected concurred in it, the fact appeared to be that it was almost impracticable, and would certainly have resulted in crushing out the many who engage in those businesses on a small scale. Thus it became a subject of never-ending discussion. The Board, however, believed that all that was necessary was regulation without removal, and accordingly advised that that plan should be tried. The result was the passage of the Noxious Trades and Cattle Slaughtering Act in 1894, and its recommendation may now be said to be justified. The state of many premises was found to be one of indescribable and almost incredible filth, so that they were a standing source of abominable nuisance to the neighbourhoods in which they were found even when work was not going on; and in no case was there any attempt made to destroy the offensive gases and vapours which descended upon thickly-inhabited areas at the great distances mentioned above. It was, therefore, necessary to give traders the choice between ceasing to manufacture and erecting entirely new premises on lines which would, at all events, make it possible to avoid causing far-reaching nuisances for the future; and, when they chose the latter course, to give them reasonable time in which to erect new factories. After this primary improvement had been effected in all cases, the next step was to cause traders to use their new appliances regularly, and to bring them to perceive that they could no longer carry on, to the annoyance of the population, without incurring penalties; and many prosecutions were necessary before traders in general (for there were, of course, some who had always endeavoured to carry on decently, and who merely were unaware of what they should do to abate nuisances which they knew they caused) began to perceive that they must for the future regard their undertakings from a different standpoint, and, for their own commercial security, must heartily endeavour to learn from, and to comply with, the law. This state of affairs has now been brought about by the Board's persistent administration during three years past; and yet occasionally a careless trader still allows offensive gases to escape. Prompt reports by the police and others in distant neighbourhoods, who exceptionally find themselves once more exposed to that familiar stench which used to be always perceptible when the wind happened to be favourable, has enabled several successful prosecutions to be undertaken against the culprits, who, after a few more such lessons will, no doubt, steadily take the simple precautions which alone are necessary. The regulations made under the Act were extended and revised during the year (*Appendix* M).

58. As regards fat-extracting, the source of nuisance seems to consist in two distinct matters. The first is steam charged with emanations from putrid animal matter; the second is the gas or gases which are disengaged from such material in the course of its digestion under steam pressure. The former can be condensed with cold water used in any of the usual ways. The gases cannot be condensed, of course, and must either be destroyed or absorbed. Two plans are in use. One is to conduct them, after condensation of watery vapour, to a chamber in which chlorine gas is being freely disengaged; the other is to conduct them to a chamber containing trays loaded with lime and with oxide of iron. Both these plans answer well; but the firstmentioned apparatus requires constant attention, while the latter only needs recharging once in about three months.

59. The number of traders on the register during the year was 176, and they were distributed as follows:—

TABLE VIII.

Name of District.	Number of Licensed Premises.		Total.
	A.	B.	
Municipal Districts—			
Alexandria	10	7	
Auburn	.....	1	
Bankstown	.....	9	
Botany	2	7	
Canterbury	1	18	
Enfield	1	9	
Ermington and Rydalmere	.....	2	
Granville	1	2	
Hurstville	.....	14	
Kogarah	.....	7	
Lane Cove	1	2	
Manly	.....	1	
North Botany	4	9	
North Sydney	.....	1	
Prospect and Sherwood	.....	4	
Rockdale	1	24	
Rookwood	1	.....	
Ryde	.....	3	
St. Peter's	.....	1	
Waverley	.....	6	
	22	127	149
Police Districts—			
Metropolitan	.....	10	
Parramatta	2	12	
Ryde	2	.....	
Windsor	1	.....	
	5	22	27
Grand Total	.....	.....	176

The number of visits paid by the Sanitary Inspector during the year to traders in Class A were:—

CLASS A.

Fat-melters, extractors, &c.	112
Bone-grinders	12
Glue-makers	5
Soup-driers	10
Knackers	7
Gut-scrapers	5
Total	151

60. The trades classed under the letter B above were, as already noticed, added during the year, and consisted of those who kept pigs, those who kept poultry, and those who kept both, for purposes of trade, and received on their premises butchers' wastes or other putrescible material. These traders had also for many years been a cause of serious nuisance to their neighbours and to others who lived at considerable distances. Here, again, the cause of nuisance was of two kinds. The nuisance to the neighbourhood was caused in part by filthiness of the premises and surrounding areas, which usually remained from one year's end to the other freely covered with putrescent animal matters; that to persons at a distance (as well as in the neighbourhood) was caused by the steam which issued from coppers in which butchers' and kitchen wastes were boiled to feed both pigs and poultry. The remedies were simple, and merely required describing and enforcing. They consisted in fitting wooden covers to all coppers, with a steam escape pipe to conduct the vapours to the little furnace below; in requiring that all putrescible food should be kept constantly in the coppers and constantly warm, unless being actually fed to the stock; in flooring pig-yards with impervious material, and in confining the food to properly constructed troughs.

61. The effect of these and other such improvements has been eminently satisfactory, and local Authorities have on the whole executed the By-laws energetically, the discomfort to which residents in almost every borough were formerly put ensuring sufficient attention to prevent a recurrence. There was at first some unwillingness to comply with the Act on the part of traders themselves, and this they made felt by complaints to their Parliamentary representatives, which very often had but little truth in them. Appended will be found a report made by the Sanitary Inspector at a date before the By-laws had taken effect, which furnishes some instructive reading, and which shows that the expense entailed by them on this class

class of small traders was, nevertheless, no considerable burden even to them, but proportioned to the size of the business, and in nearly all cases amounted to but a small sum. (*Appendix* N.) On the other hand, traders have discovered that they benefit from these improved conditions in two direct ways—from having covers to the coppers they save much fuel; and from preventing the food from putrefying, the stock do infinitely better than before.

62. The number of visits of inspection (and of instruction) which were paid to premises in Class B by the Sanitary Inspector during the year were as follows:—

CLASS B.

Pig-keepers	57
Poultry farmers	68
Pig and poultry farmers	73
Total	198

63. The following table shows the number of prosecutions undertaken, with the results thereof:—

TABLE IX.

RETURN of Prosecutions undertaken during the year 1897.

No.	By whom proceedings were undertaken.	Name of Defendant.	Nature of Trade.	Prosecutions.					Remarks.
				Charge.	Date.	Magistrate and Court.	Section of Act or Regulation.	Result.	
1	P. E. Getting, Sanitary Inspector, Board of Health.	Michael O'Riordan, Alexandria.	Fat extractor.	Carrying on noxious trade without destroying noxious gases and vapours.	1897. 1 April	Mr. Smithers, S.M., Redfern.	Reg. 10....	10s. fine, 8s. 6d. costs of Court.	Paid.
2	C. A. Simms, Secretary, Board of Health.	Thomas Elliott, Botany.	" ..	Trading without being licensed.	1 "	" ..	Sec. 9	£10 fine, £3 12s. 6d. costs.	Paid (20 days at 10s. each); second conviction.
3	Enfield Local Authority.	Michael Sullivan, Enfield.	Bone-boiler	" ..	21 "	Mr. Delohery, S.M., Newtown.	"	Case dismissed..	Magistrate held that receiving and occasionally boiling down dead stock did not constitute a trade within the meaning of the Act.
4	C. A. Simms, Secretary, Board of Health.	Thomas Elliott, Botany.	Fat extractor.	" ..	24 June.	Mr. Smithers, S.M., Redfern.	"	£15 fine, £2 9s. 8d. costs.	Paid (15 days at 20s. each); third conviction.
5	Canterbury Local Authority.	Robert Howe, Canterbury.	Pig-keeper.	" ..	14 "	Mr. Isaacs, S.M., Newtown.	" ...	£2, 5s. 6d. costs	Paid.
6	" " ..	David Lewis, Canterbury.	Poultry farmer.	" ..	28 "	" ..	"	£1 fine, £1 6s. 6d. costs.	This man did not pay fine, but served sentence of 1 month.
7	Parramatta Police ..	Henry Robertson, Guildford.	Pig and poultry farmer.	Trading without license.	28 "	Mr. MacNevin, P.M., Parramatta.	" ...	Fine 1s., and costs.	Paid.
8	" " ..	John Clarke, Guildford.	Poultry farmer.	" ..	28 "	" ..	" ...	" ..	"
9	" " ..	Samuel Fallick, Guildford.	Pig and poultry farmer.	" ..	28 "	" ..	"	" ..	"
10	" " ..	Edwin Palmer, Guildford.	" ..	" ..	12 July..	" ..	" ...	" ..	"
11	" " ..	Thomas Hall, Guilford.	" ..	" ..	12 "	" ..	"	" ..	"

64. Appended will also be found a sheet of drawings, designed by the Sanitary Inspector, which show clearly how covers and other things necessary to avoid nuisance may be constructed by pig-keepers and poultry-farmers. (*Appendix* O.)

NOXIOUS TRADES AND CATTLE SLAUGHTERING ACT, 1894.

(PART II., CATTLE-SLAUGHTERING.)

The Veterinary Staff—See above.

65. The cattle-slaughtering part of this Act provides means of regulating the premises where cattle (a term which includes all horned cattle, calves, sheep, pigs, &c., &c.) are slaughtered for food, and does not contemplate the health or condition of the cattle.

66. This law took effect from 1st September, 1894, and was designed for execution by municipal local Authorities in municipal districts, and by police local Authorities outside them. Licenses lapse on the 30th of June in each year. They are granted or renewed by the local Authorities without reference to the Board, which merely examines premises in districts as far as may be necessary to judge whether the law is being properly executed.

67. Previously, slaughter-houses were under no regular supervision; for, although municipalities could regulate them under the Municipalities Act, they were, for the most part, placed outside municipal districts, except in some instances in the neighbourhood of the larger towns. Even those, however, were not in many cases so supervised as to be free from nuisance, or so constructed that they could be kept clean. Everywhere individual premises could be found which were suitably constructed and well kept; but this was a consequence of the personal views of the proprietors.

68. Very considerable improvements have been effected by the Board through its inspectors and through police local Authorities during the past three years in the conditions under which meat is slaughtered for food. These consist in the main in the construction of impervious flooring to slaughter-houses; construction of pits so placed as to hold tubs in which blood and wash-waters are collected for removal to a distance before being dealt with; in lining the walls of houses with sheet metal, or else in seeing that they are kept clean by frequent lime-washing; in removing pigs, hide stores, and the boilers used for fat-extracting to a suitable distance from the slaughter-house; and in discountenancing the feeding of pigs on uncooked offal. Such alterations have always been willingly made, and the result has been great and general improvement in the foul conditions in which most slaughter-houses previously stood.

69. Such inspections have usually been made by the veterinary staff, in conjunction with their inspections under the Dairies Supervision Act. During the year forty-six districts were completely inspected. They contained 178 slaughter-houses. The general report was "fair" in forty out of the forty-six cases.

GLEBE ISLAND ABATTOIR.

Consulting Engineer, T. H. Houghton, M.I.C.E., M.I.M.E.

Inspector-in-Charge, G. W. Shelley.

70. This establishment, which stands on unincorporated land lying between the city and Balmain, was erected in 1864. In 1894 it was transferred to the Board by the Noxious Trades and Cattle Slaughtering Act, section 16, together with all the authority and power formerly exercised in respect of it by the Governor and Executive Council.

71. No report of the result of the Board's management ever having been made, the following remarks, and appended statement of accounts, are here inserted.

72. The Board assumed active management on 1st July, 1894. In July, 1895, it was able to report that the working expenses had been reduced by £1,182 per annum, being a reduction on salaries and wages effected by discharging superfluous hands; and that an almost equal amount had been saved in other directions—as, for instance, by revising the contract for coal a saving of no less than £500 a year was effected. These were permanent economies. Against them had to be set (as regards the year referred to) absolutely necessary structural improvements which were carried out at a cost of £3,500. At the same time it drew attention to the desiccating machinery, and after pointing out, first, that it was obsolete, expensive, and worn out, and secondly, that the best desiccating plant could not profitably deal with the mingled blood and wash-waters which the construction of the slaughterhouses obliged to be run off together, it proposed that these works should be closed and not replaced. The blood and offal were thenceforward dealt with by being dumped at sea; and although, as the Board recognised, this was a wasteful and wrong course in principle, it was the only economical plan under the conditions of faulty construction adverted to. Lastly, the bad arrangement, disrepair, and position of this establishment were mentioned, and its removal to a more suitable spot recommended; and it was suggested that there was no reason why this business should be a care of the Government, and that it might be transferred to the City Corporation by which the sale-yards were already possessed and managed.

73. During the year 1895-6 the desiccating plant was dismantled at a cost of about £115. Unpaid debits transferred from former years, and not incurred by the Board, were discharged; a further sum of £1,589 was spent in repairs and improvements; and the balance-sheet for that year showed an actual surplus of £1,920, which was reduced to £740 after payment of the old outstanding claims just mentioned. This was a highly satisfactory result, since the establishment had for the two years previous to the middle of 1895 required a subsidy from public moneys of £11,500 (in addition to its revenue from rents, &c.) to keep it going. It was now in a state in which it more than paid its way. Strictly the sum mentioned above could not be called "profits," since no account was taken of the interest on capital cost; but this item being omitted both from the old and the new accounts, the comparison just drawn is between like things.

74. During the year 1896-7 the work was continued on the same lines; and at the end of it a surplus of £1,093 was shown, although money to the amount of £2,722 was expended from revenue to effect many improvements and repairs which were still needed. Of these, the following were the most important; improvements to pig and sheep yards on the southern boundary, and interception of the drainage from them which formerly fell into the harbour; construction of a blood and sewage tank of 90,000 gallons capacity, to which all blood, wash-waters, and sewage were conveyed, and there accumulated until they could be punted tri-weekly to sea; and extensive improvements of roads and grades, by which the convenience of the establishment was much enhanced.

75. By the middle of the year now reported on, it became possible to say for the first time in the history of this Abattoir that no wastes from it entered the harbour, neither liquid nor solid; and that it had been rendered—also for the first time in its history in all probability—entirely free from the odours of putrefaction. The measures taken had, moreover, satisfied the tenants of the Crown who had before much ground for dissatisfaction, and had freely expressed it; and, though several necessary things were still wanting, they accepted the evidences of improved management as earnest that these would be supplied in the near future.

76. But it is necessary to add that the above statement is good only as far as it goes, and should not be mistaken. It must now be pointed out that the Abattoir is fundamentally wrong in construction, and never could be converted either into a suitable building, or even into a building as suitable to its purposes as are many of the meat-works scattered over the country, except by a process of demolition and re-erection. In the natural course of deterioration it cannot much longer be utilised without reconstruction; but, in opinion of the Board, it should be rebuilt on quite another site. It is also desirable that this business, which, as a business, is an unusual matter to be placed for management under the Central Health Authority of the country, should be transferred as soon as possible to municipal control.

Table X.

EXPENDITURE.	Amounts.	Total.
	£ s. d.	£ s. d.
Salaries—		
Inspector and Staff	.....	3,766 5 0
Contingencies—		
Works supervised by Consulting Engineer.	1,259 8 0	
Plumbing	358 5 10	
Water and Sewerage Board	274 0 4	
Sewage	237 0 0	
Stores Department	190 7 1	
Coal	151 15 11	
Miscellaneous	148 7 0	
Forage	117 8 8	
Gaslight Company	94 11 3	
Blacksmithing	59 18 3	
Sale of Leases	52 4 0	
Wages—Temporary Staff	45 2 0	
Consulting Engineer—Expenses and allowances.	43 13 2	
Road metal	27 14 2	
Maintenance of telephones	23 4 2	
Disinfecting fluid	20 1 6	
Lime	17 10 0	
Timber	16 8 8	
Inspector—Use of conveyance	15 7 11	
Crown Solicitor	15 7 6	
Printing	8 7 7	
Railway	7 6 6	
Works Department	1 8 7	
		3,215 8 1
Total Expenditure		£ 6,981 13 1
Plus Credit Balance		£ 2,477 14 1
Grand Total		£ 9,459 7 2

REVENUE.	Rent.	Fees.	Manure.	Miscellaneous. Rent of Quarry.	Wharf Rates.	Rent of Stall.	Rent of Office.	Total
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
	5,295 0 0	3,940 5 4	73 8 4	19 10 0	8 0 0	12 0 0	1 3 0	9,259 7 2
Sales of old machinery, &c.								200 0 0
							£	9,459 7 2

	£ s. d.
Revenue	9,459 7 2
Expenditure, including Salaries	6,981 13 1
Credit Balance	£2,477 14 1

Table XI, 1892–1897.

EXPENSES OF MANAGEMENT. Years.		Salaries.	Contingencies.	Total.
		£ s. d.	£ s. d.	£ s. d.
	1892.			
1890	For services of	.....	1,041 0 0	1,041 0 0
1891	,, ..	2 14 8	556 2 1	558 16 9
1892	,, ..	1,007 5 4	8,592 18 9	9,600 4 1
				£11,200 0 10
	Profit over working expenses			628 11 8
				£11,828 12 6
	1893.			
1890	For services of	.....	85 1 6	85 1 6
1891	,, ..	.....	1,735 5 7	1,735 5 7
1892	,, ..	2 14 8	2,119 11 11	2,122 6 7
1893	,, ..	1,255 7 10	10,106 12 1	11,361 19 11
				£15,304 13 7
	1894.			
1893	For services of	2 12 0	2,981 19 8	2,984 11 8
1894	,, ..	1,446 17 0	10,147 17 7	11,594 14 7
				£14,579 6 3
	1895—Half year, January-June.			
1894	For services of	2 13 0	3,873 1 7	3,875 14 7
1895	,, ..	391 17 0	3,810 13 3	4,205 10 3
				£8,081 4 10
	1895–6.			
1894	For services of	.....	618 10 0	618 10 0
1895	,, ..	2 13 0	567 18 6	570 11 6
(6 months). 1895–6	,, ..	615 16 8	7,944 19 10	8,560 16 6
				9,649 18 0
	Profit over working expenses			740 18 9
				£10,390 16 9
	1896–7.			
Unclassified		3,897 10 7	4,524 7 3	8,422 6 10
	Profit over working expenses			1,092 14 0
				£9,515 0 10

REVENUE. Years.	Rents.	Inspection and Slaughtering Fees.	Manures.	Wharf Rates.	Rent of Quarry.	Rent of Refreshment Stall.	Rent of Office-box, &c.	Total.
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
1892	5,835 0 0	3,857 4 3	1,956 10 0	119 19 11	27 10 0	31 13 4	0 15 0	11,828 12 6
..	.....	.....	.....	.....	.....	.....	.....	.....
..	.....	.....	.....	.....	.....	.....	.....	.....
								£ 11,828 12 6
1893	4,122 10 0	4,024 17 1	1,034 10 0	52 6 1	44 0 0	11 15 0	.....	9,289 18 2
..	.....	.....	.....	.....	.....	.....	.....	.....
..	.....	.....	.....	.....	.....	.....	.....	.....
..	.....	.....	Loss upon working expenses					6,014 15 5
								£ 15,304 13 7
1894	4,375 0 0	4,311 13 1	618 9 2	19 6 0	52 0 0	12 0 0	5 4 0	9,393 12 3
..	.....	.....	Loss upon working expenses					5,185 14 0
..	.....	.....	.....	.....	.....	.....	.....	.....
								£ 14,579 6 3
1895 (6 months.)	1,699 10 0	2,629 7 9	310 2 6	21 11 10	14 3 0	6 0 0	3 6 0	4,684 1 1
			Loss upon working expenses					3,397 3 9
..	.....	.....	.....	.....	.....	.....	.....	.....
								£ 8,081 4 10
1895–6	4,568 10 0	4,615 3 2	1,164 2 7	12 18 0	18 3 0	12 0 0	.....	10,390 16 9
..	.....	.....	.....	.....	.....	.....	.....	.....
..	.....	.....	.....	.....	.....	.....	.....	.....
..	.....	.....	.....	.....	.....	.....	.....	.....
								£ 10,390 16 9
1896–7	5,055 0 0	4,271 7 7	181 0 0	13 3 3	32 10 0	12 0 0	.....	9,515 0 10
..	.....	.....	.....	.....	.....	.....	.....	.....
..	.....	.....	.....	.....	.....	.....	.....	.....
								£ 9,515 0 10

DISEASED ANIMALS AND MEAT ACT, 1892.

77. This Act is designed to be executed by the Board through officers appointed by it all over the country. These are as follows:—

Officers of Municipal Local Authorities	67
Officers of Police Local Authorities	518
Government Medical Officers	130
Stock Inspectors	51
Total	766

78. Government Medical Officers (police-surgeons) do not as a rule initiate inspections, but are called in to advise on occasion. In addition, the permanent staff of the Board are appointed to be inspectors under this Act, and all cattle condemned, and all meat unfit for human food, are seized under it, and are either destroyed by consent of the owner, or are taken to Court for the purpose of seeking an order for their destruction.

The following tables show the diseased animals and meat reported to have been destroyed throughout the Colony during the year 1897:—

Table XII.—Metropolitan.

1.—Glebe Island Abattoir.

Kinds.	Number Slaughtered.	Condemned as diseased.		Condemned as bruised or unfit for food.	
		Number.	Percentage.	Number.	Percentage.
*Bulls	54	5	9·6	0	0
*Bullocks	58,557	706	1·2	2	·003
Calves	11,810	5	·04	2,301	19·4
*Cows	13,965	295	2·11	18	·12
Pigs	56,568	2,272	4·01	7	·01
Sheep	1,129,701	390	·03	22	·00001
Totals	1,270,655	3,673	.....	2,350	.....

* All cattle, calves excepted, are aged.

2.—Showing the Diseases for which the animals above were condemned.

Kinds.	Tuberculosis.	Actinomycosis.	Abscesses.	Cancer.	Pleuro.	Pneumonia.	Quinsey.	Swine Fever.	Dropsy.	Peritonitis.	Mortification.	Hydatids.	Extravasation.	Unfit.	Immature.	Quarters.
Bulls	4	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...
Bullocks	673	14	15	1	1	...	...	...	...	...	...	...	...	2	...	2
Cows	291	3	1	...	...	...	...	...	...	...	...	...	...	18	...	4
Calves	2	...	...	...	...	...	...	...	...	...	...	...	3	18	2,283	...
Pigs	1,609	1	506	1	...	62	22	3	7	10	35	1	14	7	...	6
Sheep	386*	...	...	...	...	2	...	...	...	2	...	...	...	22	...	...
Totals	2,579	18	909	2	1	64	22	3	7	12	35	1	17	67	2,283	12

* So-called: caseated and calcareous abscesses of lymph-ganglions unaccompanied by other signs of disease, apparently not affecting either general health or condition, and not true tuberculosis.

3.—Seized at City Sale-yards.

Kinds.	Tuberculosis.	Actinomycosis.	Cancer.	Quinsey.	Immature.	Unfit for Food.	Pneumonia.
Bullocks	.....	1	.....	.....	.....	.....	.....
Cows	4	.....	.....	.....	.....	.....	.....
Calves	.....	.....	.....	.....	138	.....	.....
Pigs	7	.....	5	1	.....	11	30
Quarters of beef	.....	.....	.....	.....	.....	69	.....
Sheep	1*	.....	.....	.....	.....	.....	.....
Bodies of pork	.....	.....	.....	.....	.....	2	.....
Bodies of veal	.....	.....	.....	.....	.....	1	.....
Hares	.....	.....	.....	.....	.....	9	.....
Totals	12	1	5	1	138	92	30

* See foot-note to previous table.

TABLE XIII.—Seized at Various Country-places.

Kinds.	Tuberculosis.	Cancer.	Pleuro-pneumonia.	Pants.	Abscesses.	Lumpy-jaw.	Actinomycosis.	Unspecified.	Unfit for Food.	Total.
Bullocks	257	107	8	.....	.....	15	25	.....	2	414
Cows	343	86	7	.....	.....	3	38	.....	7	484
Calves	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Pigs	47	12	8	9	11	.....	.....	52	.....	139
Sheep	.....	.....	.....	.....	.....	.....	.....	2	.....	2
Bodies of beef	8	1	.....	.....	.....	.....	1	.....	.....	10
Totals	655	206	23	9	11	18	64	54	9	1,051

TABLE XIV.—RETURNS RECEIVED FROM TWO COUNTRY MEAT-WORKS.

Kinds.	Number slaughtered.	Condemned for want of condition.	Tuberculosis.	Actinomycosis.	Pleuro-pneumonia.
Aberdeen Meat Preserving Co.					
Cattle	3,406	.....	* 133	8	1
Sheep	175,493	13,444	30	95	.....
Stock owners Meat Co. of N.S.W.					
Cattle	163	3	.....	.....	.....
Sheep	38,319	16,849	.....	.....	.....

TABLE XV.—SUMMARY.

Kinds.	ABATTOIR.			FLEMINGTON.	ELSEWHERE.	Total.
	Number Slaughtered.	Number Condemned.	Percentage.			
Bulls	54	5	9·25	.....	.....	5
Bullocks	58,557	708	1·02	223	560	1,491
Cows	13,965	313	2·24	46	488	847
Calves	11,810	2,306	11·05	.....	138	2,444
Pigs	56,568	2,279	4·02	.....	193	2,472
Sheep	1,129,701	412	·03	.....	30,421*	30,833
Carcases of Beef	.....	.....	.....	.....	79	79
" " Veal	.....	.....	.....	.....	1	1
" " Pork	.....	.....	.....	.....	2	2
Hares	.....	.....	.....	.....	9	9
Totals	1,270,655	6,023	.....	269	31,891	38,183

* Condemned at country meat-works, chiefly for want of condition.

79. The following were the prosecutions during the year :—

Name.	Offence.	Result of Prosecution.
M'Lean Bros.	Having diseased carcase on premises	Fined 20s. and costs.
Douglas, David	Exposing diseased carcase for sale	" £20, with £1 18s. 2d. costs.
Ridge Bros.	Selling diseased cattle	" £1 and costs.
White and Cobb	" "	" £1 " "
Marshall, James	Diseased carcase on premises	Fined.

80. The Chief Veterinary Inspector to the Board (Mr. E. Stanley, F.R.C.V.S.) is the officer who for the most part works under this Act, and, necessarily, in the metropolitan district chiefly. His first duty is to pay regular visits to the several cattle sale-yards, and to inspect the meat-markets. He follows suspected cattle which cannot be unreservedly condemned during life to the Abattoir; and is occasionally called in by the Inspector at the Abattoir to act as referee in the rarely occurring differences between him and the butchers slaughtering there. He has reported as follows :—

TABLE XVI.—INSPECTIONS OF CITY AND SUBURBAN STOCK SALE-YARDS DURING 1897.

Name of Sale-yard.	Number of Inspections made.	Stock offered for Sale.		Numbers condemned and destroyed, with disease or condition.							
		Numbers.	Kinds.	Tuberculosis.	Actinomycosis.	Cancer.	Anthrax.	Pleuro-pneumonia.	Quinsey.	Unfit for food.	Total.
Flemington	71	113,313	Cattle	180	47	26	3	...	...	2	258 cattle.
Corporation	70	88,046 12,002	Pigs Calves	...	...	...	...	...	...	...	.....
Inglis and Sons	53	.....	.....	4	...	...	...	...	...	...	4 cattle.
Ellis & Co.	50	7,300 12,517	Cows and calves. Pigs and sheep.	5	...	4	...	24	1	11	45 pigs.
Seaforth Proctor's	30	.....	.....	...	...	...	...	...	...	139	139 calves.
Murphy & Co.	40	.....	.....	...	...	...	...	...	...	18	18 fowls.
Total	314	233,178	.....	189	47	30	3	24	1	170	464

TABLE XVII.—INSPECTIONS OF CITY MEAT MARKETS DURING 1897.

Name of Meat Market.	Number of Inspections.	Condemned and Destroyed.				Total
		Carcases.		Pieces of Meat.		
		Beef.	Mutton.	Beef.	Mutton.	
Government	39	2	24	57	.....	83
Riverstone	69	.....	.....	.....	.....	.....
Metropolitan	69	.....	16	5	.....	21
Totals	177	2	40	62	.....	104

81. One hundred and thirty-nine young calves were seized during the year. These are sent to market with milch cows, and are not wanted in town dairies. They are sold for two or three shillings, and are known as "slinks" or "bobbies" when their carcases appear at the butcher's. The limit fixed by the Board in this matter is that a dressed carcase of veal must weigh not less than 50 lb.

82. In the live pig market, only thirty-five visibly diseased animals were observed during the year, and it is thought that prosecutions successfully instituted in previous years have caused owners to supervise their stock with more care before sending it to market.

83. *Legal Proceedings.*—It was necessary to procure orders of Court for the destruction of animals only in three cases; and in only three other cases was it necessary to take proceedings against owners for consigning for sale or selling visibly diseased cattle. A fine was inflicted in each case.

84. *Insurance Funds.*—Late in the year an insurance fund was started, managed by the Carcase Butchers' Association. Its object was to recoup buyers of stock which turned out to be diseased after slaughter; and funds were raised by a contribution of 1s. 6d. a head. Of this sum 1s. was paid to the fund by consignors or their agents, being deducted from the sale account; while 6d. a head was contributed by the butchers themselves. This insurance was paid on condemned animals wherever they were slaughtered, but it was paid only on animals sold at Flemington sale-yards—that is, after they had undergone inspection alive, and after the visibly diseased had been weeded out. Butchers received from the fund the full cost of their purchase.

85. There was also an insurance fund for pigs, which repaid the cost of all pigs condemned after slaughter. By arrangement with consignors, agents deduct from consignors' sale accounts on a sliding scale, as follows:—

Under 10s. in value	3d. per head.
From 10s. to 17s. 6d. in value	6d. ,,
From 17s. 6d. to 25s. in value	9d. ,,
Over 25s. in value	1s. ,,

86. Other inspections made during the year by this officer are tabulated below:—

Visits of inspection to Abattoir...	26
Dispute at Abattoir referred for decision	1
Suspected cattle observed at sale-yards further examined after slaughter { Condemned, 18; Passed, 22 }	40
Special inspections of suburban slaughter-yards	20
Special inspections of country slaughter-yards	2
Inspection of boiling-down works to which cattle condemned at Abattoir are sent ...	2
Special visits to country places...	6
Special inspection of dairy premises deemed to be insanitary	8
Special visits to dairy premises to examine diseased animals	15

87. It is convenient to mention here that the Chief Veterinary Inspector to the Board has also supervised animals at the four stock quarantine grounds for the Stock Branch of the Department of Mines and Agriculture, and has also furnished letters of advice to the same Branch in large numbers on subjects propounded by stock-owners over the country.

88. Steady administration of the Dairies Supervision Act, of the Noxious Trades and Cattle-slaughtering Act, and of the Diseased Animals and Meat Act during a few previous years, together with the increased attention to the relation borne by diseases of food-animals to human health all over the civilised world had, during preceding years, directed public interest to this important subject, and especially with regard to tuberculosis. It became commonly known that some fresh organisation, and perhaps some fresh legislation, were requisite to further ensure the freedom from this disease of milch-kine and oxen killed for meat. Breeders also began gradually to recognise the losses they suffered from tuberculosis especially, and it became apparent that they were earnestly desirous of extirpating consumptive animals from their herds, and of rearing stock which for the future should be free from that disease at all events. A representation was accordingly made by the Board of the steps by which the desired end might in its opinion be in part attained, in a scheme drawn up by the President, and adopted by it. The present state of the matter, as well as the proposed remedy, is contained in *Appendix* P, and need not be further referred to here.

NUISANCES.

89. Many complaints of nuisances of various kinds were received during the year. These were dealt with in the following way:—If the complainant did not show that he had referred to the local Authority having jurisdiction over the district where the nuisance complained of was, he was requested to apply to it; if he showed that he had already sought the intervention of the local Authority without success,

success, then the local Authority was requested to comment on the complaint for information of the Board, the matter being subsequently inquired into by the Board's officers, if necessary. In 201 cases such inquiry was necessitated. They are classified under subjects in the Table below:—

Drainage and Sewerage.	Garbage.	Boiling-down.	Wool-scours.	Night-soil.	Dairy Premises.	Railway Camp.	Poultry Farms.	Piggeries.	Total.
133	25	13	4	10	9	1	4	2	201

LOCAL EPIDEMICS.

90. The number and kinds inquired into and dealt with during the year were as follows:—

Typhoid Fever.	Scarlet Fever.	Diphtheria.
Ballina.	Chatswood.	Ballina.
Broadwater.	Grenfell.	Bellingen.
Burwood.	Gundagai.	Berry.
Captain's Flat.	Hay.	Chatswood.
Deniliquin.	Hillston.	Cobargo.
Dungog.	Inverell.	Emmaville.
Five Dock.	Mudgee.	Jerilderie.
Gundagai.	Tibooburra.	Mudgee.
Hay.	Tumbarumba.	Tamworth.
Helensburgh.	Tumut.	Wardell.
Inverell.	Wagga.	
Picton.	Wellington.	
Tamworth.	Wentworth.	
Tumbarumba.	West Kempsey.	
Tumut.	Wilcannia.	
Warialda.		
Willoughby.		
Windsor.		
Young.		

POSTERS.

91. Posters giving instructions for the prevention of hydatids, for the treatment of the apparently drowned, and of snake-bite and sunstroke, were freely distributed at beginning of the year for exhibition at court-houses, post-offices, school-houses, railway stations, &c., &c. (*Appendix* Q).

I have, &c.,
J. ASHBURTON THOMPSON,
President.

APPENDICES.

APPENDIX A.

FORMS OF NOTICES, &c., REQUIRED UNDER EVERAL SECTIONS OF THE PUBLIC HEALTH ACT, 1896.

[Section 4.]

, an officer of the Board of Health of New South Wales, is hereby authorised to enter into or upon any dairy premises or milk store of any dairyman or milk-vendor in accordance with the provisions of Section 4, Sub-section 1 of the Dairies Supervision Act, and of Section 4 of the Public Health Act, 1896.

Witness the Seal of the said Board, at Sydney, this day of 189 .

[Section 7.]

, is hereby authorised in accordance with the terms or the Public Health Act, 1896, Section 7, to enter any premises at any reasonable time for the purpose of making inquiry in relation to any matters concerning the public health, with respect to which the sanction, approval, or consent of the Board of Health is required by the said Act.

President.

[Section 8.]

To

THE Board of Health hereby gives you notice that of will, in accordance with the powers conferred on the Board by the 8th Section of the Public Health Act, 1896, enter and inspect the undermentioned premises and work, namely, on the day of next, and on such following days as may be requisite to complete inspection.

The Board requests that you will give the necessary instructions as required by the provisions of the Act above referred to.

Witness the Seal of the said Board, at Sydney, this day of 189 .

[Section 16.]

IN pursuance of the 16th section of the Public Health Act, 1896, the Board of Health hereby require you, as the Local Authority for the District of within from the service hereof to exercise the power to conferred on you by

And you are to take notice that if the said requirement is disobeyed or not complied with the Board will, on the expiration of the time above limited, exercise the said power at your expense.

President, or Secretary.

[Section 17.]

To

THE Board of Health, in accordance with the provisions of section 17 of the Public Health Act, 1896, hereby require you, the Local Authority for the District, within 3 (three) months from the service hereof, to make regulations or by-laws for the preservation of the public health under the power conferred on you by

President, or Secretary.

[Section 24.]

To

IN pursuance of the powers contained in section 24 of the Public Health Act, 1896, I hereby give you notice that the house occupied by situate at or part thereof, together with the drains thereof and the articles therein, as specified in the schedule hereto, will be cleansed and disinfected by the local authority at your expense unless, within twenty-four hours from the receipt of this notice, you inform me that you will yourself cause to be cleansed and disinfected the said house, drains, and articles, within three days of the receipt of this notice, to the satisfaction of a legally qualified medical practitioner; and that you will within the said three days furnish me with a certificate signed by the said legally qualified medical practitioner that the said disinfection has been done to his satisfaction. And I further give you notice that if you inform me as aforesaid, and, nevertheless, do not carry out the disinfection, and furnish me with the certificate as aforesaid within the time specified you will render yourself liable to a penalty not exceeding pounds, in accordance with the provisions of section 24, subsection (II) (c) of the said Act and of By-law made thereunder.

Mayor.

[Section 25.]

YOU are hereby required, in accordance with the provisions of section 25 of the Public Health Act, 1896, to deliver to the infected bedding, clothing, or other articles mentioned below for the purpose of destruction or disinfection. And take notice that if you fail to comply with this requirement you will be liable to a penalty not exceeding £10 (ten pounds).

Mayor, or
Medical Officer of Health, or
Government Medical Officer.

SCHEDULE.

[Section 29.]

TAKE notice that, in the opinion of the Board of Health, it is desirable for the purpose of preserving the public health that the of which you are the should be forthwith closed. You are therefore hereby required, in accordance with the provisions of the 29th section of the Public Health Act, 1896, to close the said forthwith, and to keep it closed until the Board notifies in the *Gazette* that it may be opened without prejudice to the public health.

Witness the seal of the said Board, at Sydney this day of 189 .

[Section 43.]

[Section 43.]
TAKE notice that whereas a nuisance caused by exists on the premises occupied (or owned) by you, now I, Sanitary Inspector to the Local Authority of the District of require you to abate the same within seven days from the date of this notice, and to

Sanitary Inspector.

[Section 49.]
To
WHEREAS it has been duly certified that the source of water supply described as follows:
is so polluted (or unwholesome) as to be unfit for drinking or domestic purposes, now we, the Local Authority for the District of having first obtained the consent of the Board of Health under the powers conferred by section 49 of the Public Health Act, 1896, hereby direct the owner of the said source of water, to close the same within twenty-four hours from the date of this notice, and to keep it closed, and not to use or suffer to be used the said water until we shall, by notice published in the *Government Gazette*, have revoked this direction.

Clerk to Local Authority.

[Section 49.]
TAKE notice that whereas the infectious disease exists in the district of and the Board of Health (or I) have reason to suspect that the said disease has been caused or might be spread by the water contained in the now, therefore, the said source is declared to be temporarily closed in accordance with the powers conferred on the Board (or on me) by the 49th section, subsection (II) of the Public Health Act, 1896, and you are hereby forbidden to use, cause to be used, or suffer to be used, the said water for any purpose whatever, as long as this prohibition remains in force.

Secretary, or President.

Notice.

THIS water is dangerous to health. Use of it is prohibited in accordance with the terms of Section 49, subsection (II) of the Public Health Act, 1896. Persons who disregard this prohibition will be dealt with according to law.

President.

[Section 50.]
To
WHEREAS the waste-waters (or wastes) from your (*i*) fall, or flow, into or carried into the the waters whereof are used for, or in connection with, the supply of water for drinking and domestic purposes, now I, an officer of the local authority for the district of require you to prevent the said from entering the said water or you will subject yourself to the penalty imposed in accordance with section 50 of the Public Health Act, 1896.

Sanitary Inspector, or Clerk to Local Authority.

(*i*) Factory, or wool-wash, or tannery, &c.

[Section 51.]
I HEREBY certify that I have analysed the sample marked handed to me on by , and that it was adulterated by addition of in the proportion of , and that the presence of in the proportion named in the same sample is injurious to health.

Government Analyst.

[Section 52.]
I, hereby authorise , an officer of the Municipal Council for the district of to take samples of foods or drugs in accordance with the provisions of section 52 of the Public Health Act, 1896, and also to inspect any vessel or vessels in which such food or drug is kept.

Mayor.

[Section 56.]
I HEREBY certify that I, an analyst duly appointed by the Board of Health to act under Part VIII of the Public Health Act, 1896, have analysed a sample of delivered to me on the day of by and marked and that the said sample was found by me to be

Analyst.

[Section 58.]
To
WHEREAS complaint has been made to the Board of Health that is being sold contrary to the provisions of Part VIII of the Public Health Act, 1896; and whereas the said complaint was made in accordance with the requirements of section 58 of the said Act, and was supported by the result of a further analysis made by the Government Analyst, acting under direction of the Board: Now, therefore, you, the Local Authority for the district of are directed to procure a sample of such food, and to have the same analysed by an analyst, and to proceed in accordance with the provisions of the said section.

Witness the seal of the Board of Health, at Sydney, this day of 1897.

[Section 80.]
To all whom it may concern:
UNDER and by virtue of the powers contained in the "Public Health Act, 1896," the Board of Health hereby authorises of an officer of the said Board, at any time within the hours of 8 a.m. and 8 p.m., and at all other hours during which business is in progress or is usually carried on in the premises, to enter and examine all premises in any district in which the said Act is being administered for the purpose of carrying out the provisions of the said Act and of the by-laws made thereunder.

Witness the seal of the said Board, at Sydney, this day of 189 .

is hereby authorised to enter the premises situated at between the hours of 8 a.m. and 8 p.m., and at all hours during which business in in progress or is usually carried on, for the purpose of carrying into effect the provisions of the Public Health Act, 1896.

Witness the seal of the said Board of Health, at Sydney, this day of 189 .

[Section 80.] Local Authority for the district of ,
is hereby authorised to enter the premises situated at within the district of between the hours of 8 a.m. and 8 p.m., and at all hours during which business is in progress or is usually carried on, for the purpose of carrying into effect the provisions of the Public Health Act, 1896.
Witness my hand this day of 189 .

Mayor, or Local Authority.

APPENDIX B.

Notification of Infectious Diseases Forms and Notices.

INFECTIOUS DISEASES.

On the 14th of December, 1897, the Governor, by proclamation in the *Government Gazette*, declared the undermentioned to be infectious diseases within the meaning of and for the purposes of Part III of the "Public Health Act of 1896," on and after the first day of January, 1898, namely :—

Scarlet Fever,
Diphtheria and Membraneous Group,
Typhoid Fever.

GOVERNOR'S REGULATIONS UNDER "PUBLIC HEALTH ACT, 1896,"

Published 10th December, 1897.

Part III.

1. The form of certificate for notification of cases of infectious disease shall be the form in Schedule A.
2. Medical officers to public institutions shall, in addition to giving the address at which the case is, give the address whence it was removed.
3. The Local Authority, on receiving a notification certificate signed by a legally qualified medical practitioner, after ascertaining that the house referred to in it is within the district of the said Local Authority, shall copy the certificate in the prescribed register, and shall then transmit it by the first post to the Secretary to the Board of Health.
4. If the certificate has been received by the wrong Local Authority it shall be forthwith sent by the said Local Authority to the Local Authority within whose district the house named in it is situated.
5. Legally qualified medical practitioners shall prepare their claim for fees in the usual official voucher forms, and shall state therein the name of the district in respect of which each claim is made, the date of report, and the patient's name, and shall forward such vouchers to the Secretary to the Board of Health at the close of each month.
6. The form of register to be kept by the Local Authority for a Municipal District shall be the form in Schedule B.
7. The form of register to be kept by the Local Authority for a Police District shall be the form in Schedule C.
8. When the case of infectious disease notified is that of a person of school age, the Local Authority shall forthwith notify the head teacher of the school usually attended by such person, in the form in Schedule D.
9. The Local Authority shall deliver at every premises on which the presence of a case of infectious disease has been notified, the notice ordered to be given in section 26 of the Act in the form in Schedule E.
10. The form in which Registrars of Deaths shall notify the Board of Health that they have registered a death ascribed to an infectious disease shall be the form in Schedule F.
11. The owner or occupier of infected premises on whom notice has been served by a Local Authority to cleanse and disinfect the same or part thereof, and to disinfect or destroy infected articles thereon, who has informed the Local Authority that he will carry out the said cleansing and disinfecting himself, shall, if he fails to complete it to the satisfaction of a legally qualified medical practitioner, as certified by the latter to the Local Authority in writing, within the time named in the said notice, be liable to a penalty not exceeding (£20) twenty pounds.
12. The body of every person who has died of an infectious disease shall be wrapped as soon as may be after death in a wrapper so as to envelope it completely, which wrapper shall be wet with a solution made by mixing five parts of carbolic acid with ninety-five parts of water.
13. Every such body shall be coffined, and the lid of the coffin shall be permanently fastened down, within twenty-four hours after death.
14. The joints of the lower part of every coffin used to contain the body of a person who has died of an infectious disease shall be watertight.
15. Any person wilfully offending against any of the three last preceding regulations shall be liable to a penalty not exceeding (£5) five pounds.

Schedule A.

*** The Medical Practitioner attending or called in to visit must send this Certificate, duly filled and signed, to the Local Authority for the District within which the patient is ill, forthwith, on becoming aware that the disease is one which has been declared to be an infectious disease under section 20 of the Public Health Act, under a penalty for neglect not exceeding five pounds.

I hereby certify that in my opinion (1) , aged sex an inmate of , in the District of (2) , is suffering from .

Date (3) . Signed

Legally Qualified Medical Practitioner.

*** The following must be filled by Medical Officers of Public Institutions, and should also be filled by others whenever the place where the patient is clearly is not the place at which the illness was contracted :—

I am of opinion that the date of attack was (4) , and at that time the patient was living at

---

The following Additional Information is desired.

The patient attends school at (5) I have been informed that the milk consumed by the patient shortly before attack was supplied by (6)

Any matter on or near the premises, probably connected with the occurrence of illness, which requires attention :—

For use of the Local Authority.

The house mentioned stands in the District of [*If the district is correctly assigned repeat here, if incorrect make no entry but transmit the Certificate by post to the proper Local Authority at once.*]

(Signed)

Received [*Date* :] Local Authority.

Notice.—This Certificate, having been received by the proper Local Authority, and the particulars entered in the prescribed register, is to be forwarded forthwith to the Secretary, Board of Health, Sydney.

SCHEDULE B.

THE Form of Register to be kept by the Local Authority for a Municipal District shall be the following :—

Date of Report.	Date of receipt of Report.	Name of Legally Qualified Medical Practitioner reporting.	Patient's Name.	Sex.	Age.	Address of Premises at which Patient is.	Ward of Municipality.	Disease.	Milk Supply.	School.	(1) Residence at date of attack.	(2) Sanitary Inspector visited and served notices.	(3) If a separate Night-soil Service provided?	(3) If Articles removed and disinfected by L. A.?	(4) Premises disinfected.		Any special matter requiring attention.
															By L. Authority.	By Householder.	

(1) If different from address at which patient is. (2) Date. (3) Yes or no. (4) Enter date in the proper column.

SCHEDULE C.

THE Form of Register to be kept by the Local Authority for a Police District shall be the following :—

Date of Report.	Date of receipt of Report.	Name of Legally Qualified Medical Practitioner notifying.	Patient's Name.	Sex.	Age.	Address of Premises at which Patient is.	Disease.	Notices delivered or posted (1).	Schoolmaster warned (1).

(1) Date.

SCHEDULE D.

INFECTIOUS DISEASES—NOTIFICATION AND PREVENTION.

(60 Vic. No. 38, Part III.)

To the Head Teacher of School.

The child (1) , sex , age , having been notified to the Local Authority for the District of as being ill at (2) of the infectious disease (3) neither the patient nor any other child living on the same premises should be admitted to your school, until the provisions of section 28 of the "Public Health Act, 1896," have been complied with.

Date Sanitary Inspector.

1 Full name. 2 Full address. 3 Name of infectious disease.

Section 28. Any person who knowingly or negligently sends to school a child, who within the previous two months has been suffering from an infectious disease or who has been resident in any house in which such disease has existed within the space of six weeks, without furnishing the head teacher of the school with a certificate from a legally qualified medical practitioner that such child is free from disease and infection, and causing the clothes of such child to be disinfected to the satisfaction of a legally qualified medical practitioner, shall be liable to a penalty not exceeding ten pounds.

SCHEDULE E.

LOCAL AUTHORITY FOR THE DISTRICT OF

(60 Vic. No. 38, Part III.)

IN accordance with the provisions of section 26 (III) of the Public Health Act of 1896, your attention is specially directed to the subjoined copy of the said section 26.

To (Signed)

Date of Service. Sanitary Inspector.

26. (I) Where a person ceases to occupy any house or part of a house in which any person has, within six weeks previously, during his occupancy, been suffering from any infectious disease, and either—

(a) Fails to have such house or part of a house and all articles therein liable to retain infection disinfected to the satisfaction of a legally qualified medical practitioner as testified by a certificate signed by him, or such articles destroyed ; or

(b) Fails to give to the owner or occupier of such house or part of a house notice of the previous existence of such disease, he shall be liable to a penalty not exceeding five pounds.

(II) And if, on being questioned by the owner or occupier of, or any person negotiating for the hire of such house or part of a house, as to the fact of there having within six weeks previously during his occupancy been therein any person suffering from any infections disease, he knowingly makes a false answer to such question, he shall be liable to a penalty not exceeding ten pounds.

(III) The Local Authority shall cause their officers to serve notice of the provisions of this section on the occupier of any house or part of a house in which they are aware that there is a person suffering from an infectious disease.

27. Any person letting for hire, or showing for the purpose of letting for hire, any house or part of a house in which or in part of which within his knowledge there has been within the previous six weeks a person suffering from an infectious disease (whether the said house or part of a house has or has not been disinfected) who fails to state that fact to the person negotiating for the hire of the house, or part of a house, or being shown over the house, or part of a house, for the above purpose, shall be liable to a penalty not exceeding twenty pounds.

28. Any person who knowingly or negligently sends to school a child who, within the previous two months, has been suffering from an infectious disease, or who has been resident in any house in which such disease has existed within the space of six weeks, without furnishing the head teacher of the school with a certificate from a legally qualified medical practitioner that such child is free from disease and infection, and causing the clothes of such child to be disinfected to the satisfaction of a legally qualified medical practitioner shall be liable to a penalty not exceeding ten pounds.

30. Any person who—

(a) While suffering from any infectious disease exposes himself without proper precautions against spreading the said disease in any street or public place, shop, inn, theatre, church, chapel, or place of public resort, or any public conveyance, or any vehicle or vessel hired or plying for hire, or enters any public conveyance, vehicle, or vessel aforesaid without previously notifying to the owner, conductor, driver, or master, or, in the case of conveyance by railway, the station-master, that he is so suffering, and obtaining his consent to ride or be carried in the said conveyance, vehicle, or vessel ; or

(b)

(b) Being in charge of any person so suffering so expose such sufferer; or
(c) Gives, lends, sells, transmits, removes, or exposes without previous disinfection, any bedding, clothing, rags, or other things which have been exposed to infection from any such disease, shall be liable to penalty not exceeding five pounds unless such person satisfy the Court that he was ignorant of the existence of such disease: Provided that no proceedings under this section shall be taken against persons transmitting or removing with proper precautions any bedding, clothing, rags, or other things, for the purpose of having the same disinfected or destroyed.

SCHEDULE F.

NOTIFICATION OF DEATH FROM INFECTIOUS DISEASE.

(60 Victoria No. 38, section 22.)

IN accordance with the provisions of the Public Health Act, 1896, I notify you that the death of (1) aged , who died at (2) on (3) was certified by (4) who is (5) a legally-qualified medical practitioner, as due to the infectious disease (6) and was registered by me on this date.

(Signed)

District Registrar.

To the Secretary, Board of Health, Sydney. (Date)

(1) Name. (2) Full address, and name of Municipal or Police District. (3) Date. (4) Name of person certifying. (5) Insert the word "not" if necessary. (6) Name of infectious disease.

[Advertisement inside the front cover of books of notification forms.]

INFECTIOUS DISEASES NOTIFICATION.

(60 Vic. No. 38, Part III.)

MEMORANDUM.

EVERY legally qualified medical practitioner attending on or called in to visit a patient, on becoming aware that the patient is suffering from an infectious disease to which this Act applies, must send forthwith to the Local Authority for the district within which the patient lies ill a notification certificate in the form prescribed by the Board of Health. The Board will pay to every legally qualified medical practitioner for each certificate duly sent by him in accordance with the Act a fee of 3s. 6d. The penalty for neglect is a fine not exceeding £5.

*** Notification is not expected in any case until the typical symptoms are recognisable.

The following diseases have been declared to be infectious diseases within the meaning of this Act:—

1. Scarlatina or Scarlet Fever.
2. Diphtheria and Membranous Croup.
3. Typhoid (or Enteric) Fever.

NOTE.—This list may be varied from time to time by proclamation in the *Gazette*

For purposes of distribution of cases it is requested that the following terms be accepted as the long limit of the latent period in the diseases named:—

1. Scarlet Fever, 7 days.
2. Diphtheria and Membranous Croup, 7 days.
3. Typhoid (or Enteric) Fever, 21 days.

The additional information desired is voluntary. It is hoped that medical practitioners will avail themselves of the opportunity thus afforded for drawing attention of the Local Authority to circumstances which may be concerned in the causation, or the prevalence in particular localities, of cases of infectious disease with a view to procuring the sanitary improvement required.

[Advertisement outside back cover of books of notification forms.]

BOOKS of Forms for notification are supplied to legally qualified medical practitioners gratuitously on application to the Local Authority for the district within which they reside.

Certificates may be sent to the Local Authority for the district within which the patient is, free by post. If the patient is reported in a municipal district then the space before the words "District of" in the address must be filled by inserting the word "Municipal"; but if outside municipal boundaries, then by inserting the word "Police."

In order to comply with the law, notifications must be forwarded in the speediest way; and when the name of the district is known within which the case to be reported is, then such way may be by post or messenger. But when the case is not in a municipality, but in a police district (of which the boundaries are not commonly known), the speediest way may sometimes be by handing the notification to the nearest Police officer for transmission to the proper Local Authority. Accordingly, the Inspector-General of Police has instructed all his officers to take charge of and to transmit to the proper quarter notifications concerning cases of infectious disease reported in districts administered by Police Local Authorities only; but it must be noted that this arrangement has been made merely for convenience of notifiers, and does not relieve them of the direct responsibility thrown upon them by section 21 (b) of the Act.

Accounts for payment must be made out on official voucher forms; the name of the patient in respect of whose case the claim is made and the date of notifying must be mentioned. They must be transmitted to the Secretary to the Board of Health at the close of each month.

COVERING LETTER ADDRESSED TO MUNICIPAL LOCAL AUTHORITIES.

Sir,

I have the honor, by direction, to enclose for your information and guidance a copy of the *Government Gazette* containing a Proclamation of certain diseases to be infectious diseases for the purposes of the Public Health Act, Part III, and Regulations made under that Act with reference to the said Part.

2. I am also to inform you that a parcel has been despatched to you this day, which contains the following papers for your use in executing this Part of the Act:—

Books of Notification Forms.
A Register.
A Form of Notice to School-teachers.
A Form containing Section 26 of the Act.
A Form containing Section 32 of the Act.
The Board's Rules for Disinfection.
Envelopes.

3. The Books of Notification Forms are to be delivered gratuitously to legally qualified medical practitioners who make application to you for them, provided the applicants reside within the boundaries of your district. The number of books now forwarded is believed to be slightly in excess of the number of such practitioners.

4. In view of the spread of infection among and by school-children, Local Authorities are required by Regulation 8 to send notice to the school-teacher in the prescribed form forthwith on becoming aware that a child of school-age is suffering from an infectious disease. To facilitate performance of this duty the accompanying forms have been drawn up and printed for your use. (See Schedule D, p. 24 above.)

5. Local Authorities are required by Section 26 of the Act to serve a copy of that section on the occupier of every house in which a case of infectious disease is known to have occurred. Forms to aid your authority in discharging this duty are provided herewith; and it will be noticed that advantage has been taken of the opportunity to reprint certain other sections, with the contents of which it is specially desirable that occupiers of infected premises should be made acquainted. (See Schedule E, p. 24, above.)

6. By Section 32 of the Act it is ordered that the body of every person who has died of an infectious disease shall be buried within thirty-six hours of death (except by a permission which it will seldom be necessary to give); and it lays the responsibility of seeing that such burial is carried out within the time named on the occupier of the infected premises, under a heavy penalty. In order to diminish the risk of hardship which might arise through ignorance of this provision of the law, and at the same time to avoid the annoyance which would be felt by occupiers if their attention were directed to it as soon as the Local Authority became aware of the presence on the premises of a case of infectious disease, copies of the section printed, together with the regulations made under it, are now forwarded to you, with a view to your supplying one to each undertaker carrying on business in your district.

7. A copy of the Board's Rules for disinfection is also enclosed for guidance of your Authority in executing the Part, and especially the provisions of Section 25 (i and ii).

8. The supply of official envelopes is to be used only for transmitting to the proper Local Authority notifications wrongly addressed to you, and for transmitting to the Secretary to the Board notifications rightly addressed to you after you have entered the particulars in the Register now forwarded.

9. It is scarcely to be expected that medical practitioners will invariably assign the houses in which they have visited cases of infectious disease to the district within which they really stand; and yet, unless this information is correctly given, cases will unavoidably be ascribed in the records of the Board to districts to which they do not properly belong. In order to prevent this a separate certificate will be found at the foot of the notification form, to be filled by you whenever the assignment has been correctly made. The boundaries of your district being thoroughly well known to your Authority's officers, a wrong assignment will be at once detected by you; and, when that is the case, no entry should be made either in your Register or in the supplementary certificate now referred to, but the notification should be transmitted in one of the official envelopes to the Authority within whose district you believe the house to stand.

10. The law (paragraph I (a) of Section 21) requires the head of the family, &c., to notify the presence of cases of infectious disease, as well as the medical practitioner in attendance thereon. Your Authority will take advantage of any information which may thus be given by the public, but notifications received from legally qualified medical practitioners only are to be entered in the Register.

11. From the general tenor of Part III you will perceive that its object is by no means inquisitorial. It is designed to give your Authority better means of preserving the public health within the district than have hitherto been at its command. It does this in part by giving information of the presence and whereabouts of cases of infectious (or preventable) disease, thus enabling your Authority to take those steps towards avoiding the spread of such diseases by contagion which the various sections of the Part empower and enjoin it to take. It also operates by enabling a watch to be kept on those localities in which infectious diseases most often occur, or prove most virulent when they do occur: in this way attention will be drawn in course of time to those parts of the district in which the more important faults of local sanitation exist.

I have, &c.,
C. A. SIMMS,
Secretary.

The Clerk to the Local Authority, Municipal District of

COVERING LETTER ADDRESSED TO POLICE LOCAL AUTHORITIES.

Sir,

I have the honor, by direction, to enclose for your information and guidance a copy of the *Government Gazette* containing a Proclamation of certain diseases to be infectious diseases for the purposes of the Public Health Act, Part III, and of Regulations made under that Act with reference to the said Part.

2. I am also to inform you that a parcel has this day been despatched to you which contains the following papers for your use in executing this part of the Act:—

A Register.
Books of Notification Forms.
Forms of Notice to School-teachers.
Forms of Notice of the provisions of Section 26.
Forms of Notice of the provisions of Section 32.
A copy of the Board's Rules for Disinfection.

3. You will observe that Regulations 6 and 11 have no application within your district.

4. The books of notification forms are to be delivered gratuitously to legally qualified medical practitioners who make application to you for them, provided the applicants reside within the boundaries of your district, and outside the boundaries of any municipal district. The number of books now forwarded is believed to be slightly in excess of the number of such practitioners.

5. In view of the spread of infection among and by school-children, Local Authorities are required by Regulation 8 to send notice to the school-teacher in the prescribed form forthwith on becoming aware that a child of school-age is suffering from an infectious disease. To facilitate the performance of this duty the accompanying forms have been drawn up and printed for your use; they may be delivered by post or otherwise, as may be most convenient.

6. Local Authorities are required by Section 26 of the Act to serve a copy of that section on the occupier of every house in which a case of infectious disease is known to have occurred. Forms to aid you in discharging this duty are provided herewith; and it will be noticed that advantage has been taken of the opportunity to reprint certain other sections, with the contents of which it is specially desirable that occupiers of infected premises should be made acquainted. This notice also may be served by post, but in that case the letter must be registered (see Section 82).

7. By Section 32 of the Act it is ordered that the body of every person who has died of an infectious disease shall be buried within forty-eight hours of death (except by a permission which it will seldom be necessary to give); and it lays the responsibility of seeing that such burial is carried out within the time named on the occupier of the infected premises, under a heavy penalty. In order to diminish the risk of hardship which might arise through ignorance of this provision of the law, and at the same time to avoid the annoyance that would be felt by occupiers if their attention were directed to it as soon as the Local Authority became aware of the presence on the premises of a case of infectious disease, copies of the section, printed together with the regulations made under it, are now forwarded to you, with a view to your supplying one to each undertaker carrying on business in your district.

8. The law (paragraph I (a) of Section 21) requires the head of the family, &c., to notify the presence of cases of infectious disease, as well as the medical practitioner in attendance thereon. You will take advantage of any information which may be thus afforded by the public; but notifications received from legally qualified medical practitioners only are to be entered in the Register.

9. It is scarcely to be expected that medical practitioners should be acquainted with the boundaries of police districts; and in order to avoid delay in transmitting notifications, the Inspector-General has been pleased to allow notifications concerning cases of infectious disease which occur in houses standing in such districts, and outside municipal boundaries, to be delivered to the nearest police officer, who will transmit them by post to the Police Local Authority within whose district the house referred to stands. At the foot of the notification form will be found a separate certificate for use of the Local Authority, which is intended to secure reasonable accuracy in the assignment of cases to the proper districts in the central Register kept in this Department. In the case of police districts this certificate will often be best filled by the police officer first receiving the notification; there is no objection to its being so filled, although it is printed as for use of a Local Authority. If, however, a wrong assignment is detected, no entry should be made either in the notification form or in your Register, and the notification should be transmitted by post to the Authority within whose district it is believed the case has really occurred.

I have, &c.,
C. A. SIMMS,
Secretary.

The Local Authority, Police District of

APPENDIX C,

Model By-laws for Common Lodging-Houses.

PUBLIC HEALTH ACT (60 VIC. No. 38).

Registration and License.

1. In these By-laws "Sanitary Inspector" means the person appointed by the Local Authority to perform the duties of inspection referred to in these By-laws.

2. These By-laws shall apply to every common lodging-house which the Local Authority, after inspection, shall require to be registered under Part IV of the Public Health Act, 1896, by a notice in writing served on the keeper thereof.

3. Notice to register his premises shall be served on the keeper of any house deemed by the Local Authority for the district to be a common lodging-house, in the form given in Schedule A.

4. Every application to register shall be entered in a book to be kept for the purpose in the form given in Schedule B.

5. Every application to register shall be accompanied by a certificate in the form given in Schedule C, signed by a Stipendiary or Police Magistrate or the Chief Police Officer of the District, that the applicant is a fit and proper person to keep a licensed common lodging-house, and by payment of the sum of five shillings, which shall be the fee for licensing, and which shall be returned to the applicant if no license is issued to him.

6. Premises which have been registered shall be re-inspected by the Sanitary Inspector within seven days of the date of registration, and within seven days of such re-inspection he shall serve on the applicant a copy of these By-laws and a notice in the form given in Schedule D, in which shall be stated the number of lodgers to be accommodated on the premises and in each sleeping room, if the premises are licensed, and the improvements (if any) he must make before a license will be issued to him in respect of the said premises, and in the said notice he shall be required to make the said improvements (if any) within a time to be therein fixed.

7. Before expiration of the time prescribed by the notice the premises shall be again inspected, and the fact that the required improvements have or have not been made shall be certified to the Local Authority by the Sanitary Inspector, in the form given in Schedule E.

8. If the Sanitary Inspector shall have certified that the required improvements have been made the Local Authority shall as soon as may be after receipt of the said certificate issue a license to the keeper of the premises.

9. The form in which license shall be granted by the Local Authority to an approved person (hereinafter called "The Keeper") in respect of approved premises shall be the form given in Schedule F.

10. A license may be revoked at any time if in the opinion of the Local Authority the keeper ceases to conduct his common lodging-house, or conducts it improperly or in a disorderly manner, or if the premises are not habitually kept in a clean and sanitary state, or for any other cause deemed by the Local Authority to be sufficient.

11. Every license shall cease and determine on the 31st day of December in the year during which it was issued.

12. In the month of December in each year every keeper shall make written application to the Local Authority to have his license renewed for the ensuing year, and with his application shall tender a license fee of five shillings.

13. On or before the 15th day of December in each year the Sanitary Inspector shall inspect and report upon each licensed common lodging-house to the Local Authority. Any repairs, alterations, or improvements which may be necessary shall be forthwith ordered by notice in writing in the form given in Schedule G delivered to the keeper, to be made within a time fixed in the notice.

14. Every person who keeps an unlicensed common lodging-house open for the reception of lodgers after being required to register by the Local Authority, by notice in writing as hereinbefore provided, shall be liable to a penalty not exceeding (£10) ten pounds: Provided, nevertheless, that during the time which elapses between giving the notice mentioned under By-law 3 and the issue or refusal of license; and also during the time which may elapse between the serving of a notice under By-law 13, to repair, alter, or improve licensed premises, and the end of the time named in such notice, no keeper of a house deemed by the Local Authority to be a common lodging-house, shall be liable to any penalty for continuing to receive lodgers in such house.

General.

15. Every common lodging-house shall be maintained at all times in good structural repair, and clean in every part; and shall be provided with water supply, drainage, and ventilation to the satisfaction of the Local Authority.

16. Every common lodging-house shall be provided with bath accommodation to the satisfaction of the Local Authority.

17. A keeper shall not at any time cause or suffer any room which may be appointed for use as a kitchen, scullery, bath-room, or living-room, to be used as a sleeping apartment.

18. Every keeper shall cause every room which may be appointed for use as a sleeping-room to be furnished with such bedsteads and bedding, and with such a supply of bedclothes, and of necessary utensils as the Local Authority may deem sufficient for the requirements of the lodgers authorised to be accommodated therein.

19. A keeper shall not at any one time receive, cause, nor suffer to be received into a common lodging-house, nor into any room therein, a greater number of lodgers than the number fixed by the Local Authority as the maximum number authorised to be received into such house or such room respectively, and specified in the license.

20. The Local Authority may from time to time alter the number of lodgers authorised to be received at any one time in any common lodging-house or in any room of such house; and after written notice of such alteration shall have been served on a keeper, he shall not receive, cause, or suffer to be received therein a greater number of lodgers than the number specified in such notice.

21. For the purposes of these By-laws every two children under the age of 10 years may be reckoned as one adult.

22. Every keeper shall exhibit in each sleeping-room a notice on which is stated the number assigned to the room by the Local Authority in the license issued to him, and the number of adults each room is licensed to accommodate; such notice shall be put up or fixed in a suitable and conspicuous position in such room and in such manner that the words and figures in such notice shall be at all times clearly and distinctly visible and legible.

Separation of the sexes, &c.

23. Every keeper shall cause every room which may be appointed for occupation as a sleeping apartment by two or more married couples to be so fitted that every bed when in occupation shall be effectually screened off from the view of the occupant of every other bed by a partition of wood or other solid material, fixed so as to allow adequate access to the bed it is intended to screen, and so as to extend upwards throughout the whole length and breadth of such bed to a height of 6 feet and 6 inches above the floor, and downwards to within 6 inches of the floor and no lower.

24. A keeper shall not, except in such cases as are hereafter specified, cause or suffer any male person above the age of 10 years to use or occupy any room which may be occupied or used as a sleeping-room by any female person; such keeper shall not, except in such cases as are hereafter specified, cause or suffer any female person to use or occupy any room which may be used or occupied as a sleeping apartment by any male person above the age of 10 years: Provided that this By-law shall not be taken to prohibit the occupation by a husband and wife of any room which may not be used or occupied by any other person of either sex above the age of 10 years, or which may be used in accordance with the By-law in that behalf as a sleeping apartment for two or more married couples.

25. A keeper shall not cause nor suffer any bed in any room, which may be used as a sleeping-room by male persons above the age of 10 years, to be occupied at any one time by more than one such person.

Sleeping-rooms.—

Sleeping-rooms—Ventilation, &c.

26. Each sleeping-room must provide not less than 500 cubic feet of air space for each adult inmate; must have at least one window, capable of being opened to the external air both at top and bottom; and must have either an open fireplace and chimney, or else a ventilator or ventilators, having in the aggregate 24 square inches of free opening for the passage of air to each adult lodger the room is licensed to accommodate.

27. Every keeper shall cause the window of every room appointed for sleeping to be opened and to be kept fully opened for one hour at least in the forenoon and for one hour at least in the afternoon of every day.

28. Every keeper shall cause the bedding of every bed to be removed as soon as conveniently may be after vacation by any lodger, and shall cause all such bedding to be freely exposed to the air for one hour at least in every day.

29. A keeper shall not cause nor suffer any lodger to occupy any bed at any time within the period of eight hours after such bed shall have been vacated by the last preceding occupant thereof.

Sleeping-rooms—Furniture and cleansing.

30. Every keeper shall provide for the use of lodgers a sufficient number of basins, or other receptacles for water, of adequate capacity, and suitably placed, a sufficient supply of water, and a sufficient supply of clean towels for use in connection with such receptacles for water; he shall keep the receptacles clean, and shall renew the supply of towels from time to time as often as may be requisite for cleanliness.

31. Every keeper shall cause all bedding and every bedstead to be thoroughly cleansed from time to time, as often as shall be requisite to keep the same free from vermin and in a clean and wholesome condition.

32. Every keeper shall cause the floor of every room or passage or stair to be thoroughly swept once at least in every day before the hour of ten in the forenoon, and to be thoroughly scrubbed and washed once at least in the course of every week, namely, on day in each week.

33. Every keeper shall cause every window, every wall, and every fixture of wood, stone, or metal, and every painted surface in such house to be thoroughly cleansed from time to time, as often as may be requisite to keep the same clean, and as often and in such manner as the Local Authority may order.

34. Every keeper shall cause all solid or liquid filth or refuse to be removed from every room in his house once at least in every day before the hour of ten in the forenoon, and shall once at least in every day cause every vessel, utensil, or receptacle for such filth or refuse to be thoroughly cleansed.

Privy accommodation, &c.

35. Every keeper shall provide and maintain as many separate water-closets or privies as in the opinion of the local authority shall be necessary for the decent accommodation of lodgers of both sexes.

36. Every keeper shall cause the seat, floor, and walls of every water-closet or privy to be thoroughly cleansed from time to time, as often as may be necessary to keep the same in a clean and wholesome condition, and shall keep every part of every water-closet or privy in good structural repair, and adequately supplied with water.

37. Every keeper shall cause every yard and open space on premises to be maintained at all times in good order, and to be thoroughly cleansed from time to time, as often as may be necessary to keep the same in a clean and wholesome condition.

38. Every keeper shall provide and maintain an ash or dust box furnished with a cover; he shall cause all ashes and dry household refuse to be carefully put therein, and shall keep the same constantly covered; he shall take care that the said refuse is regularly removed from the premises not less than once in each week.

Infectious Disease.

39. Every keeper, immediately after he has been informed, or has reasonable cause to believe, that any lodger in his house is ill of any disease which has been proclaimed to be an infectious disease under section 20 of the Public Health Act, 1896, shall inform the Sanitary Inspector thereof by delivering a written notice at the Council Chambers, in which shall be specified the name of the patient, if known, and the disease from which he is suffering or is believed to be suffering.

40. Every keeper, immediately after he has become aware that any lodger is ill of any infectious disease, shall adopt all such precautions as may be necessary to prevent the spread of such infectious disease, and shall take any other precautions which may be directed by the Sanitary Inspector.

Such keeper shall not at any time while such lodger is suffering from such infectious disease cause or allow any other person, except the wife or other relative of such lodger, or except a person voluntarily in attendance on such lodger, to use or occupy the same room as such lodger.

Such keeper shall, immediately after the recovery, removal, or death of such lodger, give written notice thereof to the Sanitary Inspector.

41. Every keeper shall keep a register in which he shall enter the name, age, and sex of every lodger accommodated in his house, and the period during which every lodger lived at his house, in the form given in Schedule H.

Disorderly Lodgers.

42. The keeper who lodges or harbours thieves, or reputed thieves, or suffers or permits thieves or reputed thieves to meet or assemble on his premises, or suffers or permits the deposit of goods therein which he has reasonable cause to suspect have been stolen, shall be liable to a penalty not exceeding (£20) twenty pounds.

43. The keeper who permits riotous or disorderly conduct, gambling, or drunkenness on his premises shall be liable to a penalty not exceeding (£10) ten pounds.

44. Every keeper shall put up or affix a copy of the By-laws for the time being in force in the district, in a suitable and conspicuous position in his common lodging-house, and shall maintain the same at all times clearly and distinctly legible and visible.

45. Every keeper who shall offend against any of the foregoing By-laws shall be liable for every such offence to a penalty not exceeding (£5) five pounds.

SCHEDULE A.

LOCAL AUTHORITY FOR THE DISTRICT OF TO OF

THE premises situated at , in the District of , occupied by , as a common lodging-house, having been inspected by the Local Authority, it was resolved at a meeting of the Local Authority, held on the day of 189 , that the said premises should be registered with them under Part IV of the Public Health Act, 1896: Now, therefore, I, , Clerk to the Local Authority, require you (name) to make written application to me to register the said premises as a common lodging-house within seven days of the date hereof; and with the said application you shall furnish me with a certificate of good character signed by the Chief Officer of Police in the District of , and you shall at the same time tender me a licensing fee of (5s.) five shillings.

Clerk to the Authority.

Date

SCHEDULE

SCHEDULE B.

Date of application
Applicant's name
Address of premises
Date of inspection after registration
Total number of rooms in house
Total number of persons allowed to be harboured at any one time in the house.

Detail of Rooms.

	Description or use of each room.	Number assigned to each room by Local Authority.	Dimensions.				Number of persons allowed to sleep in the room.
			Height.	Length.	Breadth.	Cubic Space.	
			Feet.	Feet.	Feet.		
Ground Floor ...							
First Floor ...							
Second Floor ...							
Third Floor ...							

A license was (1) to in respect of the above premises this day of 189 .

(1) Refused or issued

Clerk to the Local Authority.

SCHEDULE C.

I, A. B., hereby certify and declare that C. D., of , in the District of , is a fit and proper person to hold a license to keep a common lodging-house at (address) , in the District of .

(Signed) A. B.,

Stipendiary or Police Magistrate, or Chief Officer of Police in the District.

Date

SCHEDULE D.

LOCAL AUTHORITY FOR THE DISTRICT OF TO OF .

WHEREAS a common lodging-house at , situated in the District of , of which you are the keeper, has been registered; and whereas the Local Authority have powers conferred upon them by statute to license the said premises as a common lodging-house: Now, therefore, I, , Sanitary Inspector to the said Local Authority, deliver to you the following statement of repairs, alterations, or improvements which must be made in the said premises within days of the date hereof, failing which the Local Authority will not license the said premises.

I also hand you the following statement of the total number of lodgers you will be permitted to harbour at any one time on the said premises and in any one room of the said premises :—

	Description or use of each room.	Number assigned to each room by Local Authority.	Dimensions.				Number of persons allowed to sleep in a room.
			Height.	Length.	Breadth.	Cubic Space.	
			Feet.	Feet.	Feet.		
Ground Floor...							
First Floor ...							
Second Floor ...							
Third Floor ...							

And I herewith hand you a copy of the By-laws made by the Local Authority under Part IV of the Public Health Act, 1896.

Dated this day of 189 .

Sanitary Inspector.

SCHEDULE E.

I HEREBY certify that A.B., being the keeper of a common lodging-house at , in the District of , has carried out to my satisfaction the improvements, alterations, or repairs which he was required to make by a notice delivered him in accordance with the requirements of the 6th By-law, a copy of which notice is attached hereto.

Sanitary Inspector.

To the Clerk to the Local Authority.

SCHEDULE F.

LOCAL AUTHORITY FOR THE DISTRICT OF TO OF

WHEREAS in pursuance of statutory provision in that behalf, the common lodging-house situated at in the District of , of which you are the keeper, has been duly licensed by the Local Authority for the said District: Now, I, , Clerk to the said Local Authority, do hereby give you notice that in the exercise of the powers conferred upon them in that behalf, the said Local Authority have fixed as the maximum number of lodgers authorised to be received at any one time into such house, and into the several sleeping-rooms therein, the number specified in respect of such house, and of each of such rooms in the Schedule hereto appended.

SCHEDULE.

SCHEDULE.

District of
Common Lodging-house situated at
Name of Keeper
The maximum number of lodgers authorised to be received at any one time in this house is .

The maximum number of lodgers authorised to be received at any one time in each of the several sleeping-rooms in this house is the number specified in respect of each such room in the appropriate column of the following Table :—

	Number of Sleeping-room.	Dimensions of Room.				Maximum number of Lodgers.
		Length.	Breadth.	Height.	Cubic Space.	
Ground floor						
First floor.....						
Second floor						
Third floor						

For the purposes of this notice every two children under the age of 10 years may be counted as one lodger.
Witness my hand this day of , 189 .

Clerk to the Local Authority.

SCHEDULE G.

TAKE NOTICE that I, , Sanitary Inspector to the Local Authority for the District of , hereby require you, , to make the alterations, improvements, or repairs as specified below in the licensed common lodging-house situate at , of which you are the keeper, within days of the date hereof, failing which the license for the common lodging-house will not be renewed.

Sanitary Inspector.

SCHEDULE H.

Lodger's name.	Lodger's sex.	Lodger's age.	Date of beginning to lodge.	Date of ceasing to lodge.

APPENDIX D.

LIST OF PERSONS APPOINTED TO BE ANALYSTS.

(From *Government Gazette* No. 264, of 2nd April, 1897.)

Office of the Board of Health, Sydney, 16th March, 1897.

NOTICE is hereby given that the undermentioned gentlemen have been nominated Analysts for the purposes of the Public Health Act, 1896 (60 Victoria No. 38), with power to act until the date of the first meeting of the Board of Health in January, 1898, on which date the said appointments shall cease and determine, viz. :—

Mr. James Alexander Schofield, F.C.S., The University, Sydney ;
Mr. Charles Henry Albert Helms, M.A., F.C.S., Ph.D., 8, Bridge-street, Sydney ;
Mr. William Adam Dixon, F.I.C., F.C.S., Technical College Laboratory, Ultimo ;
Mr. Andrew James Dixon, F.C.S., Australian Smelting Works, Dapto ;
Mr. George Alexander Byrn, Technical College Laboratory, Ultimo ;
Mr. James Laker MacMillan, F.C.S., 17, Clarence-street, Sydney ;
Mr. Alexander Orr, 109, Pitt-street, Sydney.

By order of the Board,
C. A. SIMMS,
Secretary.

APPENDIX E.

FOOD STANDARDS ADOPTED BY THE BOARD OF HEALTH ON THE 20TH JULY, 1897.

MILK shall contain not less than 12¼ per centum of genuine milk-solids, of which at least 3¼ per centum shall be butter fat; the milk-solids to be obtained by drying any convenient sample on a water-bath for three hours until constant in weight; then upon subtraction of 3¼ per centum of fat the remainder shall be taken as the co-efficient of "solids not fat," and shall be at least 9 per centum.

BUTTER shall contain not less than 83 per centum of genuine butter-fat.

TEA shall not contain more than 8 per centum of mineral matter, calculated on the tea dried at 100 degrees Centigrade, of which at least 3 per centum shall be soluble in water, and the tea as sold shall yield at least 28 per centum of extract.

VINEGAR shall contain not less than 3 per centum of ascetic acid ($C_2 H_4 O_2$), and not more than one-thousandth part by weight of sulphuric acid.

SPIRITUOUS LIQUORS.

BRANDY, WHISKEY, AND RUM shall be not more than 25 degrees underproof.
GIN shall be not more than 35 degrees underproof.

APPENDIX F.

PUBLIC HEALTH ACT, 1896—PART VIII.

RETURN showing Articles purchased, results of Analysis of same, and proceedings taken for breach of the Act, during the year 1897.

W. M. HAMLET, F.I.C., F.C.S., Government Analyst.

No.	Date of Purchase.	Article.	Brand.	Quantity purchased.	Price of Sample.	Purchased from—	Manufactured by—	If divided according to section 56 or not.	Result of Analysis.	Subsequent proceedings.				Remarks.
										Date.	Magistrate and Court.	Section of Act.	Result.	
					s. d.									
1	10 Sept.	Oatmeal	"Star"	7 lb. bag	1 3	J. Kidman, Oxford-street	Robert Harper & Co.	Yes	Genuine oatmeal	....	.....	..	.....	
2	10 ,,	,,	Parson's best	6 ,,	0 8½	H. R. Cooper, 107, George-street W.	Parsons Bros. & Co.	,,	,,	....	.....	..	.....	
3	10 ,,	,,	.....	6 ,,	0 7½	Joseph Roberts, Oxford-street	Geo. Henderson, N.Z.	,,	8 % of wheat meal	15 Dec.	Mr. Edwards, S.M., Central	62	Fine, £1; costs, £1 7s. 10d.	Fine and costs paid.
4	10 ,,	,,	"Quaker Oats"	2 lb. packet	0 8	Jesse Dwyer, 145, George-street N.	American Cereal Co., Chicago	,,	Genuine oatmeal	....	.....	..	.....	
5	10 ,,	,,	"Uncle Toby's Rolled Oats"	2 ,,	0 6	C. P. Downton, 234, George-street N.	.....	No	,,	....	.....	..	.....	
6	10 ,,	,,	"Imperial"	7 lb. bag	1 2	McClelland and Roach, George-street	Clifford, Love, & Co.	,,	15 % of wheat meal	20 Dec.	Mr. Delohery, S.M., Central	62	Fine, £1; costs, £1 7s. 10d.	,, ,,
7	10 ,,	,,	"Little Folks"	6 ,,	0 10	R. W. Newall and Sons, 337, Pitt-street	J. Gillespie & Co.	,,	20 % ,,	15 Dec.	Mr. Edwards, S.M., Central	62	Fine, £2; costs, £2 15s. 8d.	,, ,,
8	10 ,,	,,	"Gillespies"	4 ,,	0 4½	A. E. Roberts, 86, George-street W.	,,	,,	Genuine oatmeal	....	.....	..	.....	
9	10 ,,	,,	.....	7 ,,	1 0	J. F. Ashwood, 327, George-street S.	J. F. Ashwood	Yes	,,	....	.....	..	.....	
10	12 Oct.	Pepper	"Star" white pepper	¼ lb. tin	0 4	W. Hughes and Son, 231, William-street.	Robert Harper & Co.	,,	Genuine pepper	....	.....	..	.....	
11	12 ,,	,,	Mixed white pepper	¼ ,,	0 3	P. Dimond, 172, William-street	Not known	No	15 % of rice flour	....	.....	..	.....	Labelled "Mixed with rice flour.
12	12 ,,	,,	Finest ground white pepper	¼ ,,	0 2½	D. McKinnon, 122, William-street	,,	,,	10 % ,,	....	.....	..	.....	Labelled "Mixture of pepper and farina.
13	12 ,,	,,	Finest prepared white pepper	¼ ,,	0 3½	Denis Molloy, 106, William-street	S. Freeman and Sons	,,	10 % ,,	....	.....	..	.....	
14	12 ,,	,,	"Scimitar" mixed white pepper	¼ ,,	0 3	H. Chapman, 100, William-street	Not known	Yes	18 % of rice flour and potato starch.	....	.....	..	.....	
15	12 ,,	,,	"Magnet" finest mixed white pepper.	¼ ,,	0 2	T. Anderson, 74, William-street	T. Anderson	No	20 % of rice flour	....	.....	..	.....	
16	15 ,,	,,	Finest ground black pepper	¼ ,,	0 3	A. McLachlan, 59, Erskine-street	Not known	Yes	12 % of rice flour and starch	15 Dec.	Mr. Edwards, S.M., Central	62	Fine, £1; costs, £1 6s. 6d.	Fine and costs paid.
17	15 ,,	,,	Finest quality white pepper	¼ ,,	0 2½	Craigie and Clift, Kent and Erskine Sts.	J. Gillespie & Co.	No	20 % of rice flour, arrow-root, and sweepings.	16 ,,	,,	62	Fine, £4; costs, £2 12s.	,, ,,
18	20 ,,	,,	Finest ground white pepper. Guaranteed pure.	¼ ,,	0 3½	Fortescue and Sons, 115, Glebe Road	Parsons Bros. & Co.	,,	Genuine pepper	....	.....	..	.....	
19	20 ,,	Black pepper	.....	½ lb. loose	0 2½	Charlie War Son, 157, George-street W.	Not known	Yes	15 % of rice flour	15 Dec.	Mr. Edwards, S.M., Central	62	Fine, £1; costs, £1 6s. 6d.	,, ,,
20	20 ,,	,,	.....	¼ ,,	0 2½	Sam and Harr Warley, 129, George-st. W.	,,	,,	15 % of rice flour, wheat flour, and tapioca.	15 ,,	,,	62	Fine, £2; costs, £1 12s.	,, ,,

RETURN showing Articles purchased, results of Analysis of same, and proceedings taken for breach of the Act; during the year 1897—*continued.*

No.	Date of Purchase.	Article.	Brand.	Quantity purchased.	Price of Sample.	Purchased from—	Manufactured by—	If divided according to section 55 or not.	Result of Analysis.	Subsequent proceedings. Date.	Magistrate and Court.	Section of Act.	Result.	Remarks.
					s. d.									
21	20 Oct.	Black pepper	.....	¼ lb. loose..	0 2½	H. R. Cooper, 107, George-street W.	Not known	Yes	20 % of rice flour and arrowroot.	15 Dec.	Mr. Edwards, S.M., Central	62	Fine, £1; costs, £1 6s. 6d.	Fine and costs paid.
22	8 Nov.	Sulphate of copper..	.....	1 lb.	0 4	Holdsworth, Macpherson, & Co.	,, ...	,,	Genuine copper sulphate..	....	.....	..	.....	
23	8 ,,	,, ..	.....	1 ,, ...	0 4	F. Lassetter & Co., George-street	,, ...	,,	,, ,, ..	....	.....	..	.....	
24	8 ,,	,, ..	.....	1 ,, ...	0 6	J. Macintosh and Son, Pitt-street	,, ...	No	,, ,, ..	....	.....	..	.....	
25	8 ,,	,, ..	.....	1 ,, ...	0 6	H. H. Groth, 529, George-street	,, ...	,,	86 % of sulphate of iron ..	....	.....	..	.....	No prosecution. Not purchased for human consumption or treatment.
26	12 ,,	Evaporated cream..	"St. Charles"	1 tin	0 8	Anthony Hordern and Sons, George-st....	St. Charles Condensing Co., Illinois, U.S.A.	,,	Evaporated skimmed milk	....	.....	..	.....	
27	12 ,,	Condensed milk ..	"Gold Medal"	1 ,, ...	0 5½	Fortescue and Sons, 115, Glebe Road ..	Anglo-Swiss Condensed Milk Co., Hamar.	,,	Made from genuine milk..	Taken for preliminary information with a view to future action.				All of these condensed milks would yield a milk much inferior in value to genuine milk if they were diluted as directed by the makers.
28	12 ,,	,, ..	Nestlé's	1 ,, ...	0 6	Thorton Bros., Glebe Road	Henri Nestlé, Switzerland..	,,	,, ,, ..					
29	12 ,,	,, ..	"Queen of Holland"	1 ,, ...	0 5	J. Hurley, Glebe Road	Anglo-Dutch Milk Co.....	,,	,, ,, ..					
30	12 ,,	,, ..	"Milkmaid"	1 ,, ...	0 5	—. White, St. John's Road, Glebe	Anglo-Swiss Condensed Milk Co., Cham.	,,	,, ,, ..					
31	29 ,,	,, ..	"Royal Dutch"	1 ,, ...	0 4½	Co-operative Stores, Darling-st., Balmain	(Prepared in Holland).....	,,	Not made from whole milk					
32	10 ,,	Claret	"Boar's Head"	1 bottle ..	2 0	J. Bottomley, 2, Elizabeth-street	Innes & Co.....	,,	All these samples were found to contain salicylic acid in varying proportions, but in no case exceeding 1 grain per gallon.					This preservative was most likely added for the purpose of concealing inferior quality, and for preventing fermentation.
33	10 ,,	Port	,, ...	1 ,, ..	2 0	G. D'Albora, 333, George-street	,, ...	,,						
34	10 ,,	Claret	.....	1 ,, ..	1 6	J. Lennon, 48, Erskine-street	—. Summerhayes.....	,,						
35	10 ,,	,, ...	.....	1 ,, ..	1 0	D. Diavoli, 57, Erskine-street	Not known...	,,						
36	10 ,,	Port	.....	1 ,, ..	1 0	Abel & Co., Erskine-street	,, ...	,,						
37	10 ,,	Hock.....	.....	1 ,, ..	1 6	J. T. Gorus, Hunter-street	J. T. Gorus.....	,,						
38	10 ,,	Port	.....	1 ,, ..	1 6	,, ,, ...	,, ...	,,						
39	10 ,,	Claret	"Boar's Head"	1 ,, ..	1 0	A. Licciardi, Bent and Phillip Streets ..	Innes & Co.	,,						
40	10 ,,	Sherry	.....	1 ,, ..	2 0	J. Brun, 119, George-street	Not known.....	,,						
41	10 ,,	,, ...	.....	1 ,, ..	2 0	J. Joseph, 162, George-street	,, ...	,,						
42	10 ,,	Port	.....	1 ,, ..	2 0	,, ,, ...	,, ...	,,						
43	10 ,,	Ale	"Chicago".....	1 ,, ..	0 6	"Belmore Hotel," Phillip-street.....	J. Cornwell.....	,,	Not yet analysed.....					
44	10 ,,	Stout	"Gibson's Foreign".....	1 ,, ..	0 6	,, ,, ...	,, ...	,,						
45	10 ,,	Ale	"Standard"	1 ,, ..	0 6	Barnett's Hotel, George-street North ..	J. T. and J. Toohey.....	,,						
46	10 ,,	Stout	"XXX"	1 ,, ..	0 6	,, ,, ...	,, ...	,,						
47	10 ,,	Ale	"Imperial"	1 ,, ..	0 6	"Fortune of War Hotel," George-st. N.	Tooth & Co. (Limited).....	,,						
48	10 ,,	Stout	"Finest Double".....	1 ,, ..	0 6	,, ,, ..	,, ...	,,						
49	24 ,,	Dandelion ale	"XXX"	1 ,, ..	0 6½	G. Nicholls, George-street, Camperdown	G. Nicholls.....	,,						
50	24 ,,	,, ..	"Viena".....	1 ,, ..	....	,, ,, ,, ..	,, ...	,,	All contained trace of salicylic acid.					
51	24 ,,	,, ..	"XX"	1 ,, ..	0 2	,, ,, ,, ..	,, ...	,,						
52	24 ,,	,, ..	"XXX"	1 ,, ..	0 3	,, ,, ,, ..	,, ...	,,						
53	24 ,,	,, ..	"XX Carbonized"	1 ,, ..	0 4	,, ,, ,, ..	,, ...	,,						
54	24 ,,	,, ..	"XX"	1 ,, ..	0 3	A. Loschiavo, 2, Castlereagh-street	,, ...	,,						
55	24 ,,	,, ..	"XX"	1 ,, ..	0 3	A. Caleo, 19, Hunter-street	,, ...	,,						

PAUL E. GETTING,
Sanitary Inspector.

APPENDIX G.

TABLE showing work performed in the Analytical Branch of the Health Department during each month of the year 1897.

Month.	Analyses and Investigations made					Evidence given or furnished by Certificate.								Miscellaneous.		Total.
	For Health Department.	For Police and Justice Departments.	For Detective Department.	For Customs Department.	Total.	Coroner's Court.	Police Cases.	Quarter Sessions.	Criminal and Circuit Court.	Public Health Act, Part VIII.	Sale and Use of Poisons Act.	Civil Cases.	Total.	Reports on Various Subjects.	Evidence before Parliamentary Committee.	
January	22	3	2	7	34	1	2	1	...	...	2	...	6	49	.....	89
February	37	2	1	4	44	...	...	1	...	...	...	...	1	35	.....	80
March	23	13	...	17	53	...	1	...	2	1	...	...	4	39	4	100
April	27	8	...	6	41	1	...	...	1	...	...	...	2	48	.....	91
May	39	20	14	10	83	1	2	1	...	...	...	...	4	15	.....	102
June	25	3	15	11	54	1	...	1	...	...	...	...	2	26	.....	82
July	46	10	4	5	65	1	1	...	...	...	...	1	3	64	.....	132
August	49	4	4	6	63	2	...	...	...	...	...	1	3	64	.....	130
September	40	10	2	4	56	1	1	...	...	...	...	1	3	32	.....	91
October	28	14	4	6	52	...	2	...	...	...	...	...	2	43	.....	97
November	50	6	14	34	104	1	1	...	2	...	...	1	5	72	.....	181
December	58	2	8	14	82	2	...	...	...	4	...	1	7	38	.....	127
Totals	444	95	68	124	731	11	10	4	5	5	2	5	42	525	4	
															Grand total	1,302

W. M. HAMLET, F.I.C., F.C.S.,
Government Analyst.

APPENDIX H.

TUBERCULIN-TEST RECORD.

Year District Owner's Name Address

Description of Animal.						Observer's Name.	Thermometer Number. (4)	Natural Temperatures.				Injection.		Tuberculin.		Reaction Temperature at hours after Injection. (5)						Difference between highest natural temperature and highest re-action temperature.	Signs of Tuberculosis during life. (6)	Organs found Tuberculous after death. (6)	Any other Disease detected after death.	Remarks. (7)
Kind.	Description. (1)	Brands.	Class. (2)	Sex.	Age. (3)			Date.	9 a.m.	12 noon.	5 p.m.	Date.	Hour.	Brand.	Quantity used.	9th.	12th.	15th.	18th.	21st.	24th.					

(1) Colour, &c. (2) Dairy, store, working, &c. (3) Distinguish young animals (the age up to which bovines are to be reckoned as calves is one year—when younger, age to be stated in months). (4) With reference to correction—certificate. (5) Not to be taken before 9th hour. (6) In milch or breeding cows note state of udder especially. (7) Always mention total in herd, total inspected, and total found tuberculous.

RULES TO BE OBSERVED IN APPLYING THE TUBERCULIN TEST.

NOTE.—Although this form is designed primarily for use by the Veterinary Inspectors of the Board of Health, it is desired that it may be employed by all who apply the tuberculin test to animals. The following directions, which it is very important to follow carefully, are therefore printed here. Forms will be supplied gratis on application to the Secretary, on condition that a copy of the record made is subsequently forwarded to the Health Department.

1. Animals should be confined during testing, and the natural temperature should not be taken until they have become cool and quiet after being first confined.

2. Animals under test should be allowed to drink only immediately after taking their temperature, and not within one hour at least before taking it.

3. The temperature must be taken in the rectum; a string should be attached to the thermometer, and held; thermometer, being about 6 inches long, should be introduced until its extremity is only just visible; it should remain in for five minutes by the watch; it should be withdrawn horizontally, and read while still in that position; the reading should be written down at the same time; lastly, the thermometer should be cleaned, and the mercury shaken down until it stands below 98°, before replacing it in its case.

4. The natural temperature of the animal to be tested must be taken during the daytime before the injection is made at night. It should be taken three times, at 9 a.m., at 12, and 5 p.m.

5. It is convenient to inject the tuberculin late in the evening, or between 9 and 10 o'clock, so that observation of the reaction temperature may be begun early next day.

6. No attempt need be made to ascertain the reaction temperature before the 9th hour after injection, and no such observation, if made, is to be recorded on this form.

7. The highest natural temperature observed before injection is to be taken as the *datum* for comparison with the reaction temperature.

8. No reaction temperature is to be regarded as decisive tuberculosis which does not exceed the *datum* temperature by two and a half degrees Fahrenheit, at least.

9. Animals suffering from advanced tuberculosis are liable not to give a marked temperature reaction, or, if they are already feverish, the reaction may not be noticeable; consequently, when the disease can be diagnosed with reasonable certainty by ordinary inspection, the tuberculin test should not be applied.

10. Animals suffering very slightly from tuberculosis sometimes give a marked reaction temperature. In cases in which a marked reaction of temperature has been observed, and no diseased place is detected when the animal is first examined after slaughter, further and more careful search must be made. If a spot of disease is at last found which yet cannot be identified as tuberculosis by its appearance, it should be cut out, placed in spirit, and transmitted to the Board's Laboratory for microscopical examination, together with the details required in the form.

11. Every Veterinary Inspector of the Board who tests animals for tuberculosis will do his best to explain his proceedings to, and to instruct, both the owner and his neighbours.

J. ASHBURTON THOMPSON.

APPENDIX I.

Memorandum by the President of the Board of Health on the Prevention of Tuberculosis in Man and in Cattle.

August, 1897.

It has already become generally known that tuberculosis, or consumption, is a disease common to man and some animals, that it is communicable from animals to man, and that man is liable to acquire it by eating the milk or flesh of consumptive beasts. The following case pointedly directs attention to the danger which the public, and especially children among them, run at present of catching consumption by means of milk.

2. On 1st June Mr. Veterinary-Inspector Melhuish, M.R.C.V.S., made report to the Board of his annual inspection of dairies in a populous suburban district. He remarked of the district in general that the execution of the Act as regarded inspection of cows was "most perfunctory." He went on to mention especially the dairy of one X., who had a herd of eighteen cows, and supplied a large number of customers with milk by retail. His premises were in good condition—well paved, clean, safely connected with the sewers, and supplied by constant service with water from the mains only; but among the herd there was a cow "which was a most glaring case of disease. The animal had very extensive glandular swellings around the throat, the breathing could be heard some distance away, and on exertion there was a troublesome cough. The appearance was sufficient to justify any inspector in condemning her for dairy purposes. When the inspector of dairies to the Local Authority and I spoke to X. about her condition, he stated that it happened about three weeks ago, and the swelling was produced by the kick of a horse. He fetched her from the paddock, and I examined her in the bail and condemned her. X. said that the milk was mixed with that obtained from the other cows, and was distributed around. There is no doubt that this animal has been in this condition for several months, and it is hard to conceive how any man could be so depraved as to keep an animal in this condition in a dairy. He stated that he had had this cow for two years."

3. On 2nd June a letter was delivered to the Clerk to the Local Authority, in which he was informed that this animal was obviously in the last stages of consumption, and should have been detected by the local inspector; that having been killed, its internal organs had been found riddled with tuberculous abscesses; and, as it had been long ill, that it was certain that the cow-shed had become infectious, and probable that other animals of the herd had acquired the disease. The likelihood that more or fewer children among X.'s customers had consequently been infected with consumption was mentioned; and the Local Authority was requested to immediately cancel X's registration, and to prevent him trading until the premises had been cleansed and disinfected. X.'s name was forthwith erased from the register by the Local Authority, and in consequence he became unable to sell the milk of his herd to any person in any district whatever.

4. On 3rd June the required disinfection of the premises was begun under veterinary supervision, and the other seventeen cows were put to the tuberculin test. Six were found to react well, two indecisively. The value of the six animals having been agreed upon, in order that X. might be compensated if any of them were found after death not to be diseased, they were slaughtered in presence of the Board's inspector and a veterinary surgeon acting in X.'s interests. All of them presented marked signs of consumption.

5. On 17th June, the consumptive cows having been destroyed, and the premises cleansed and disinfected to satisfaction of the Board, the Local Authority was informed that X.'s name might be restored to the register, and resumption of business by him consequently allowed.

6. What is the nature and extent of the danger thus betokened? The report of the Royal Commission appointed to inquire into the effect of food derived from tuberculous animals on human health, which sat at Westminster, and reported in April, 1895, furnishes the answer to this question. It is only necessary to add that the conclusions drawn are at bottom matters of fact—that is to say, they rest on demonstrations furnished by a large number of trustworthy experimenters, who have worked during many years past in various parts of the world. In some lesser respects they are supported by consideration of a large body of evidence of other than experimental, but still of trustworthy kind.

7. The following is a very brief statement of some of the more important points mentioned in the evidence just referred to:—Consumption, or tuberculosis, is one and the same disease in man and in the food-animals. Every person who takes tuberculous matter into his body as food incurs some risk of acquiring consumption. Of the several forms of the one disease (tuberculosis) from which mankind suffer—consumption of the lungs, of the brain, of the bowels, and of glands or of joints—some are almost peculiar to children; and probably the proportion of persons who acquire consumption through food is larger among children than among their seniors (an opinion in accordance with the experience which shows that the young of all susceptible animals are especially easily infected by feeding them on the meat and milk of consumptive animals). Milch cows are especially liable to acquire tuberculosis; and to all the tuberculous among bovine animals, cows contribute the largest proportion (thus there are two reasons why milch cows should be watched with great care: they are more likely to be tuberculous; children are easily infected by the milk of tuberculous cows). The conditions requisite to render the milk of consumptive cows infective to those who drink it is that the udder shall be affected. Affection of the udder is not peculiar to advanced stages of the disease, and occurs in mild cases. Nor can it always be easily detected; for "if reliance be placed on the general condition of the cow, and on physical examination of the udder, an accurate diagnosis of tubercular disease of the udder is not possible"; in other words, given a tuberculous cow (and, as will appear later, whether a bovine is tuberculous or not often cannot be determined by ordinary examination) the healthiness of its udder cannot be vouched for, although on physical examination it appears to be healthy. Besides that, disease of the udder sets in suddenly, and progresses with alarming rapidity; so that an udder thought to be healthy after a physical examination, may be seen to be obviously diseased at a second examination made only a fortnight later. Consequently "no tuberculous animal of any kind should be allowed to remain in a dairy herd. The milk of cows affected with tuberculosis of the udder possesses a virulence which can only be described as extraordinary"—that is to say, the infection is much more likely to take, and causes a form of the disease which runs a much more rapid course when animals are inoculated or fed with tuberculous milk, than when they are inoculated or fed with tuberculous meat, or tuberculous matter of other descriptions. Pigs are especially easily infected by feeding on tuberculous milk or meat (it is important to note this for two reasons: the feeding of pigs on separated milk, which is so common in this country, and their being fed on the flesh of condemned, and consequently often tuberculous, animals, which still is common though in course of prevention under the Noxious Trades and Cattle-slaughtering Act). It is possible by this means to produce in pigs, whose throats have specialities of construction in which they closely resemble the human throat, some of those slower forms of consumption which affect the throat of man; for thus is suggested "the possibility of widely different forms of human tuberculosis owing an origin in milk." Lastly, "as to the proportion of tuberculosis acquired by man through his food, or through other means, we can form no definite opinion, but we think it probable that an appreciable part of the tuberculosis which affects man is obtained through his food." To this it may be added that while it is generally considered that practically all the consumption of the bowels among children is due to tuberculous milk, it is also considered that consumption of parts of the body remote from those with which food comes into immediate contact are also often due to infection received through the bowels. These are the main facts now known concerning causation of this prevalent and fatal disease; they reveal a removable risk which all persons alike run at present. But all persons exposed to this risk do not succumb, because the natural defences of the healthy body against infection are potent. Hence consumption is not so prevalent among raw-milk drinking children (for instance) as from the above facts might at first sight be expected. Yet those natural defences are weakened or lost during ill-health, or do not avail against large doses of the infection; and therefore, notwithstanding their usual efficiency, consumption is still very common among children. Adults, it must be repeated, have their share in this risk, though the lesser share; they are more liable to contract the disease from eating meat infected with tuberculous matter. The points of most importance in connection with the case of X.'s dairy are that consumption is common among children; that the young, both of man and of the lower animals, are especially liable to acquire it from feeding on the milk of consumptive cows; and that consumption is entirely preventable, both among men and among animals.

8. All risk of infection by milk might be avoided by the simple expedient of never drinking uncooked milk; but in order to deprive it of its infective power it must be cooked with knowledge, care, and unfailing regularity. For this purpose Pasteurisation (though valuable with milk in other relations) is useless; raising the temperature of the milk to between 160° F. and 170 F. for a few minutes, in which the process of Pasteurisation consists, does not suffice to kill this infection. It can be killed with certainty if the milk be raised to 185° F., and kept at that temperature for five minutes. The simplest instruction is to raise it to boiling point, and to keep it briskly bubbling for one minute; then it is quite safe.

Easy

Easy to apply as this safeguard is in itself, however, it is likely that no considerable proportion of any population could be depended upon to boil all milk with scrupulous care and unfailing regularity before taking it; but there is no need in this matter to speculate on probabilities. The Board has accumulated a very considerable body of actual experience in connection with outbreaks of typhoid fever in earlier years, which, also, might have been prevented had all the milk been boiled; and the fact revealed by its inquiries seems to be that while scarcely one family in fifty even professes to boil its milk, still fewer boil it with a semblance of regularity. The meat of consumptive beasts may be spoken of in similar terms; if it were always thoroughly cooked—if it were always raised throughout its thickness to the temperature attained by the exterior in the course of roasting, for example—there would be no danger of contracting consumption from that source. But the necessary temperature is seldom attained towards the centre, either by roasting or boiling. Suppose, however, that meat and milk were always and regularly exposed to the temperature known to be necessary to kill this infection if it happened to be present in them, still the source of danger—presence of the disease among food-animals—would be left untouched; other precautions, therefore, must be taken, which shall have prevention of the disease at its origin for their object, that is to say, among the cattle at breeding stations.

9. Steady and determined attempts to prevent consumption among cattle have begun to be made but recently; and the reasons are two. First, the minute organism which is the actual or essential cause of the disease was discovered only in 1882. Until, then, therefore, it was little more than an opinion that consumption was maintained and diffused by communication of one or other sort—direct or roundabout—between diseased animals and those which were still well; but as soon as the essential cause was discovered it became a matter, not of opinion and of strong probability, but of demonstration or of fact appreciable to the senses that the disease was spread by direct or by roundabout communication between the sick and the healthy. Merely to know that the disease spread by contagion, however, was not enough to permit effectual efforts to be made to prevent it, because of that peculiarity of consumption in cattle which has been alluded to above; namely, that the disease can take hold of a beast and progress to a serious extent before betraying its presence by obvious external signs. Consequently, as long as only ordinary means of detecting tuberculosis were at command, efforts to prevent its spread by separating the diseased from the healthy could not succeed; for although the obviously sick animals were separated from the rest, there would still remain a number really affected, and capable of communicating the disease, which perforce would not be detected. And, therefore, the second reason why systematic attempts to eliminate tuberculosis from herds have but lately become possible, is that the means of detecting the disease in its early stages have only been discovered recently, namely, in 1891. In that year the injection of tuberculin as a test of freedom from consumption first began to be tried with cattle, and during three or four subsequent years its usefulness and trustworthiness for this purpose were thoroughly established. To-day tuberculin, used with certain precautions, is relied upon by breeders in all countries for this purpose; although, it should be added, it is not absolutely infallible.

10. At the present date, then, two things are known with certainty; first, that if an animal (whether man or of other species) has consumption, it is because it has taken into its body the essential cause of that disease, *and taken it from some other animal already suffering;* secondly, that the fact of freedom from disease, or (notwithstanding external appearances) of infection with it, can be ascertained by injecting tuberculin, a proceeding which produces no important effect on healthy beasts. From these two items of knowledge, the breeder can draw all the procedure required to eliminate consumption from his herd. First, he must ascertain with tuberculin which of his herd are affected; then he must remove the affected from the healthy; lastly, he must never add fresh animals to his herd until they have been tested, and thus proved to be free from disease. These are the chief steps, stated very briefly; but there are others of importance. Consumption cannot appear unless the essential cause is taken into the body from some previously affected animal. That is invariably true; but it was remarked above of children that not all who drank infected raw milk contracted the disease, because a healthy body has certain natural powers of defence, a statement which applies also to lower animals. Consequently, the essential cause alone, though taken in, is not always sufficient to give the disease; and usually there must be present also some secondary causes. These are such as lower the general health; they are comprised under darkness, dampness, filth, want of ventilation, and improper or insufficient food. It is therefore necessary that both breeder and dairyman should take care that none of these conditions exist on their premises; and the first essential is that cow-sheds, bails, dairies, and other buildings used either for cows or to handle milk in shall be suitably designed, and constructed of materials which, from their non-absorbent nature and comparatively smooth surface, can be kept clean with little trouble. This is one reason why the Board strongly objects to the use of wood for floors in dairies, bails, and cow-sheds. But there is still another qualifying circumstance which must be mentioned, and which has special importance in relation to cattle, It is, that if the essential cause be introduced by inoculation, even a healthy animal will succumb. If a healthy animal, unaffected by the secondary causes just mentioned, breath in or swallow the essential cause, it still has many chances of conquering it, and of escaping; but if that cause be injected under the skin, for instance, then good health will stand it in little stead, and it will almost certainly become ill. And therefore, when inoculating to protect against pleuro-pneumonia, care must be taken that the matter to be inoculated has been taken from a beast which was not suffering from tuberculosis, otherwise that disease may be communicated as well as the mild attack of pleuro it was intended to cause.

11. The ways in which consumption spreads which are of greatest practical importance may be summarised as follows, namely, as from man to man, from man to the lower animals, from lower animals to lower animals, and from lower animals to man.

(1.) *From man to man.*—For all practical purposes the sole danger lies in careless scattering about by consumptives of their expectoration, which contains the essential cause of the disease; from drying of this, so that it can break up into dust and float on the air; and from breathing into the lungs of this infective dust by people who are in such a state of health that the essential cause when thus breathed in can take root in their lungs, live and grow there, and thus cause them to become consumptive.

(2.) *From man to animals.*—Here again the danger of spreading lies in the expectoration of consumptive man; but animals may either breath it as dust or swallow it, and infection may consequently take place either by the lungs or by some part of the digestive tract. Dogs, cats, and fowls have been observed to become consumptive from swallowing the expectoration of consumptive man rather often; cows, on one or two occasions (their risks from this source being manifestly likely to be fewer than those of the other animals named).

(3.) *From lower animals to lower animals.*—The ways are more varied, and should be more carefully considered. It is unnecessary to mention all of them; they include every chance by which the essential cause, thrown off from the body of a consumptive animal, can gain access to the body of a healthy animal, and the more obvious are the following:—In the first place the expectoration, saliva, &c., of consumptive animals is as infective as that of man; tuberculous bovines which are stalled, therefore, or fed out of the same manger or box, or which lick their calves, may communicate the disease either directly (by coughing, licking, &c.), or by depositing their expectoration on mangers, walls, &c., whence it can be either breathed in after drying, or swallowed by the healthy. Secondly, the infection can be communicated by means of milk to the calves, to pigs fed either on whole or separated milk derived in whole or in part from consumptive cows, and to others of the lower animals who get such milk. Hence it is to be noted once more that young animals of all species are specially liable to acquire consumption from infective milk. Thirdly, communication can occur when healthy animals feed on the flesh of consumptive animals; consequently, pigs, dogs, cats, and fowls are likely to contract the disease in this way.* Fourthly, the influence of heredity, or of a consumptive bovine on its offspring, cannot at present be exactly defined, but it is possible for a calf to be already infected when dropped. Heredity, therefore, has importance, and tuberculous animals should not be used for breeding.

(4.)

* Although pig-keeping and poultry-farming were declared noxious trades on 31st December, 1896, under the provisions of the Noxious Trades and Cattle-slaughtering Act, 1894, and although by by-laws framed to regulate those trades, it is illegal for any pig-keeper or poultry-farmer to receive on his premises any diseased animal or the body of any dead animal, the following events happened after condemnation of X's first, or obviously diseased, cow. X said he would send the animal to a boiling-down works, and this arrangement was considered satisfactory by the Board's veterinary inspector. But when the latter came to get the address of the man to whom it had been sold for 10s., and the next day went there to examine the carcase, it turned out that the premises were used not for boiling-down (or fat-extracting) but as a poultry-farm; and the veterinary inspector, accompanied by the inspector to the Local Authority in whose district the premises were situate, found the carcase partly cut up, and saw fowls, a dog, and a cat feeding upon it. The veterinary inspector then discovered that this poultry-farmer was trading illegally, without being licensed, for which he was subsequently prosecuted by the Local Authority and fined; and that this was the case was due to neglect of the Local Authority to perform the duty cast upon it by the law. All the animals mentioned can acquire tuberculosis by feeding, although in the ordinary course of life they do not usually suffer, and fowls are food animals. Cats and dogs are not food-animals; nevertheless, their infection would be a matter of importance, for their dead bodies might very easily, and in such a neighbourhood very likely would, be eaten by pigs, which also can take the disease, and, again, are food animals.

(4.) *From lower animals to man.*—Here the danger of infection is practically confined to eating meat and milk produced by consumptive animals. Infection takes place by way of the digestive tract, but, as has already been remarked, the disease does not always develop at the point by which the infection entered. Without having done any damage at that place, it may reach other parts of the body and cause the first signs of illness to show themselves there. Once again, the young—whether infants and young children, or calves, &c.—are especially susceptible to infection by swallowing, the medium in their case being infected milk for the most part.

12. The scheme for preventing this disease can be deduced without difficulty from the foregoing facts. *In the case of man, isolation is not necessary*, for man is an intelligent animal, and can be caused to take the small amount of trouble with his expectoration which is necessary to prevent risk to others;* but periodical disinfection, cleansing, and thorough exposure to light of the quarters occupied by consumptives are necessary. *In the case of animals, on the contrary, separation of the sick from the healthy is an essential step in prevention*, for, of course, the lower animals are not intelligent in the present sense. For separation to be effectual, the disease must be detected early, and before it has proceeded so far as to be recognised by ordinary methods of examination. Tuberculin, used according to certain rules, must be employed for this purpose. No bovine which has not withstood the tuberculin test should be allowed to remain in the herd with healthy animals, should be allowed to suckle its own calf, should be used for breeding, should remain on dairy farms or premises, nor should be used as a source of milk or meat, whether for human beings or for lower animals. After death, the bodies of infected animals must be safely disposed of either by burning or else by boiling-down at places to which no other live animals have access. Every time after discovering an infected animal in a herd, the stalls, cow-sheds, bails, feeding-boxes, &c., must be very carefully cleansed and disinfected to prevent communication of the disease to the healthy in any of the roundabout ways already referred to.†

13. It will now be apparent that prevention of that part of the incidence of consumption on mankind which is due to eating meat and milk produced by consumptive beasts is inextricably bound up with prevention of this disease among herds, and is only secondarily connected with inspection of dairies and slaughter-houses. That it can be entirely prevented among cattle has been proved by many individual breeders in different countries, who, acting on the lines indicated above, actually have eliminated it, and now possess herds which are free from tuberculosis. Those breeders can safely undertake to sell stock under the condition that every beast shall withstand the tuberculin test; and, in short, under a guarantee that every beast sold is free from consumption. This is a result of very great value to the public health; but it has importance of another kind which concerns commerce, and which, practically, is not less worth attention. Stockbreeders and farmers have a direct personal interest in freeing their herds from tuberculosis; for this disease, though it progresses rather slowly, nevertheless causes cattle to die prematurely; and it is felt by all that the losses thus incurred, though they have never been estimated in this country, must be great. They have also another direct interest, which is of even greater commercial importance. Sanitarians and breeders alike are now aware both that consumption is preventable among herds, and that the meat, milk and butter produced from consumptive animals are sources of real danger to man; consequently, guarantees of the healthiness of the animals which have furnished meat, butter, and milk which are offered for sale in the world's market are being demanded by purchasers with more and more stringency day by day. At no great distance of time such products, when they are furnished from animals among whom consumption is known to be a rare disease, will have a very great advantage over other such products derived from animals among which consumption is either known to be rife, or concerning which no good information is procurable. It only remains, then, to consider how the business of preventing tuberculosis among cattle can be best set going; for, although self-interest is a powerful incentive, it often takes people long to learn where their profit truly lies.

14. It is convenient at this point to recapitulate the preventive measures already in force in New South Wales. In the first place, it has been shown that the public could protect themselves by very thorough cooking of meat and milk; but it has also been observed that this is not, and never could become, a good practical safeguard on the public scale. As regards milk, the Dairies Supervision Act, 1886, gives certain powers of inspection and control over dairies to Local Authorities, under supervision of the Board; and, as the case of X shows, those supervisory powers are exercised by the Board not only habitually but also promptly and effectively on special occasion appearing. But the occasion in that case (and in too many others) was detected by the Board's inspectors in course of execution of their annual supervision, and not, as it should have been, by the Local Authority in the course of its daily duties. Further, even if the action both of Local Authorities and of the Board as a supervising authority were continuous and always thoroughly efficient, still diseased cows would be constantly drafted to dairy herds from breeding stations. Those cows, if they were in the earlier stages of illness, would be used for production of milk, because their disease could be detected only by a rather lengthy process of testing; and thus there would be no end, neither to the labour of testing herds at individual dairies, nor yet to the losses which dairymen would suffer in consequence. The case with animals used for food is slightly different. Under the Diseased Animals and Meat Act, 1892, the Noxious Trades and Cattle-slaughtering Act, 1894, and the several older Cattle-slaughtering Acts, the Board has legal powers which are sufficient to prevent diseased meat from entering into consumption; and here the labour of testing is not necessary, because the animals are to be killed, and disease can be easily detected by inspection of their carcases. But, as matters stand at present, just as the cow-keeper's losses from condemnation for tuberculosis would be continuous as long as diseased beasts were bred and sold to him, so the butcher's losses actually are continuous for that very reason. Probably all butchers would agree that the flesh of diseased animals is not suitable for the food of man, and that the flesh of tuberculous animals cannot be consumed by him without an appreciable direct risk to life; but, on the other hand, the loss caused by condemnations of diseased carcases under the provisions of the laws mentioned fall upon them alone. This they feel to be a hardship. It is the interest of every person concerned, of the public, the dairyman, butchers, agents, and all other middlemen, back to the breeder, to take steps to eliminate tuberculosis from herds, to prevent the disease itself. How can breeders in general be brought to take the necessary precautions?

15. Consideration of X's case furnishes a valuable hint. Six of his cows, it will be remembered, were apparently in average health; even a veterinary surgeon could not have told, or at all events could not have made sure, by ordinary methods of examination, that they were suffering from tuberculosis; and yet, as soon as they were suitably tested, it turned out that they were tuberculous—a conclusion which was amply supported as soon as their carcases were examined after slaughter. Having lost six cows, X desired to supply their places, to do which he must go into the open market. There he would handle the stock for sale, and with every care would select six which were in apparent good health. But his recent experience had taught him that freedom from tuberculosis cannot be ascertained by inspection; and, consequently, he felt that, notwithstanding all his care, he might nevertheless buy beasts which were not sound. This being the case, what guarantee had he that officers of the Board might not visit him again after he had spent his money, and having used the tuberculin test condemn his new purchases? And, if that happened, what end could he foresee to his losses? This dilemma is unfair. Choice must be made between relinquishing attempts to protect the public health by withdrawing tuberculous beasts from the dairy, and making such systematic efforts to prevent the disease itself, as would not merely protect the public, but would largely benefit every branch of this business. There can be no doubt that the latter course will, and indeed, must be taken. X, and all dairymen, all butchers, and all breeders must be able to buy under a guarantee of freedom from tuberculosis. There seems to be only one way of effecting this: the sale of every bovine animal, and of every pig, though ostensibly "with all faults," must, nevertheless, be conducted legally subject to an implied agreement that every such animal shall withstand the tuberculin test applied under conditions to be fixed. Gradually, under the necessity which would thus be imposed upon them, breeders would weed their herds, and in four or five years might and should be a position to regard this legal condition with indifference, for by that time it would cease to operate against them. At the same date they would find that their prosperity had been materially enhanced and had become assured.

16.

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* All spitting on roads, pavements, floors, and in public places should be seriously and strenuously discouraged and prevented; it is not only filthy, but dangerous to others. The expectoration of all persons who suffer from a chronic cough should be carefully collected in spittoons containing a strong disinfectant. The expectoration of all persons known to be consumptive should be most carefully collected in a vessel containing the disinfectant—carbolic acid or chloride of lime. Portable spittoons for the pocket are made.

† Use hot water (or steam, if available) to cleanse woodwork, &c., so as to soften any expectoration sticking to it; scrape well. After scraping, wash all surfaces thoroughly with chloride of lime—1 lb. stirred up in a bucket of water. Leave for twelve hours. Afterwards clean up with special thoroughness. Examine the floor, and repair all faults in which stalings or water might lodge. Take care that the shed is kept thoroughly dry at all times. See that ventilation is sufficient and thorough; air the place freely from time to time; at all time let it be as well lighted as possible. Light, air, and dryness are essential to the health of cattle.

16. If this condition were imposed it would still be necessary to continue supervision over slaughter-houses and dairies; but the present methods require improvement. As regards slaughter-houses, the legal powers already conferred on Local Authorities and on the Board as the supervising authority are sufficient; but the circumstance under which slaughtering is at present done are such as sometimes hinder efficient inspection. For the sake of the home trade—that is to say, for protection of the public health of the people of New South Wales, slaughtering for export being done already under convenient conditions—it is necessary that private slaughtering should be abolished as much as possible, and without exception at every considerable centre of population. With this object in view, an amendment of the Noxious Trades and Cattle Slaughtering Act 1894, was inserted in the Public Health Act 1896, which gave Local Authorities alone or in combination, power to erect a public slaughter-house at any convenient point within or outside their district, and which gave the Board power as soon as such a public slaughter-house had been established to declare private slaughtering illegal thenceforward within such radius as might be deemed by it to lie within reasonably easy reach of the public slaughter-house. No advantage has as yet been taken of this provision, which, it should be noted, is merely an improvement on powers granted by the principal Act so far back as 1894; and it has now become a question whether Local Authorities should not be obliged to establish public slaughter-houses on being required to do so by the Board. The investment (under a monopoly of slaughtering within the radius) would be safe and even remunerative unless it should be thought desirable to apply profits to reduce slaughtering fees; and it might be desirable to allow Local Authorities to borrow the required capital from the Government at a low rate of interest.

17. With the Dairies Supervision Act the case is a little different. Power to test dairy herds with tuberculin should be explicitly given; and in case it should be thought at first sight that this (and the consequent destruction of some animals) might involve hardship, it is well to mention here that one of the large milk companies, which has its own circle of suppliers in country districts under contract with it, has made it a condition of contract already that every beast found by its inspector to be tuberculous shall forthwith be slaughtered, no compensation being paid to owners unless it is found after death that a mistake had been made, and that the animal was not diseased. This condition has so far been cheerfully accepted, and there is no reasonable doubt that it will continue to be accepted without demur, provided the dairymen find that they can supply the places of the slaughtered animals with sound stock, and thus, in return for their losses, find that they are gradually acquiring a herd entirely free from consumption. But very many of such dairymen are themselves breeders; it is, therefore, important that they should be made aware of the steps necessary to eliminate tuberculosis; and for that purpose it is essential that they should be systematically instructed. This is not practicable with the veterinary staff at present under control of the Board, and with those methods of inspection which, efficient as they are, were designed without special reference to the prevention of tuberculosis. Inspection, weeding out, and instruction in management and breeding, so as to prevent consumption, can only be given—(*a*) by qualified veterinary surgeons, who (*b*) shall be resident in the district of which they have charge. It should be made illegal to return to suppliers any separated milk from creameries, butter factories, &c., except after boiling it. It should be made illegal to inoculate for pleuro-pneumonia except with virus taken from animals ascertained to be free from tuberculosis. Lastly, the distribution of tuberculin should be in the hands of the Board, which alone can give the necessary guarantees of purity and efficiency; and it should be made illegal to use any that has not been approved by it.

J. ASHBURTON THOMPSON,
Chief Medical Officer of the Government.

Memorandum by the President of the Board of Health on the Application of the Tuberculin Test to the Ox.

December, 1897.

In August, 1890, Koch announced the discovery of his "lymph," or "material" as he called it at first; and in a second communication, made in the same year, he pointed out that injection of his lymph into tuberculous animals was attended with a notable rise of temperature, which occurred within a few hours, while no such effect was produced in animals not so suffering.

This attracted the attention of all who were interested in the prevention of tuberculosis in the ox. For of course it was already known that this disease could make considerable progress in that animal before it betrayed itself by clinical signs; that it was communicated from beast to beast; that the means of reducing its prevalence among oxen must lie in separating the sick from the healthy; and consequently, that to separate the visibly sick alone might still leave in the herd a number of cattle capable of communicating their disease—a number not unsuspected, indeed, but down to that date undiscoverable. In 1891 Guttman, of Dorpat, had already published an account of the extent to which Koch's statement held good for oxen. This was the first published account; at all events it was the first which gave good ground for believing that Koch had placed in the hands of breeders trustworthy and most important aid to them in their fight against tuberculosis. Thus this weapon has been at command only for about six years; and yet it cannot be called new any longer. Age is not always to be measured by lapse of time alone; and in this case the very wide experience gained and recorded during those six years has established this test in an impregnable position. It is now a part of the common knowledge of all whose interests require them to be acquainted with advances in pathology, and time is wanted merely to diffuse that knowledge more and more widely, until it is common also to the least of those whose interests require a knowledge in them of the economics of the breeding and of the dairy-farm.

A tuberculous animal injected with tuberculin, then, suffers a rise of temperature which is usually apparent at the ninth hour, or at a time between the ninth and the twelfth. Hereupon it should be noted that this general statement requires some qualification. An animal which has but a small tuberculous spot—it may be but one, or two or three small glands affected—will show this reaction, and most often in marked degree; but one which is far advanced in the disease may not show it, or may not show it with the intensity which is necessary to establish the diagnosis. From this, two practical rules follow: First, an animal in which tuberculosis can be recognised by the ordinary methods with tolerable certainty should not be submitted to this test; and, secondly, when an animal which has reacted nevertheless appears after slaughter to be healthy, a very careful search should be made—such a search as requires a good deal of anatomical, though not necessarily of professional or scientific anatomical, knowledge—before the carcase is pronounced healthy, and before it is noted that in that case the test seemed to have failed.

Next, what is the rise of temperature, as measured by the thermometer, which may be relied upon to indicate infection? The temperature of adult man is very uniform, and very stable; it is not easily disturbed by trifling external or internal influences. It is far otherwise with oxen. It is easy to state their average temperature; it is not so easy to find it in individual beasts. The average for adult oxen in health is taken at F. 101·5°, and for calves at about a degree higher, or F. 102·3° or ·4. Variations of external temperature, which have so slight an effect on man, have an appreciable effect on them. By exertion or by worry their temperature is easily raised one, two, and even more degrees; it is easily and markedly raised by trifling ailments, and especially by slight disturbances of digestion. Besides this, it may be, and not very infrequently is, found to be subnormal by a degree or more; or, it should rather be said, below the average, for animals having that lowered temperature have no appreciable ailment to account for it; and, again, drinking will lower the temperature in the rectum by a degree for an hour or more afterwards. Now, Professor Nocard, so early as January, 1892, laid down the rule deduced from experience, that a reaction of less than F. 2·5° could not be safely accepted as evidence of tuberculosis; but he added that a reaction of F. 1·4° had no significance at all, thus leaving it to be inferred that the full rise of F. 2·5° need not always be strictly adhered to. After consideration it will be apparent that a less rise than F. 2·5° may sometimes be accepted by a skilled and experienced observer in accordance with other considerations which weigh in the balance of his judgment as a proficient; but that if a rule is required to guide all alike, others as well as proficients, then it must be said that a rise of less than 2·5° cannot be depended upon.

But since the temperature of bovine animals varies by a degree and a half or more, even when they are in health, from what step on the scale shall the rise be reckoned? No fixed temperature can be named. The normal temperature of each animal must be ascertained before testing, or at least that temperature which is apparently normal for it at the time of observation. It is usually sufficient for reasons to be mentioned immediately, to take it three times during the day preceding the application of the test. These observations will often be found to differ between themselves, and therefore they do not yield any other guide than this—they serve to show whether the animal's temperature lies within the rather wide limits of the normal. Thus they do not apparently furnish the required starting point, but two or three different temperatures, between which a choice has to be made. The way out of this difficulty is simple. The reaction temperature, or rise after injection, must be measured from the highest of the natural temperatures observed beforehand.

At

At what hours of the day should the preliminary temperature be observed? A common recommendation is to take it three times a day—and even oftener—for several days before injecting. That is desirable, no doubt; and as long as this method was under investigation it was indispensible. But practical work has to be carried on under limitations; and the number of preliminary observations being constantly limited as a rule to three or four, it appeared that the times of observation should include those at which the natural temperature was considered to be highest, so as to avoid the error which might sometimes arise if hours of lowest natural temperature were inadvertently chosen: for the temperature of bovine animals fluctuates with the hour of the day, as well as with other conditions, some of which have been already mentioned. 9 a.m. and 4 p.m. are considered to be hours of highest temperature for the ox, and accordingly these were fixed upon, one observation at mid-day, or three hours after the first, being additionally recommended.

It now comes to be considered how the temperature should be taken. It is customary to take it either in rectum or vagina; but there is usually a difference of three or four tenths of a degree between the two, that of the vagina being the lower, except during œstrum. As long as the temperature is taken at successive observations in the same cavity in the same animal, probably it does not matter which is chosen, as regards that single case. But in order that a series of observations on different animals may be comparable, it is necessary that all should be taken in the same way; and for this reason it is better to direct, for the present purpose, that all temperatures should be taken in the rectum. There is another point of a similar kind, but of greater importance. This is that the temperature recorded will be higher when the thermometer is fully inserted than when it is only partly inserted, and the difference, as has been shown by Mr. Frederick Hobday, M.R.C.V.S., may be as much as one degree. As this difference of temperature corresponds to a difference in depth of insertion of only two inches, it is essential that some method for securing insertion to the same depth always, both in the same and in different animals, should be adopted. The best instruction is to insert the instrument until its extremity is but just visible.

The reaction temperature may begin to show itself at the sixth or seventh hour; usually it does not occur until the ninth hour. But in every case it lasts over that hour; so that there is no object in attempting to observe it earlier. Strictly, observations of the reaction temperature should be continued every three hours until the twenty-fourth; it is desirable to follow it until, at about that time it has disappeared; but, as with the preliminary temperatures, it is not very often possible to do this. The working rule, therefore, is to begin to observe the temperature at the ninth hour after injection, and to continue every three hours until a rise of F. 2·5° above the highest preliminary temperature has been recorded. By this plan the least time possible will be occupied. But occasionally the reaction is delayed to the eighteenth hour, so that if the expected standard-rise is not observed earlier it must not be hastily concluded that the beast is healthy.

When the reaction temperature has been marked, but yet short of the standard, the result may be considered as doubtful. A fresh injection must be made, and a larger dose than that given at first should be employed. But a second injection must not be given until a week has gone by. The reason is that the first dose apparently protects the animal for that short time, so that a second given within it sometimes produces little or no effect. The dose is increased partly in case the average dose given at first should have produced only a doubtful effect because of some peculiarity of the animal, because the animal was one which required a larger than the average dose, without any reference to its state as to disease.

As to the way in which the injection is made. Any graduated glass syringe which holds 10 centicubes will do. The needle should be stouter than is used for man. It is a good precaution to interpose a short length of india-rubber tubing between the syringe and the needle; about an inch is enough. There is then less risk of getting the needle broken should the animal move unexpectedly during the little operation, as it commonly does. The injection may be made under the skin of any part of the body, behind the shoulder being a favourite spot; and sometimes it is customary to incise the skin before thrusting the needle in, but if a stout and sharp needle be used this is seldom necessary.

There are three brands of tuberculin which are more or less freely available in Sydney; they differ somewhat in appearance, but much more in price than in any other respect. Koch's tuberculin, prepared under direction of Dr. Libbertz, costs only 3s. 6d., in bottles holding 5 centicubes; and as half a cubic centimetre (or centicube) is the dose for an adult, the cost of the tuberculin used at each observation is about 4¼d. A third brand, prepared at Copenhagen, also sent out in bottles containing 5 centicubes, has been offered in Sydney at 20s.; the dose being the same, the cost of the tuberculin used at each observation would be 2s. But this quantity of Bang's tuberculin costs only a shade over 1s. 4d. in Copenhagen; and so the cost of each dose would be about three half-pence. The tuberculin for veterinary use supplied by the British Institute of Preventive Medicine is found in small wide-necked bottles holding 3 centicubes each; the cost is 1s., and as 1 centicube is a dose for an adult, the cost of the tuberculin used at each observation is 4d. For two or three years past the Department has been in the habit of using Koch's, and of course with perfectly satisfactory results; the others have also been tried, and with the same satisfactory results.

The direction given with the German and with the Danish lymphs is to dilute them before use; each portion of 5 centicubes is to be made up to 50 (German) or to 100 (Danish) centicubes with 45 or with 95 centicubes of recently-boiled water, in which half a centicube of pure carbolic acid has been dissolved. No such direction is given with the product of the British Institute. Doubtless the object is to render the loss of a few drops of the mixture of less consequence, should any be spilt in making the injection, and as a general rule dilution is to be recommended. But, as a matter of fact, Mr. Stanley, the Chief Veterinary Inspector of the Board of Health, was for long in the habit of injecting the tuberculin undiluted, and with an ordinary hypodermic syringe; and in very expert hands there is no objection to this plan.

The necessary syringe, needle for penetrating the skin and injecting the contents of the syringe, measures divided so as to measure in centicubes (or cubic centimeters), and tuberculin, may be got at leading surgical Instrument makers and wholesale druggists in Sydney. Thermometers should not cost more than a few shillings each, and the necessary outfit, excluding tuberculin, should scarcely cost more than a sovereign. With great care and some practice an intelligent farmer would soon learn to make correct and trustworthy observations; but it must be said that while the mere doing of the various things already described is easy enough, it is more difficult to interpret correctly the results as shown by the thermometer. Much further help will be gained from the form of record and directions issued by the Department. This will be forwarded free of charge on application to the Secretary, Department of Public Health, Sydney, on condition that a copy of the record duly filled in is sent back to the Department for registration.

In conclusion, it must be pointed out that public interest in the prevention of tuberculosis among oxen is two-fold. First, all alike share in the commercial interest which prevention of that disease has for this pastoral country. Tuberculosis is a disease which in those districts where it is prevalent inflicts very great loss on the breeder. No attempt has been made to estimate the amount of that loss here; but it is not necessary to search far in order to find individual breeders whose losses from this cause have seriously discounted their otherwise prosperous business.

Secondly, all members of the community—whether cattle-breeders or not, know that consumption in man is a too prevalent disease; or, to put it in another way, it is now known that consumption in man is a preventable disease, which yet is far from being effectually prevented. The fight to prevent it entirely must, in the nature of the case, be long and difficult, and consequently there is the most urgent need to neglect no advantage which knowledge has afforded. Now it has been abundantly demonstrated, that consumption can be communicated from animal to animal and from animals to man by feeding on milk and meat derived from tuberculous animals. Here, then, a hold over a powerful enemy offers. The sale of the meat and milk of tuberculous animals must be strenuously resisted by all who have the prevention of consumption in man at heart.

This struggle is greatly and happily facilitated by circumstances; for, though inspection of slaughter-houses and dairies is useful, and must not be abandoned, the direct method of preventing consumption in man is to prevent the disease among cattle at the breeding-station. Thus the domain of commercial interest which was mentioned just now is again entered; the prevention of tuberculosis among cattle, which interests the guardians of the public health, also interests the breeder as a matter of prudent commercial management.

Very often the public health and commercial interests appear superficially to be opposed; seldom can they be convincingly shown to jump together, as in this case they can

J. ASHBURTON THOMPSON,
Chief Medical Officer of the Government.

APPENDIX K.

Abstract of Tuberculin Register, 1897.

Consecutive numbers.	Description of animal.				Tuberculin.		Temperatures.			Signs of tuberculosis during life.	Organs found tuberculous after death.	Any other disease detected after death.	Remarks.
	Kind.	Class.	Sex.	Age.	Brand.	Quantity used.	Highest before injection.	Highest after injection.	Rise.				
1	Durham ..	Dairy	Cow..	9 years	Danish	·8 ..	101·2°	102°	8° ..	Mastitis ..	Not killed	.....	
2	,, ..	,,	,, ..	8 ,,	,,	·8 ..	102°	105°	3° ..	Cough	Lymphatic glands; lump liver and peritoneum.	None	9 cows milked; 23 inspected.
3	,, ..	,,	,, ..	7 ,,	,,	·8 ..	101·2°	105·1°	3·9°..	"Roarer"..	Lymphatic glands..	,, ...	4 cows milked; 38 inspected.
4	Ayrshire ..	Stud	Bull..	6 ,,	Koch's	·33cc. ..	102·6°	102·1°	..	.....	Not killed	... ..	
5	,, ..	Store	Cow..	3 ,,	,,	·33cc. ..	103·1°	102·6°	..	.....	,, ...	.....	
6	,, ..	,,	,, ..	5 ,,	,,	·33cc. ..	102·6°	103·6°	1° ..	.....	,, ...	.....	Excited by driving.
7	Durham ..	Stud	Bull..	7 ,,	,,	·33cc. ..	102·6°	105·7°	3·1°..	Sonorous breathing.	Lymphatic and pulmonary.	Pleuritic adhesions.	
8	Ayrshire ..	Dairy	Cow..	4½ ,,	,,	·33cc. ..	102·6°	102°	..	.....	Not killed	.....	
9	Durham ..	,,	,, ..	6 ,,	Danish	·8 ..	102°	102°	..	Heavy breathing.	,, ...	.....	25 cows milked; 25 inspected.
10	,, ..	,,	,, ..	7 ,,	,,	·8 ..	101·5°	101·5°	..	Diarrhœa ..	,, ...	.....	
11	,, ..	,,	,, ..	8 ,,	Koch's	·66cc. ..	103·4°	101·8°	..	.....	,, ...	.....	
12	Jersey	,,	,, ..	3 ,,	,,	·66cc. ..	102·6°	101·6°	..	.....	,, ...	.....	
13	Crossbred..	,,	,, ..	Aged ..	Danish	5cc. dil.	102·2°	102·3°	·1	Slight cough	,, ...	.....	
14	,, ..	,,	,, ..	8 years	,,	5cc. dil.	102·8°	102·5°	..	,,	,, ...	.....	
15	,, ..	,,	,, ..	4 ,,	,,	5cc. dil.	102·2°	101·8°	..	Diarrhœa ..	,, ...	.....	
16	,, ..	,,	,, ..	4 ,,	,,	5cc. dil.	102·8°	105·1°	2·3°..	Poor condition and cough.	Mammary abscess; caseous, enlarged lump gland above. Viscera all healthy.	.....	No tubercle bacilli found in smear preparations and sections of gland.
17	Durham ..	,,	,, ..	7 ,,	Koch's	·66cc. ..	104·4°	105·6°	1·2°..	Cough and extended head.	Lymphatic and pleural.	None	
18	Alderney ..	,,	,, ..	7 ,,	,,	·5 ..	103·2°	105·3°	2·1°..	.....	Not killed	.....	
19	Crossbred..	,,	Bull..	4 ,,	,,	·5 ..	101·4°	104·3°	2·9°..	Slight "Roarer."	Lymphatic	None	45 cows; 2 bulls, all inspected.
20	,, ..	,,	Cow..	4 ,,	Danish	·4 ..	102·3°	103·3°	·1 ..	Swelling in udder.	Not killed	.....	
21	,, ..	,,	,,	4 ,,	,,	·4 ..	102·5°	102·6°	·1 ..	.....	,, ...	.....	
22	,, ..	,,	,,	4 ,,	,,	·4 ..	102·5°	104·1°	1·6°..	.....	,, ...	.....	
23	,, ..	,,	,,	8½ ,,	,,	·4 ..	102·6°	103·4°	·8 ..	Cough, dribbling; thin.	Lymphatic (?).....	.....	Killed on account of bad condition.
24	,, ..	,,	,,	12 ,,	Koch's	·5 ..	102·2°	102·3°	·1 ..	Thin	Not killed	.....	Appearance probably due to age.
25	Shorthorn..	,,	Bull..	2 ,,	,,	·5 ..	102°	102·2°	·2 ..	.....	,, ...	.....	
26	,, ..	,,	Cow..	7 ,,	,,	·5cc. ..	101·2°	101·4°	·2 ..	Swelling of udder.	,, ...	.....	
27	Crossbred..	,,	,,	13 ,,	,,	·5cc. ..	102°	102·1°	·1 ..	.....	,, ...	.....	
28	,, ..	,,	,,	9 ,,	,,	·5cc. ..	101·6°	101·6°	..	.....	,, ...	.....	
29	,, ..	,,	,,	11 ,,	,,	·5cc. ..	101·8°	102°	·2 ..	.....	,, ...	.....	
30	,, ..	,,	,,	12 ,,	,,	·5cc. ..	102·2°	103·8°	1·6°..	.....	,, ...	.....	
31	,, ..	,,	,,	9 ,,	,,	·5cc. ..	101·8°	101·3°	..	.....	,, ...	.....	
32	,, ..	,,	,,	11 ,,	,,	·5cc. ..	102°	102°	..	.....	,, ...	.....	
33	,, ..	,,	,,	Aged ..	Danish	·4cc. ..	102·3°	105·8°	3·5°	.....	,, ...	.....	For some reason or other this cow was not killed.
34	,, ..	,,	,,	6 years	,,	·4cc. ..	102·4°	101·8°	..	.....	,, ...	.....	
35	,, ..	,,	,,	5 ,,	,,	·4cc. ..	102·4°	101·8°	..	Slight hardness in udder.	,, ...	.....	
36	,, ..	,,	,,	5 ,,	,,	·4cc. ..	102·1°	102·2°	·1 ..	.....	,, ...	.....	
37	,, ..	,,	,,	5 ,,	,,	·4cc. ..	102·5°	102·8°	·3 ..	.....	,, ...	.....	
38	,, ..	,,	,,	3 ,,	,,	·4cc. ..	102·0°	101·8°	..	.....	,, ...	.....	
39	,, ..	,,	,,	Aged ..	,,	·4cc. ..	103·1°	102·4°	..	Thin	,, ...	.....	
40	,, ..	,,	,,	4 ,,	,,	·4cc. ..	102·4°	101·8°	..	.....	,, ...	.....	
41	,, ..	,,	,,	4 ,,	,,	·4cc. ..	102·5°	102·2°	..	.....	,, ...	.....	
42	,, ..	,,	,,	4 ,,	,,	·4cc. ..	102·5°	101·8°	..	.....	,, ...	.....	
43	Ayrshire ..	,,	,,	3 ,,	,,	·4cc. ..	102·4°	102·4°	..	.....	,, ...	.....	
44	,, ..	,,	,,	3 ,,	,,	·4cc. ..	102·0°	101·8°	..	.....	,, ...	.....	

APPENDIX L.

Manual for the Information and Guidance of Local Authorities and of Dairymen and Milk-vendors registered, in Town and Country Districts, under the "Dairies Supervision Act" (50 Vic. No. 17), and the "Public Health Act," Part IX (60 Vic. No. 38).

CONTENTS.

Part

Dairies Supervision Act, 50 Vic. No. 17. Public Health Act, 60 Vic. No. 38 (Part IX.)

THIS Manual has been compiled for the information and guidance of local authorities, dairymen, and milk-vendors, to assist them in carrying out the provisions of the Dairies Supervision Act (50 Vic. No. 17).

Local authorities should not register any dairyman or milk-vendor unless in the first instance they have assured themselves that the requirements specified herein have in the main been carried out.

A dairyman according to this law is "any person engaged in the *production* of milk for sale or supply for profit to other persons," so that a dairyman is one who keeps milch cows (or goats, &c.) A milk-vendor is "any person engaged in the *storage* or *distribution* of milk for sale or supply to other persons"; and thus a milk-vendor may be spoken of in general terms as one who receives milk from a producer (or dairyman) and acts as a distributor of it.

By the Public Health Act, 1896, Part IX, section 71, the provisions of the Dairies Supervision Act were extended, so as to apply to cream, butter, and cheese. Therefore, everyone who sells or supplies cream, and everyone who manufactures and sells or supplies butter or cheese is a dairyman or milk-vendor, and must be registered.

The Board has been advised that skim, separated, and butter-milk, whey, &c., are all to be regarded as "milk"; consequently, persons who sell or supply any of them are "milk-vendors," and must apply to be registered.

The Board has also been advised that all persons who sell or supply milk, cream, &c., to any individual or company for the manufacture of butter or cheese, or *for any other purpose*, must be registered under this Act, and that it does not matter whether such milk suppliers are shareholders or co-operative partners in a company supplied by them or not.

The law imposes certain requirements which must be strictly observed by all dairyman and milk-vendors; moreover, it requires them in general to maintain their premises, persons, and cattle in a good sanitary state. [See sub-section (IV) of section 4 of the Act.]

I.—REMARKS ON SOME PROVISIONS OF THE ACT.

1. LOCAL AUTHORITIES.

The local authorities charged to carry out the Act are as follows:—(1) Within the boundaries of the City of Sydney, the Municipal Council of that city; (2) within the limits of any other municipality or portion thereof, the Municipal Council thereof; (3) in any place where there is no municipality the Police Magistrate or senior police officer of the police district in which such place is situate.

2. APPLICATION FOR REGISTRATION TO BE MADE.

All dairymen and milk-vendors are required by the Act to apply for registration to the local authority for the district in which they reside; and they must do this before they begin to trade. Their application must be made in writing, and in the form given in Appendix "A" to the Act.

3. REGISTRATION TO BE RENEWED YEARLY.

All registrations expire on the 31st December of each year, and all dairymen and milk-vendors must before that date apply for a renewal of registration. If from neglect to apply to the local authority for renewal they allow their registration to lapse, they will be liable to prosecution for trading without being registered.

4. CANCELLATION OF REGISTRATION.

Should the premises of any dairyman or milk-vendor be in an insanitary condition, the trader may be called upon to make the necessary improvements forthwith, or the registration may be cancelled.

5. STATUTORY NOTICES TO BE EXHIBITED.

All registered persons are required by the Act to affix and maintain on their premises and on all vehicles used by them for the purposes of trade their name and the words "Registered Dairyman" or "Registered Milk-vendor," according to the branch of trade for which they are registered. Any person infringing this provision is liable to a penalty of £20.

6. WHERE TO BE AFFIXED ON PREMISES.

The notice to be affixed to the premises according to the Act, "in some conspicuous place," and should be written in legible letters. That part of the premises which faces the most frequented thoroughfare is the proper position.

7. NOTICES ON VEHICLES.

The notices on vehicles must be in legible letters, They may be affixed so as to allow of removal in case the vehicles are sometimes used for other purposes than those of the milk trade.

8. CEASING TO TRADE.

Every dairyman or milk-vendor who ceases to trade in the district for which he is registered is required by the Act to give the Local Authority notice that he has ceased. It does not matter why he has ceased—he is in all cases bound to give the Local Authority notice. If he neglects this he will be liable to a penalty of £20.

9. INFECTIOUS DISEASES IN MAN TO BE REPORTED.

A dairyman or milk-vendor is required by the Act to report immediately any case of the following infectious diseases occurring in any human being engaged at or residing on or in his dairy-premises or milk-store:—Cholera, enteric fever (typhoid), small-pox, scarlet fever, diphtheria, measles, syphilis.

10. INFECTIOUS DISEASES IN ANIMALS TO BE REPORTED.

A dairyman or milk-vendor is required by the Act to report immediately any case of the following diseases which may occur on his dairy premises in any animal (that is, in any animal whatever, and not in milch-cows alone):—Aphthæ, cancer, pleuro-pneumonia, splenic fever (anthrax, or Cumberland), tuberculosis, actinomycosis, and inflammations, eruptions, or warts of the udder.

11. TO WHOM REPORTS OF INFECTIOUS DISEASES IN MAN OR IN ANIMALS ARE TO BE MADE.

In the City of Sydney such reports may be made either to the officer in charge of the nearest police station or to the Secretary of the Board of Health. Elsewhere they are to be made either to the nearest officer of police, or Clerk of Petty Sessions, or to the Government Medical Officer.

II.—DAIRY PREMISES.

12. Definition of Dairy Premises.

Dairy premises comprise any building, shed, land, or place used for the stalling, grazing, feeding, or milking of cattle, for the purpose of producing milk to be sold or supplied, or any building or place used for the purpose of depositing or storing milk when so produced.

13. Habits of Persons on Dairy Premises.

Premises cannot be deemed to be satisfactory (see subsection IV of section 4 of the Act) unless the people who live on them are cleanly in their persons, clothing, and general habits, and keep their houses clean and well ventilated.

14. Milking-sheds, Bails, Yards, &c.

Milking-sheds should be provided, and in all cases should be properly roofed and floored, so that the roof is weather-proof and the floor is impervious or waterproof; and the floor should be graded so that liquid matters may run off and be carried away outside the shed.

The milking-yard should have a dry and solid surface; it may need to be under-drained, metalled, and rolled, or paved, or tar-paved; and it must be graded to a gutter.

The dung and litter should be swept up and removed to the dung-heap after, not before, each milking, but the sweeping should not be commenced until the milk has been removed or placed under cover.

The dung-heap should be as far as possible from the bails and milk-room.

15. Lime-washing.

Bails and milking-sheds should be kept well lime-washed. This should be regularly and thoroughly done not less than once in three months, and as much oftener as may be necessary to keep them clean and sweet.

16. Drainage.

Liquid filth should be conducted from sheds and bails by a well-constructed gutter. This should be open, so that it can be swept down daily, and it should have an even fall from its beginning within the milking-shed, or at the bails, to its termination.

17. Rain and Surface Waters.

Roof should be furnished with guttering and spouting to lead off rainwater to tanks, &c., or to well-laid, open gutters, so as to prevent the accumulation of pools of stagnant water.

18. Approaches to Milking-yards, &c.

The approaches to milking-yards should also be formed, and gutters should be cut so as to prevent water from standing near the yards.

III.—MILK-ROOMS AND MILK.

19. A Milk-room to be Provided.

On every dairy premises a room must be provided to be used for separating or for straining or cooling the milk and for storing vessels and utensils when they are not in actual use. A milk-room is always necessary, whether the milk is stored or not.

20. Its Uses.

One object of this room is to provide a place free from the dust of yards, sheds, bails, &c., where the vessels may be washed and kept clean. A boiler should be provided close by, so that hot water for washing-up may be got without going to the kitchen or washhouse. Milk and milk vessels must always be kept quite apart from the dwelling-house.

21. Its Position.

The milk or separating room must not be under the same room as, nor in communication with, any bail, stable, or fodder store. It must not be in communication with any living-room. It must not have any room over it nor under it. It should be detached, but the Local Authority in its discretion may give permission to build it as a lean-to against the blank wall of some other building. It should be placed as far as posssible from bails and yards, and it must be at a safe distance from fowl-yards, or drains, privies, dung-heaps, pig-styes, and other possible sources of contamination.

22. Its Construction.

The milk-room must be floored with some non-absorbent material. It must be well-lighted and well ventilated. Its windows and doors should be fitted to keep out flies and dust. It must not be used for any other purposes than those already named, and is to be kept scrupulously clean.

23. Connection with Sewers.

There must be no direct connection between the milk-room and the sewer. By the 10th section of the Act any person who stores, keeps, or deposits milk in any room used for sleeping or dwelling in, or *in any other way or place* likely to render it unwholesome or injurious to health, is liable to a penalty of £20.

24. Milk.

It is a well-established fact, though one not as yet sufficiently recognised by dairymen, that milk is very delicate, and that its flavour and keeping qualities are easily spoilt. It readily absorbs taints and odours. Scrupulous care should be taken, therefore, to prevent its pollution, not merely by dust and dirt, and by the minute portions of stale milk or curd which adhere to vessels unless they are regularly and thoroughly scalded and scoured bright, but also by the smells and taints given off from dung-heaps, rubbish, and filth. These should not be allowed to accumulate or remain near places where cows are milked, nor where milk is stored. The cleaner milk is kept the longer it will keep sweet, and the better will be the class of the butter made from it.

25. Precautions to be observed in order to protect Milk.

Several precautions must be taken in milking to produce milk which will keep sweet as long as possible. Persons should wash their hands clean before beginning to milk; the udder and teats of the cow should be washed clean; the udder and underpart of the belly of the cow should be well wetted to prevent dust from those parts from falling into the pail; the two or three jets of milk first drawn from each teat should be rejected, and not allowed to fall into the pail; as soon as possible the milk should be run over a cooler and cooled as much as possible in a cool, dark milk-room, free from floating dust; and afterwards it should be covered and kept cool until it can be sent away. All pails, strainers, coolers, or other appliances used to receive, prepare, or store milk should be constantly kept in thoroughly good repair, for rough places, dents, torn edges, &c., cannot easily be cleansed; immediately after use these vessels should be regularly scalded and scoured bright. Zinc or galvanised utensils are to be avoided; tinned vessels are much better, but should be replaced when the metal becomes worn and rusty; block-tin or enamelled vessels are best of all, and easy to keep clean, for milk does not eat into them.

26. Preservatives.

The addition of preservative substances and antiseptics is in all cases reprehensible, and, moreover, it is not necessary; for if care be taken to keep the milk clean, if it be milked by clean hands from clean udders and teats into clean vessels, stored in clean places and kept cool, it will keep sweet long enough for the ordinary purposes of trade. Milk may be kept sweet still longer by a process, now well known, call pasteurising, and apparatus for carrying out this process is simple and inexpensive; but pasteurising is not a substitute for cleanliness. The precautions described and recommended above must always be taken as well.

27. Boiling Water to be used.

The wholesomeness of milk has been found by practical experience to depend largely on boiling water being used to scald utensils and vessels; they should not be washed with cold water.

28. No Cloth to be put under the Lids of Milk-cans.

The cans in which milk is carried must have close-fitting lids so made that they effectually close the cans by themselves, and do not require any rag, cloth, or other material to be pressed in with the lid to make it tight.

29. Vehicles to be kept Clean.

The vehicles used for carrying milk should be thoroughly cleansed after use.

30. Keeping Pigs.

Keeping pigs near dairy premises is always objectionable, but if pigs are kept the following rules must be complied with:—They should be confined either in a stye or in a well-fenced paddock, and at the least not less than 50 yards from any dwelling, milk-room, bail, or yard, and the styes should be kept thoroughly clean and sufficiently floored.

31. Dogs and Cats on Dairy Premises.

Dogs and cats should be most carefully prevented from getting access to the milk, for both are liable to have diseases which are communicable to man through milk if it is contaminated by them. These animals should not be permitted to go near the milking-shed, milk-room, &c., &c.

IV.—CARE OF DAIRY CATTLE.

32. To produce Milk of the best commercial value.

All the foregoing precautions will not enable the dairyman to produce milk of the best commercial value unless the cows themselves are healthy, and well fed, and cared for, and not too old.

33. Milk of Cows recently calved not fit for consumption by Man.

The milk furnished by cows immediately after calving is unfit for consumption by man, and it cannot be added to the milk drawn from the milking herd without injuring the whole yield. A good way of making sure that such milk has become suitable for ordinary dairy purposes is to boil a little of it. As long as it forms a considerable clot after boiling it is still unfit; but as soon as it forms only the usual thin scum it is fit, and the cow may be drafted to the milking herd.

34. Feeding and Watering.

In the paddock cattle should have at all times access to an ample supply of good pure water. They must not be turned out where they can get at foul water, or at heaps of manure, rubbish, or refuse. Neglect in this respect would justify cancellation of registration.

35. Shelter.

In paddocks shelter should be provided by means of weather-sheds and shade trees. Lastly, to yield well, cows should be fed well and kept thoroughly clean; and in the winter they should be kept warm (housed).

36. Quiet Handling of Cows.

Milch-cows should not be treated roughly at any time. More especially must they be gently handled when they are being driven in to milk, and while in the milking-yard or bails. Rough treatment lowers the quality of the milk by heating and irritating the cows, and for the same reason it reduces the quantity of milk yielded. It is thus to the dairyman's interest to provide for his cows carefully, and to handle them gently.

V.—HOW TO ACT WHEN DISEASE OCCURS.

37. When Disease Occurs to Animals and is Known to be Infectious.

It has already been pointed out that the law requires that certain diseases (see section 10) be reported when they occur in animals on dairy premises. Such reports must be made without any delay (see section 11).

38. When Doubt Exists as to the Nature of the Disease.

If any animal is noticed to be sick it should be separated and watched for a time. If the disease is supposed to be one of those mentioned in clause No. 10, it should be reported, so that the Local Authority may decide what action is to be taken.

39. Health of Cows after Calving to be especially Watched.

After calving, and for three months thereafter, cows should be watched with special care. Their udders should be frequently examined both for lumps and for scabs, or any breaking out on them or the teats, and their hides should also be examined for loss of hair in patches. If anything of the kind is found the affected cow should be immediately separated from the milking herd, and its milk dealt with as milk from diseased or suspected cows, even though the cow may not seem ill. When any scabs, chaps, blisters, or sores are found on the udder or teats of any cow in a herd the rest should be carefully examined, because the diseases which cause such eruptions are in many cases infective, and are liable to run through the herd.

40. Tuberculosis in Cattle.

This disease is found in all the districts where dairying is carried on, and as it is communicable to man through the use of milk given by infected cows, or of butter made therefrom, and is moreover contagious, and therefore likely to spread in a dairy herd, every suspected case must be at once isolated, and the animal must be destroyed forthwith, if on examination it be found so diseased. In obscure cases the use of "tuberculin" is a valuable means of detecting the disease.

41. Reasons for Separating Suspected Cows.

Cows occasionally suffer from slight ailments, and at first it may be difficult to tell whether an illness is really trifling or the beginning of a more serious illness. By separating and keeping under observation the dairyman gets an opportunity of forming a sound opinion, with safety in the meantime to his customers and to the herd. Some of the diseases of the cow which are communicable to man by milk are not always the cause of serious illness in the affected cow, though when they are transferred (by means of milk) to man they become more virulent, and cause serious and even fatal diseases.

42. Use of Milk from Diseased or Suspected Cows.

It must be clearly understood (1) that the milk of a diseased or suspected cow is not to leave the premises; (2) it is not to be used for the food of man, whether it has been cooked or not; (3) it must not be used to feed other animals (pigs, for instance) unless it has first been thoroughly boiled. These rules apply to any sick cow whatever, and not merely to those which are suffering, or thought to be suffering, from one of the diseases specially mentioned by name under section 10 above.

43. Sick Animals of all kinds to be similarly dealt with.

The foregoing remarks have been made with special reference to milch-cows. But as disease is communicable from one animal to another they must be taken to apply to all the animals on the farm.

44. When Infectious Sickness occurs in Human Beings.

When any disease named (under section 9) attacks any person on dairy premises, whether living on them or merely employed on them, the case must be reported without any delay (Dairies Supervision Act, section 7). The sale or supply of milk from the infected premises must forthwith cease, and must not be renewed until the patient has been removed or has recovered, and the premises have been disinfected. If it is possible to arrange for the herd to be driven from the infected farm to a dairy in the neighbourhood, and it is there milked and the milk handled and sent to market, &c., by persons who are not members of the infected household, that course may sometimes be permitted; but no member of the infected household must enter the premises to which the herd is so driven for milking, nor in any way join either in milking or in preparing the milk for sale, or in conveying it to any factory, platform, &c., &c. The responsibility of taking care that all risk of infection of milk is prevented under these circumstances rests on the Local Authority.

45. Indisposed Persons not to Work on Dairy Premises.

No sick or indisposed person should be allowed to help in the business until he has thoroughly recovered.

46. Penalties.

According to section 10 of the Act, any person who sells or supplies milk *produced by any diseased animal*, or milk which has been *exposed to infection from any person* suffering from an infectious disease, is liable, on conviction, in a penalty of £20. The attention of Inspectors under the Act has been specially directed to these provisions.

VI.—WATER.

47. Pure Water essential.

A good supply of pure water is essential on dairy premises. Firstly, whenever it is possible the premises are to be connected with the public water-mains; secondly, whenever a public water-supply is available, all underground tanks and all wells must be closed.

48. Water-troughs should be Cleansed.

Water-troughs should be provided in yards and paddocks, and should be regularly cleaned, and every trough should have a waste-hole at the bottom, so that it can be easily emptied. The vicinity of the trough must be paved or otherwise prevented from becoming soft or muddy. In places where a public water service is available the troughs should be supplied from it.

49. Position of Wells.

Wells should not be sunk near to any dwelling, bail, yard, drain, privy, dung-heap, fowl-yard, pig-sty, or other source of contamination, nor in any frequented place. They must be securely covered and fitted with a pump. Deep wells are better than surface wells, which should always be avoided if possible. When they are absolutely necessary special care must be taken to have them as far removed as possible from sources of contamination by underground soakage (as from cesspits, dung-heaps, drains, &c.), and they must be protected by a wall or coaming to prevent inflow of surface-water during rains.

50. Purity of Water.

It is the duty of local authorities to examine all sources of water carefully. If water is found to be polluted and unsafe, the dairyman is required to find a fresh source, failing which his registration may be cancelled. Access of cows to impure water, as in drains, &c., must be prevented by fencing, &c.

VII.—PRIVIES.

51. Water-Closets.

If dairy premises stand within reach of public sewers they must be connected with them. In that case they must be furnished with water-closets.

52. Pail Closets.

When no public sewer is within reach, dairy premises must be provided with pail-closets, which must be emptied by the municipal scavenger not less frequently than once a week. When the premises are out of reach of the public scavenger the pail must be emptied by the householder not less than once a week. The contents should be dug into the soil, and turned over with the spade a few times, so as to be mingled with the earth. They are not to be simply tipped into a hole and buried in a solid mass. A kitchen garden may be a suitable place; but any place is unsuitable where surface waters may wash the nightsoil into waters which may be used for drinking by man or animals; so also is any place near a well or tank, or near the bails, or in the grazing-paddock. Any spot thus used for burying should not be used again for at least a month.

53. No Cesspit to remain on Dairy Premises.

Cesspits are not allowed on dairy premises. If they exist they must be first emptied, and then filled up with clean earth, level with the natural surface of the ground, before registration is granted.

By order of the Board,
CLARENCE A. SIMMS,
Secretary.

APPENDIX M.

Regulations under the Noxious Trades and Cattle-slaughtering Act.

[*From Supplementary Government Gazette, No. 8, 5 January, 1897.*]

PROCLAMATION.

New South Wales, to wit, } By His Excellency The Right Honorable Henry Robert, Viscount Hampden, Governor and Commander-in-Chief of the Colony of New South Wales and its Dependencies.

(L.S.) Hampden, *Governor.*

Whereas by an Act passed in the fifty-seventh year of the reign of Her present Majesty, intituled the "Noxious Trades and Cattle-slaughtering Act, 1894," it is enacted by section 2 that the Governor, on the recommendation of the Board of Health, may, by proclamation, declare that any trade, business, or manufacture is a noxious trade within the meaning of the said Act: And whereas it is deemed expedient that the following trades, businesses, and manufactures be declared noxious trades within the meaning of the said Act, namely:—

Fat-melter.	Bone-grinder.	Glue-maker.
Fat-extractor.	Blood-boiler.	Pig-keeper.
Bone-boiler.	Blood-drier.	Poultry-farmer.

Now, therefore, I, Henry Robert, Viscount Hampden, the Governor aforesaid, with the advice of the Executive Council, do hereby declare the above-mentioned trades, businesses, and manufactures to be noxious trades within the meaning of the said Act.

Given under my Hand and Seal, at Government House, Sydney, this eighteenth day of December, in the year of our Lord one thousand eight hundred and ninety-six, and in the sixtieth year of Her Majesty's Reign.

By His Excellency's Command,
G. H. REID.

GOD SAVE THE QUEEN!

The

The Treasury, New South Wales, 31st December, 1896.

HIS Excellency the Governor, with the advice of the Executive Council, has been pleased to approve of the under-mentioned Regulations in connection with the proper administration of the "Noxious Trades and Cattle-slaughtering Act of 1894," and the same are published for general information.

G. H. REID.

NOXIOUS TRADES AND CATTLE-SLAUGHTERING ACT, 57 VICTORIA No. 21.

PART I.—NOXIOUS TRADES.

I.—*Registration.*

1. In these Regulations the expression "the Act" means the "Noxious Trades and Cattle-slaughtering Act, 1894."

2. Every person applying for registration or for renewal of registration under Part I of the Act shall apply in the form given in Schedule A, and shall forward with the application the prescribed fee, provided—

(*a*) That such fee shall be returned to the applicant if the Local Authority refuses to register or renew the registration of the applicant, or if the Board refuses to approve the issue of a license to such applicant.

(*b*) That if the license be issued between 1st January and 30th June in any year half the prescribed fee shall be returned to the applicant.

3. Every person applying for registration or for renewal of registration as aforesaid, in respect of two or more separate premises, shall make a separate application and pay a separate fee in respect of each of such premises; and premises shall be deemed to be separate for the purposes of this Regulation when they have no common boundary.

4. The Register to be kept by the Local Authority, under subsection 1 of section 4 of the Act, shall be kept at the office of the Local Authority, in the form given in Schedule B.

5. All premises registered under this Act shall be so enclosed as to define their boundaries; and licenses shall issue in respect of such enclosed and defined areas only.

II.—*Licenses.*

1. Upon the receipt of an application for registration or for renewal of registration as aforesaid, the Local Authority shall inspect the premises in respect of which the application is made, and shall, within fourteen days of the receipt of such application, either

(*a*) Inform the applicant, in writing, that the said Local Authority refuses to register or renew the registration of the applicant, stating the grounds for such refusal; or

(*b*) Register or renew the registration of the applicant, and, within the time above-mentioned, submit, in writing, to the Board of Health, the particulars prescribed in Schedule C.

2. The application having been approved by the Board, a license in the form of Schedule D shall be forthwith issued by the Local Authority, and shall continue in force, unless revoked, until the 30th day of June next after the date of issue.

III.—*Inspection of Premises.*

1. The Local Authority shall cause all licensed premises to be inspected at least once in every month.

IV.—*Regulations to be observed in carrying on Noxious Trades.*

A.

1. The following Regulations shall apply to persons carrying on the under-mentioned trades, that is to say, the business of a—

Fat-melter.	Bone-boiler.	Blood-boiler.	Glue-maker.
Fat-extractor.	Bone-grinder.	Blood-drier.	

2. All materials which are not undergoing treatment shall be so stored as to prevent the emission of noxious or offensive vapours, gases, or effluvia.

3. All refuse from digesters or boiling-pans, and all refuse, residue, or other matters from which noxious or offensive vapours, gases, or effluvia are evolved or are liable to be evolved, shall be placed in properly closed receptacles, or otherwise dealt with in such a manner as to prevent any noxious or offensive vapours, gases, or effluvia from escaping.

4. All floors on which any process of the afore-mentioned trade is carried on shall be properly covered with a layer of concrete or other approved materials, laid upon a suitable bottom. Every such floor shall have a proper slope towards a channel or gully, and shall be effectually drained by adequate drains so discharging as not to be a cause of nuisance. Every drain shall be properly trapped, and shall be protected with a grid of which the bars shall not be more than three-eighths of an inch apart. Every drain and every apparatus connected therewith shall be maintained at all times in good order and efficient action.

5. No liquid or waste matters shall be allowed to leave the premises until they have been so purified as not to be a cause of nuisance.

6. The internal surface of the walls and every floor or pavement on the premises where any of the afore-mentioned trades are carried on, shall be kept at all times in good order and repair, so as to prevent the absorption of any liquid, filth, or refuse, or any noxious or offensive matter.

7. The internal surface of every wall shall be at all times kept clean, and, after being thoroughly cleansed by scraping or other effectual means, shall be thoroughly washed with hot lime-wash four times at least in every year—that is to say, at least once during periods between the 1st and 14th days of the months January, April, July, and October in each year.

8. The interior and exterior of every digester or boiling-pan, and of every tank, vat, trough, or other receptacle, shall be thoroughly cleansed as often as may be necessary to prevent any accumulation of filth in or upon such digester, pan, tank, vat, trough, or receptacle.

9. At the close of every working day, or, when work is carried on continuously, then once at least in each twenty-four hours, all fat, tallow, grease, glue, refuse, filth, or other matters which has or have been spilled, splashed, have fallen, or have been deposited or any surface shall be removed. All such parts of the premises, apparatus, and appliances as are especially exposed to such splashing or spilling shall be effectually cleansed, and when not injurious to the apparatus or appliances shall be washed with hot lime-wash at frequent intervals.

10. All premises shall be provided with apparatus or appliances capable of effectually destroying noxious or offensive vapours, gases, or effluvia arising in any process, or from any material, residue, or other substance which may be kept or stored upon them; and every process in which any such vapours, gases, or effluvia are generated shall be carried on in such a manner that they shall be effectually destroyed.

11. Every vehicle used in the collection of butcher's or slaughterman's garbage, wastes, or other offensive material shall be so constructed that it is air-tight when closed; and while any such cart is in use, the trap or other door of access to the interior shall not be permitted to remain open longer than is actually necessary to receive or discharge such material. Every such cart shall be thoroughly cleansed, and the interior thereof shall thereafter be thoroughly washed out with an approved disinfectant daily.

12. Every person applying for registration or for renewal of registration under this part (A) shall apply in the form given in Schedule A, and shall forward with the application a fee of £10.

B.

1. The following Regulations shall apply to persons carrying on the under-mentioned trades, that is to say, the business of a—

Pig-keeper,
Poultry-farmer.

2. A pig-keeper or poultry-farmer, within the meaning of these Regulations, is a person who keeps pigs or poultry for the purposes of trade, and who receives on his premises kitchen, butchers', or slaughterhouse wastes, or other putrescible matter.

3. No animal for slaughter, nor any dead animal shall be received on the premises.

4. The flesh of diseased animals shall not be received on any premises nor supplied to the stock.

5. No putrid matter shall be on the premises.

6. All animal food shall be boiled briskly for half an hour at least before being supplied to the stock.

7.

7. Every pig-keeper or poultry-farmer shall have on his premises one or more boilers with a fireplace of approved construction; they shall have a cover by which they can be closed air-tight, and they shall always be kept so closed, except when being filled, or emptied, or cleaned; every such boiler shall be furnished with a pipe for the escape of steam, and this pipe shall be so arranged that the steam escapes in the ashpit below the furnace.

8. All putrescible matters received on the premises shall be turned direct into the boilers; the fire shall be constantly maintained, so as to keep the contents of the boilers warm, and such contents shall not be removed from the boilers except to the feeding troughs.

9. All kitchen, slaughter-house, and butchers' wastes and the like material shall be collected in approved receptacles provided with lids which can be closed air-tight; and all such receptacles, while in use for collecting, shall be closed air-tight except when being filled.

10. Pigs shall be fed in enclosed yards, which shall be floored with brick or other approved impervious material, set on a good bottom, and having a proper fall for drainage.

11. Feeding troughs in sufficient number shall be provided, and food shall be deposited in them only.

12. Every pen and every yard shall be thoroughly cleansed at least once each day before 10 o'clock a.m.; all apparatus utensils, or tools shall be kept clean and in good repair.

13. Such portions of the buildings or premises as may be indicated by any inspector under Part I of the Act shall be kept thoroughly lime-washed to the satisfaction of the inspector.

14. Every person applying for registration or for renewal of registration under this part (B) shall apply in the form given in Schedule A, and shall forward with the application a fee of 10s.

V.—*General and Penalties.*

1. A copy of these Regulations shall be exhibited in a conspicuous place on every licensed premises.

2. Any person or persons offending against or failing to comply with any of these Regulations shall, for each and every offence, forfeit, on conviction, a penalty of not more than £5, and for a continuing offence not less than £1, for every day during which the offence shall be continued after conviction for the first offence: Provided that no such penalty shall exceed £20.

Schedule A.

NOXIOUS TRADES AND CATTLE SLAUGHTERING ACT.

APPLICATION FOR REGISTRATION UNDER SUBSECTION 1 OF SECTION 4 OF THE ABOVE ACT.

To the Local Authority for

I apply to be registered, in accordance with the particulars in the Schedule hereunder:—

SCHEDULE.

Name in full	
Style or Firm under which Trade is to be conducted	
Address	
Trade or Trades proposed to be carried on	
Description of Land, Premises, Buildings, and Enclosures occupied, used, or intended to be used by Applicant	
Special Appliances and Apparatus used for prevention of Nuisances in connection with above trade	

I transmit herewith the sum of ten License Fee to 30th June next.

Date— , 189 . Signature of Applicant.

Schedule B.

PARTICULARS OF REGISTRATION OF NOXIOUS TRADES UNDER 57 VIC. No. 21.

Registered by the Local Authority under Section 4 of the Act for the District of , for the year ending 30th June, 189 .

Date of Application.	Date of preliminary Inspection before Registration.	Date of Registration.	Dates and details of subsequent Inspections, and of Cancellation of Registration, &c., &c. (if any).
Name			
Address			
Situation of premises			
Proposed trade or trades			
Area of land			
Nature of water supply			
Condition of premises as to— (1.) Cleanliness ..... (2.) Lighting ..... (3.) Ventilation ..... (4.) Drainage			
Number of carts or other vehicles used			
Number of persons employed			
Means used for the disposal of solid and liquid refuse			

Date of approval or refusal of issue of license by the Board...

Date and number of license issued .....

Signature of the Officer of the Local Authority empowered to sign on its behalf.

Schedule

Schedule C.

NOXIOUS TRADES AND CATTLE-SLAUGHTERING ACT, 57 VICTORIA No. 21.

PART I.—Noxious Trades.

THE Local Authority for the district of , having registered on the , the premises of situated at , for the purpose of carrying on a noxious trade thereat, submits the following particulars to the Board of Health, and asks for the approval of the Board to the issue of a license to the said

Date of application of registration
Name
Address
Situation of premises
Proposed trade or trades
Area of land

Signature of the Officer of the Local Authority empowered to sign on its behalf.

Date— , 18 ,

To the Secretary, Board of Health, Sydney.

Schedule D.

NOXIOUS TRADES AND CATTLE-SLAUGHTERING ACT OF 1894, 57 VICTORIA No. 21.

THE Local Authority for the district of having registered the premises of situated at for the purpose of carrying on a noxious trade thereat; and having applied to the Board of Health for its approval of the issue of a License for such premises, the Board, after inquiring into the circumstances in connection with the premises, are of opinion that a License under the provisions of the above Act may now be issued to the said

Signature of the Secretary, Board of Health.

Date— , 18 .

In accordance with the provisions of subsection 1 of section 4 of Part I of the Act 57 Victoria No. 21, this License is hereby issued to , to carry on the noxious trade of , at premises, situated at , such License to continue in force until the thirtieth day of June next.

Signature of the Officer of the Local Authority empowered to sign on its behalf.

Date— , 18 .

The Treasury, New South Wales, 31st December, 1896.

HIS Excellency the Governor, with the advice of the Executive Council, has been pleased to approve of the undermentioned Regulations in connection with the proper administration of the "Noxious Trades and Cattle-slaughtering Act of 1894" in lieu of those issued on the 30th August, 1894, and the same are published for general information.

G. H. REID.

NOXIOUS TRADES AND CATTLE-SLAUGHTERING ACT, 57 VICTORIA No. 21.

PART II.—CATTLE-SLAUGHTERING.

I.—*Registration.*

1. In these Regulations the expression "the Act" means the "Noxious Trades and Cattle-slaughtering Act, 1894."

2. Every person applying for registration or for renewal of registration under Part II of the Act shall apply in the form given in Schedule A, and shall forward with the application a fee of 5s., provided that such fee shall be returned to the applicant if the Local Authority refuse to register the applicant or to renew his registration as the case may be.

3. Every person applying for registration or for renewal of registration as aforesaid, in respect of two or more separate premises, shall make a separate application and pay a separate fee in respect of each such premises; and premises shall be deemed to be separate for the purposes of this Regulation when they have no common boundary.

4. The Register to be kept by the Local Authority under subsection 1 of section 12 of the Act shall be kept at the office of the Local Authority, in the form given in Schedule B.

5. All premises registered under this Act shall be so enclosed as to define their boundaries; and licenses shall issue in respect of such enclosed and defined areas only.

II.—*Licenses.*

1. The registration having been approved by the Local Authority, a license in the form of Schedule C shall be issued, and shall continue in force, unless cancelled in accordance with the Act, until and inclusive of the 30th day of June next after the day of issue.

III.—*Inspection of Premises.*

1. It shall be the duty of the Local Authority, by itself or by its officers, to inspect licensed slaughter-houses at least once in every month, and the date of every such inspection, with a report of the state of premises, shall be entered in the register.

IV.—*Construction and Arrangement of Premises.*

1. All premises registered as slaughter-houses, and all utensils and appliances used and all other things contained therein, shall be kept in good repair and in a clean and sanitary condition to the satisfaction of the Local Authority.

V.—*Penalties.*

1. Any person or persons offending against or failing to comply with any of these Regulations shall for each and every offence forfeit, on conviction, a penalty of not more than five pounds, and for a continuing offence not more than one pound for every day during which the offence shall be continued after the conviction of the first offence: Provided that the penalties imposed for a continuing offence shall not exceed in the aggregate twenty pounds.

Schedule A.

NOXIOUS TRADES AND CATTLE-SLAUGHTERING ACT OF 1894, 57 VICTORIA No. 21.

APPLICATION FOR REGISTRATION UNDER SUBSECTION 1 OF SECTION 17 OF THE ABOVE ACT.

To the Local Authority for

I apply to be registered in accordance with the particulars in the Schedule hereunder:—

SCHEDULE.

Name in full.....	
Style or Firm under which Business is to be conducted.....	
Address	
Description of and Situation of Slaughter-house, other Buildings, and Enclosure occupied, used, or intended to be used by Applicant.	

I transmit herewith the sum of five shillings, Registration Fee to 30th June next.

Signature of Applicant.

Date— , 189 .

Schedule

Schedule B.

PARTICULARS OF REGISTRATION OF CATTLE-SLAUGHTERING PREMISES UNDER 57 VICTORIA No. 21.

REGISTERED by the Local Authority under Section 12, Subsection 1 of the Act, for the [*Municipal or Police*] District of , for the year ending 30th June, 189 .

Date of Application.	Date of Preliminary Inspection before Registration.	Date of Registration.	Dates and details of subsequent inspections, cancellation of Registration, instructions given and proceedings, if any, taken under the Act.
Name of person or firm			
Address			
Situation of slaughtering premises			
Area of land (approximately).....			
Number of stock (classed) slaughtered per week (about).			
Nature and extent of water supply			
Condition of premises as to— (1.) Cleanliness ..... (2.) Drainage..... (3.) Lighting ..... (4.) Ventilation.....			
Disposal of solid and liquid refuse—means used ...			
Number of persons employed.....			
Number of carts or other vehicles used			

Date and Number of License issued .....

Date of Cancellation, if any .....

Signature of the Officer of the Local Authority granting registration and empowered to sign on its behalf.

Schedule C.

NOXIOUS TRADES AND CATTLE-SLAUGHTERING ACT OF 1894, 57 VICTORIA No. 21.

IN accordance with the provisions of Subsection 1 of Section 12, of Part II of the Act 57 Victoria No. 21, this License is hereby issued to , of , to carry on the business of cattle-slaughtering on premises situated at within the District of ; such license to continue in force until, and inclusive of, the thirtieth day of June next, unless previously cancelled in accordance with the Act.

Signature of the Officer of the Local Authority empowered to sign on its behalf.

Date— 189 .

APPENDIX N.

GENERAL REPORT ON THE PRESENT STATE OF PIG AND POULTRY FARMS IN THE COUNTY OF CUMBERLAND.

The Sanitary Inspector to the Chief Medical Officer.

26 May, 1897.

CAUSES OF NUISANCES COMPLAINED OF.

I HAVE the honor to report that in searching through previous reports in connection with pig and poultry farmers, I find that a number of complaints were made as to the way in which these people carried on their business. Such cases were —

J. Fry, Hurstville, 12th January, 1897.
P. Hensen, Kogarah, 19th May, 1894.
Francis Bros., Rockdale, 5th April, 1895.
E. Duncan, Woollahra, 1st August, 1896.

The nuisance was chiefly caused by the stench arising from the boiling in open pots of offal and stale kitchen refuse, and also from the very unclean state of pig-sties. In several instances, such as McNamara at North Botany and A. Edwards at Botany, who are both licensed fat-melters, complaints were laid frequently with the local Authority, whereas it was found that the stench was chiefly caused by pig and poultry farmers whose premises were situated close to the above-named traders, Moss, at North Botany, and William Brown, at Botany, causing the nuisance complained of. This caused Part A of the present Act to labour under a great disadvantage. Numerous complaints were made in various localities, but the local Authorities were powerless, or rather did not care to take the onus of passing by-laws on their own account, such as had been done by the Kogarah Council.

BAD STATE OF PREMISES, 1896.

2. In February and March, 1896, the Chief Medical Inspector made an inspection of pig and poultry farms in Enfield, Rockdale, Canterbury, Kogarah, Botany, and North Botany Municipalities, and found that their mode of carrying on the trade was most offensive, causing grave nuisance.

EVASION OF REGISTRATION AS FAT-MELTERS, ON PLEA OF PIG-KEEPING, &c.

3. In many instances the trade of pig and poultry farming is only used as a disguise to conceal the real trade of fat-melter, some of these so-called farmers making more fat than licensed fat-extractors. As they were exempt from the operation of the Act, it caused the licensed traders to complain. William Brown, at Botany, I am informed, buys butchers' meat to extract fat, but states he gives it to his pigs. Cooper, at Enfield, by his own admissions, made £7 a week by fat, whereas at the most he only made £3 a week by the pigs and poultry. Whalan, at Enfield, also receives much more raw material on his premises than he requires for feeding his stock, and he makes a good deal of money by boiling down old horses. It would be very difficult indeed to procure strong enough evidence to convince a magistrate that pig and poultry farming is only the secondary consideration to fat-extracting. Most of the pig and poultry farmers are just making a living, but some are doing a very extensive business, especially men who only keep poultry, such as Ellis, of Botany, Miller, at Bankstown, and Johnston, at Kogarah.

LICENSED

LICENSED SLAUGHTERMEN WHO KEEP PIGS SHOULD BE LICENSED AS PIG-KEEPERS.

4. Included in my report are the premises of slaughtermen who keep pigs chiefly to get rid of their slaughter-house wastes, but also to rear pigs for their shops. In several cases licensed noxious traders, such as Mahony and Brown at Granville, and Green and Sons, at Alexandria, keep also pigs or poultry, or both. If licensed slaughtermen were allowed to keep pigs without being licensed to do so, there would be no power to compel them to cover their boilers, and at slaughter-yards the boiling of offal causes a good deal of stench to the annoyance of neighbours, as the cases of Hammond, at Pymble, and Vidler, at Merrylands, show.

SITUATION OF PIG AND POULTRY FARMERS.

5. In such municipalities as Bankstown, Canterbury, Hurstville, Kogarah, Lane Cove, Prospect, and Sherwood, Rockdale, and the Metropolitan Police District, the pig and poultry farms are well isolated, whereas in others, such as North Sydney, North Botany, Enfield, Parramatta, and Alexandria, a number of premises are right amongst thickly populated districts. At North Botany I found two piggeries (Hodges and Holmes), which were certainly not 120 feet from public streets, as required by Towns Police Act; the local by-law even specifying 80 feet as the lowest limit.

SOME PREMISES WELL KEPT.

6. In some districts these traders form small colonies, and in these cases one tries to surpass his neighbours as to cleanliness and standard of improvements.

FEED COLLECTION, COOKING.

7. The food used by all the traders visited by me consisted either of slaughter-house wastes or kitchen refuse, or both. This material was in most cases collected in casks, simply covered with bags held in position by an iron hoop; but since the regulations have been in force, several traders, such as North, at Rockdale, and Wheeler, at Bankstown, have had proper carts built, with watertight bodies, which are covered in such a manner as to prevent any liquid flowing out or stench escaping. The food was generally cooked in open coppers, set either on a few loose bricks, or else built in brickwork, without covers of any kind. Kogarah Municipality was the exception, as here coppers are well set in brick, fitted with air-tight covers and steam escape-pipes, which latter, however, led over the fire, instead of under the fire-bars. The cooking took about six or seven hours, and, after the fat had been skimmed off, the hash was mixed with mill sweepings, pollard, bran, or such like material. In several places I found that the offal was fed raw to pigs, especially at McKay's at Canterbury, Creasy's at Strathfield, Taylor's and Vidler's, at Merrylands, Whalan's, at Enfield, Hammond's, at Pymble, Dignan's, at Bankstown, and Dunn's, at Granville.

NUMBER OF PIG AND POULTRY FARMS VISITED.

8. There are 114 pig and poultry farms which I have visited since the Act has been in force. 105 are situated in sixteen municipalities, and the remaining nine in the Metropolitan Police District. Of these, fifty-one were poultry farms only; seventeen were piggeries, and at forty-six, pigs and poultry were kept. The smallest number of pigs kept by any man who only kept pigs, was ten; the largest 250. The smallest number of poultry kept by any person who only kept poultry was 150; the largest, 6,000.

STATE OF PREMISES AT FIRST VISIT.

9. At first inspection, twenty-six had closed coppers, seventy-five had open coppers; the remaining thirteen had no coppers at all. Six premises were filthy, twenty-two bad, and eighty-six were fair to good.

IMPROVEMENTS REQUIRED.

10. In most cases the improvements required were confined to air-tight covers and steam escape-pipes to coppers. This applies equally to pig and poultry farmers. The shelters for poultry required cleaning and lime-washing; feeding-yards had to be bricked, and feeding-troughs provided. The matter of draining the pig yards and sties required a good deal of attention.

COST OF IMPROVEMENTS REQUIRED.

11. The cost of improvements necessary in most cases would not be more than £2 (two pounds), and they were in several cases done for that amount; whereas in others £20 would hardly have covered the cost of the most necessary work. This was, however, only the case where new pigsties and feeding-yards had to be built.

VIEW OF ACT TAKEN BY DIFFERENT MEMBERS OF THE TRADE.

12. As a whole the persons whose places I inspected were well pleased with the improvements required by the Act, and were willing to do anything reasonable asked of them. About 50 per cent. of fuel and labour is saved by having air-tight covers; the food is kept sweeter and the stock thrives better. Several, however, point blank refused to effect any alterations whatever, until absolutely compelled to do so, as Lewis, at Canterbury.

15. I visited fourteen farms for the second time, and of these eleven have effected all necessary requirements; one has given up boiling refuse; one has given up business, and only one had not made any improvements whatever. Of those places I had visited only once, seventeen had complied with the Act in every way, and I have in those cases recommended the issue of a license. Thirty licenses have so far been issued; twenty-two in four municipalities, and eight in the Metropolitan Police District.

RECOMMENDATION TO ALTER THE DEFINITION OF THESE TRADES.

14. As it will be a very difficult matter to efficiently supervise these trades, I think that such poultry farmers as only use corn (as they say) should be also brought under the operation of the Act. As the law now stands small men, who must use kitchen and other refuse to make a living, are at a great disadvantage compared with those who say they only feed on corn and bran, and this is one of their greatest grievances. In a few cases people are using digester meat, but this is not a wise course, as the poultry suffer from the use of this food; pigs are also rendered barren by this, and by soup from boiling-down works.

PAUL E. GETTING,
Sanitary Inspector.

APPENDIX P.

MEMORANDUM ON MEAT INSPECTION FOR HEALTH.

The President of the Board of Health to The Right Honorable the Premier.

I.—PRESENT CONDITIONS OF MEAT INSPECTION.

7 October, 1897.

DOWN to 1892 cattle-slaughtering was regulated by the Acts 5 Wm. IV, No. 1, 7 Vic., No. 2, and 15 Vic. No. 13. To be brief, it may be said that these were Police Acts, largely designed to check cattle-stealing, and having but little to do with disease or with the sanitary state of slaughter-houses.

2. With a single exception all slaughter-houses were, and still are, private establishments. The exception is the following:—By the Act 14 Vic., No. 36 (1850), Sydney Abattoir, a public slaughter-house, was established at Glebe Island, and private slaughtering was forbidden within the limits of the City of Sydney and within a distance of 3 miles beyond them. It was built with public moneys at a cost of £56,000; it was administered by the Governor-in-Council, and managed in the Treasury.

3. Although there was no Act of Parliament specifically designed to prevent the flesh of diseased animals from reaching the public, diseased carcasses detected at Glebe Island were condemned and destroyed under by-laws made under 14 Vic. No. 36.

4. On 16th March, 1892, an Act for prohibiting the sale, consignment, or exposure for sale of diseased animals, and for amending the law relating to the sale, or exposure for sale, of meat which was diseased, unwholesome, or unfit for the food

APPENDIX O.

Plan showing arrangements recommended for avoiding nuisances from Pig & Poultry Farms.

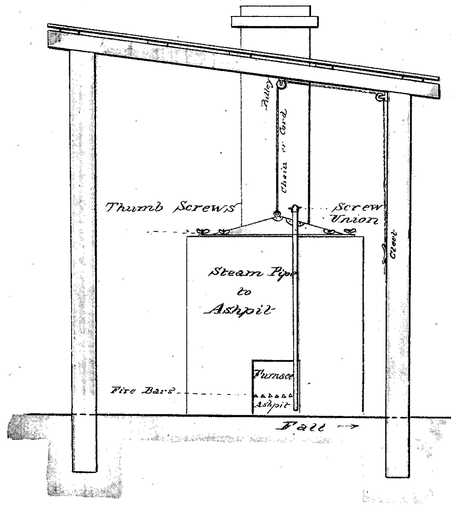


Fig. 1b.

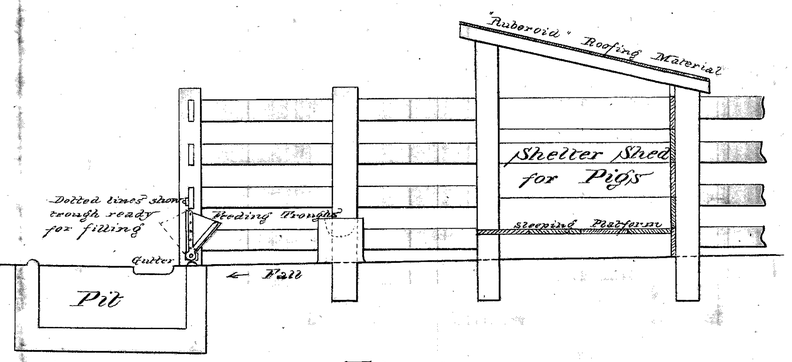


Fig. 1a

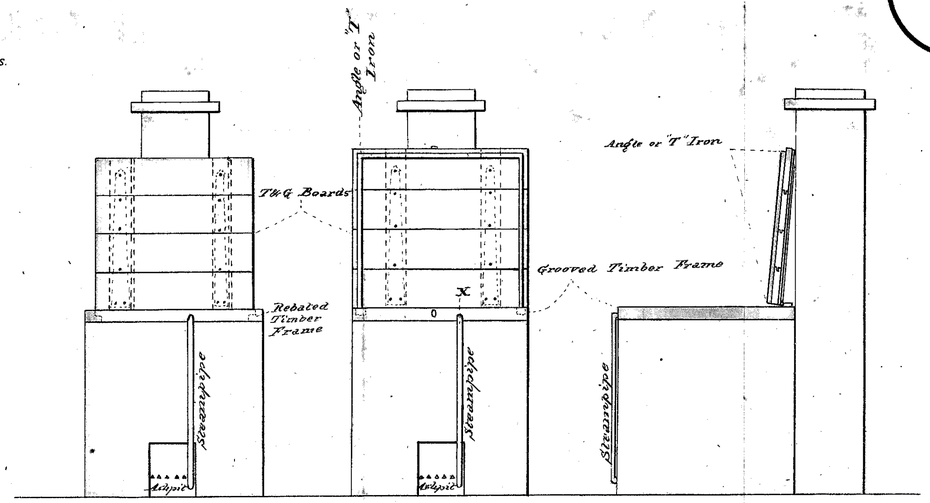
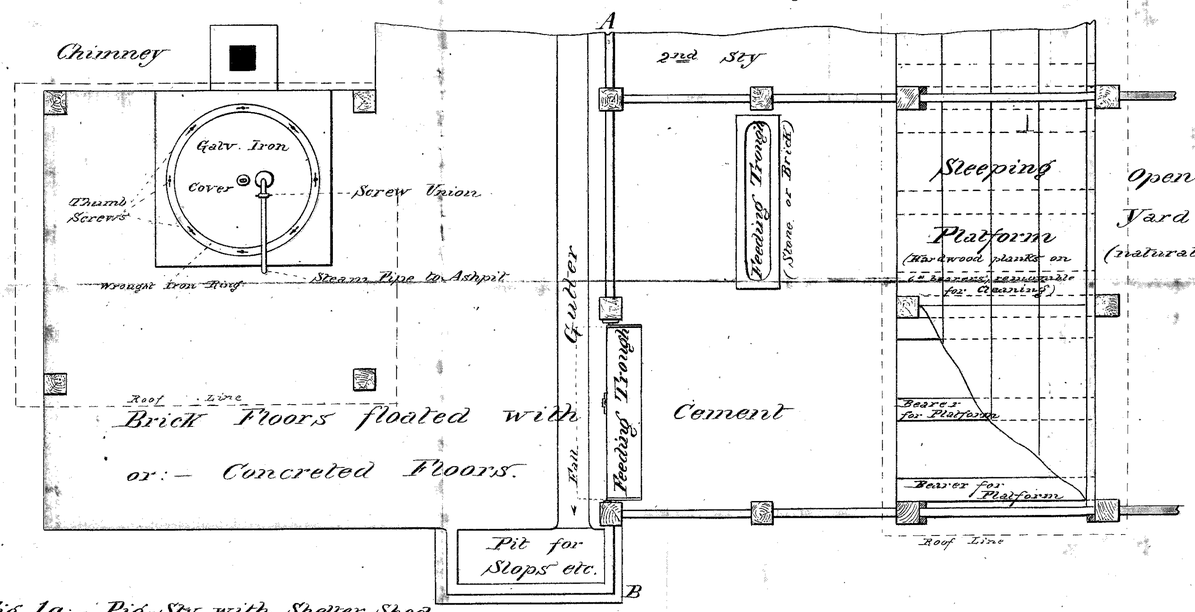


Fig. 2.

Fig. 3.

Side Elevation of Fig. 3.



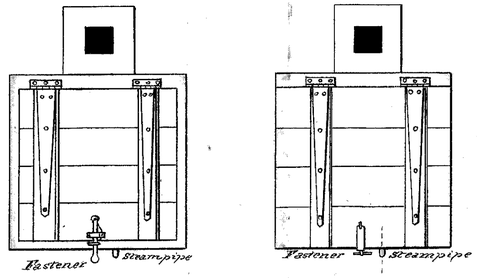


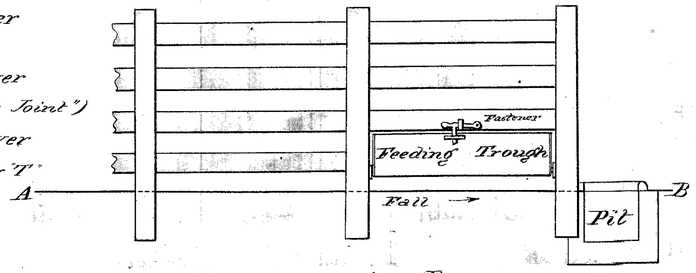
Fig. 1a:- Pig-Sty with Shelter Shed

Fig. 1b:- Boiler fitted with iron cover and loose Steampipe

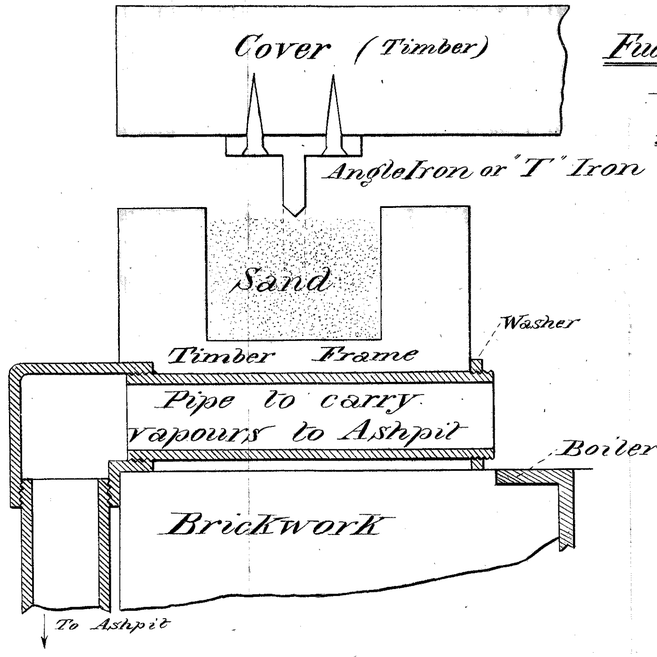
Fig. 2:- Boiler fitted with wooden cover and fixed Steampipe (Rebate Joint")

Fig. 3:- Boiler fitted with wooden cover and fixed Steampipe (Angle or "T" Iron Joint)

Scale: 1/2" = 1 foot



Elevation:- A — B



Full Size Section of Fig. 3. at "X"

Paul G. Stacy
Sanitary Inspector
Board of Health
Sydney, March '98.

Sig 100. 30915

PHOTO-LITHOGRAPHED AT THE GOVT. PRINTING OFFICE, SYDNEY, NEW SOUTH WALES.

food of man, received assent. It had been introduced at instance of the Board of Health, and that body was charged with its administration. The Board appointed about 800 persons to be unpaid inspectors under this Act throughout the country from among its veterinary staff, the Glebe Island staff, Government medical officers, municipal inspectors, the police, and stock inspectors; and a great deal of useful work has been done, and is still being done by these officers. This Act made it a penal offence to sell or expose for sale a diseased animal for the food of man; but animals may be advanced in some diseases, and quite unfit for food without this being discoverable, except after slaughter. Hence its usefulness was seriously limited; for Magistrates would not inflict heavy fines on persons who sold diseased animals, unless the signs of disease were obvious during life. Besides this, milch cows do not fall under the description, though their milk is food for man.

5. In May, 1894, the Noxious Trades and Cattle Slaughtering Act, which had been introduced at instance of the Board of Health, received assent; as regards cattle slaughtering, it did not deal with disease, but provided only for the licensing, inspection, and regulation of all private slaughter-houses. The Board were charged to administer it, municipal and police local authorities to execute it; and already the conditions under which animals are slaughtered for food have been very greatly improved.

6. By the same Act, power was conferred on municipal councils, either alone or in combination, to erect public slaughter-houses within their district or combined districts, and on the Board to declare private slaughtering illegal within the said district or districts, as soon as such a slaughter-house should be available; and by the Public Health Act, 1896, these powers were so extended that such a slaughter-house might be erected within or outside such district or districts, and private slaughtering be prohibited within any area surrounding such a slaughter-house which the Board might define. These powers were originally introduced and were extended on recommendation of the Board made with the definite object of securing efficient inspection of meat, which, it perceived, could never be got as long as slaughtering continued to be done at an immense number of small slaughter-houses scattered over the whole country. An opportunity for very profitable investment was opened up to municipalities by thus conferring on them a monopoly of slaughtering in their districts, or, rather, in their neighbourhoods; but local authorities in general failed to perceive this. No advantage has as yet been taken of it, and the question of erecting a public slaughter-house has thus far been seriously discussed only in the Hunter River District by a conference of thirteen municipal councils.

7. By the same Act, management of Glebe Island was transferred to the Board, to which all the powers and authorities vested in the Governor and Executive Council by the Act 14 Vic. No. 36 were transferred. The Board began to exercise these powers in July, 1894. It found that it had undertaken a bankrupt business, which had been kept going by annual subsidies of public money, amounting on an average of years to about £3,000 a year, and an establishment which was in a state of filth and disrepair, entitling it to be called the most flagrant nuisance of its kind in the Metropolitan area. By alterations in the business management, and by very careful choice of officers, it was made to pay its way as soon as debts bequeathed to the Board and not incurred by it had been discharged, and was converted into as wholesome and as convenient a place as its originally faulty construction left possible (though still a good deal of the less urgent kind remains to be done). All improvements were paid for out of revenue, and yet at conclusion of the financial year just elapsed a net profit of about £1,100 was paid into the Treasury.

8. On passage of the Diseased Animals and Meat Act, 1892, systematic inspection of animals exposed for sale at all saleyards was commenced, all which were visibly diseased being seized, condemned by consent or at need by order of Court, and destroyed; at Flemington and City Saleyards this work was and still is done by the Board's veterinary staff. Concurrently with improved management the Board gradually secured a stricter inspection of carcasses slaughtered at Glebe Island. Condemnations at saleyards involved losses to consignors; condemnations at Glebe Island were losses to butchers alone.

9. Butchers were not and are not under any obligation to kill at Glebe Island, but its convenience as an old-established centre of trade has hitherto caused them to continue there. Meat might be and is killed at private slaughter-houses outside the 3-mile radius, and may be sold within that radius and within the city limits. Consequently the Glebe Island butchers suffered a tax (from condemnations) which their competitors in trade largely escaped, for inevitably from the conditions the municipal inspection of private slaughter-houses was inefficient and casual. Attempts were made to lighten this tax on slaughterers at Glebe Island by two different arrangements successively agreed to between consignors and butchers, whereby the loss from condemnations was divided between them; both failed after trial, for reasons which need not be mentioned here, and at the present moment the whole loss falls on the butchers. The latter, consequently, are leaving Glebe Island to slaughter privately, with a view to escape a part, at all events, of the losses there entailed on them by efficient inspection, and as soon as one or two of the larger firms shall have left it will no longer be possible to carry on that establishment, for its revenue will not suffice. It must then be closed, and the inspection of meat for health will be entirely done by municipal and police inspectors, and will be quite insufficient.

10. In the meantime a very strong demand for efficient inspection of meat for health (and of animals which supply milk) has risen in two quarters. In the first place, the knowledge that diseases of animals are not infrequently the cause of disease in man has widely spread, partly as the result of extended and more positive knowledge of this subject acquired by the world during recent years, and partly (as regards local diffusion of such knowledge) as a result of the persistent efforts of the Board and of its scientific staff; so that the present state of public opinion on the subject in New South Wales may be pretty accurately expressed in the following words, which were used by Mr. Salmon, chief of the United States Bureau of Animal Industry, at the International Congress of Hygiene, London, 1891:—

> "With us an animal which is sick, no matter what the disease, is considered as unfit for food, and our people would not knowingly tolerate an inspection which allowed the carcasses of such animals to go upon the market. From having for a long time an abundant supply of cheap meat, our people are accustomed to choose the best cuts from the best animals, and they are extremely intolerant of any policy which has a tendency to allow a food product to be placed on sale which they would reject were they to know all the facts concerning its origin."

And secondly, the export trade has begun to perceive that, if their products are to hold their own in the world's markets, a thoroughly efficient system of inspection for health must be instituted here, and such a system as will successfully withstand the most hostile scrutiny of their competitors. I believe their feeling, too, may be well expressed in other words of Mr. Salmon's:—

> "The United States is a meat-exporting nation. It recognises the fact that its meat-inspection system has become a matter of international interest, and is determined to make it so rigid and comprehensive, that it cannot be excelled by the most progressive nation in the world."

11. These two interests, I repeat, have made themselves strongly felt in New South Wales during five or six years past; the passage without important opposition of the Diseased Animals and Meat Act (1892), and of the Noxious Trades and Cattle Slaughtering Act (1894) are evidence of this; and so also are the items published in the daily press which, for two years past, at all events, have been extremely numerous, and unanimous without exception, I believe, in requiring greater efficiency in, and more comprehensive system of, inspection of food-supplies derived from animal sources. It is well to note here that there is one disease which effects horned cattle mainly, and which it is of paramount importance to avoid. This is consumption. The ground of this statement has been embodied in a *Memorandum on the Prevention of Tuberculosis in Man and Animals*, which the Board had the honor to present to you on August 20th last. It is very important to bear in mind that tuberculosis in cattle is a preventable disease in relation to much of what follows.

12. Thus it is almost certain that under existing conditions Glebe Island must, in no long time, be closed for want of sufficient revenue to keep it going; or, if continued by subsidy, then it is certain that the amount of efficiently inspected meat which would in practice be produced there would be insignificant in comparison with the bulk of uninspected meat which would find its way into the market from private slaughter-houses. And, therefore, it would not at all suffice to suggest a scheme by which a public slaughter-house for the metropolitan district alone might be established, and might be made to pay its way. The general interests of public health, and the general interests of the meat-trade just referred to above, would thus be left uncared for. It appears that the time has come for instituting a systematic and self-supporting scheme which shall provide efficient inspection of all export meat, and all meat killed for home consumption—at least in all the more populous centres.

13. I have the honour, therefore, now to lay before you the following suggestions; details, although in great measure already thought out, are omitted; some points also admit of being dealt with in other ways than those mentioned. The object in view is the effectual exclusion from the home and export markets of food-products derived from diseased or unwholesome animal sources, by a method which shall pay its own way:—

II. Suggestions towards a Self-supporting Scheme for the Systematic Inspection for Health of Meat Produced for Sale in Home and Foreign Markets.

(a) *Brand for Health.*

14. All meat which has been killed under efficient inspection to be stamped for health; one and the same stamp for home and export meat; stamped meat to be saleable all over the country; unstamped meat not to be introduced into districts which have a public slaughter-house. The stamp to be applied only by educated meat-inspectors attached to slaughter-houses, and responsible to the Board alone.

(b) *Establishment of Public Slaughter-houses.*

15. Municipal Councils or combinations of councils to be obliged to exercise the power they already possess to establish a slaughter-house within or outside their districts, on being required to do so by the Board of Health after inquiry.

16. Councils thus required to be able to borrow the necessary capital from the Government at a fixed rate of interest.

17. Capital and interest to be repayable within a term to be fixed; this term would in every case be short, and the security for repayment would be of the best kind, for reasons which appear below.

18. Private slaughtering to be illegal within such radius of any established public slaughter-house as may be fixed after inquiry by the Board of Health (already provided by the Public Health Act, section 75, ii).

(c) *Repayment of Capital and Interest.*

19. The amount of slaughtering done annually in any district can be ascertained with accuracy; and nothing but a great diminution of population could interfere with the revenue, calculated beforehand on that basis, and a scale of slaughtering dues.

20. It seems proper, and even necessary, that local authorities should manage the public slaughter-house. But bad management would reduce the profits and upset the scheme. Until the loan has been repaid the Government must be secured by retaining control both of capital and working expenditure, and therefore to some extent of the management also. When a slaughter-house has become free from its debt it might be handed over to the local authority, which would thus become possessed gratis of a very valuable property.

21. Local authorities, then, must borrow the money; but the Board of Health should have complete power to control site, plans, structure, extensions, repairs, number of staff, slaughtering dues, and to frame by-laws, until the loan has been repaid.

22. Care would be taken that the accommodation provided should be exactly commensurate with ascertained existent needs, and that it should be so planned as to admit of easy extension, exactly in proportion to any increased need which might make itself felt in the future. Thus the security would be just as good in the case of small as of large towns, for establishments would be in proportion to known revenue.

23. In order to enable the Board to do this it should have power to provide itself with an engineer, qualified in both the civil and mechanical branches of his profession, and having special knowledge of slaughter-house requirements. He should be paid at current professional rates, and his fees for supervision of plans and advice should be a charge against each loan. When his advice was required in respect of an existing slaughter-house, then his fees should be a charge against its revenue. Construction of approved works should be supervised by a clerk of works appointed by the Board, to be similarly paid.

24. The Board having settled these essentials, after inquiry, would be in a position to say exactly how much money should be borrowed; the loan would be granted on its recommendation; and the term within which it should be repaid could then be fixed. This need not be long, but, rather, should be short; the reason being that the accommodation provided would be to meet current needs exactly, and not prospective needs.

25. The above functions of the Board would be supervisory. Local authorities would employ their own engineer to recommend a site and furnish a design and estimates, and might erect the building, subject to the supervision last described above.

26. The accounts would be subject to inspection by the Treasury until the loan had been repaid; and during that time the Board should have power to authorise an increase or to require a diminution in the staff, as might seem necessary.

27. The staff might be appointed and paid out of revenue by the local authority, with an exception. The inspector or inspectors, who alone would have power to stamp carcasses for health, must always be appointed by the Board, and paid by them (though out of the slaughter house revenue). These officers must be kept entirely free from local influences.

(d) *Qualification of Inspectors.*

28. Inspection of meat is a special matter requiring experience, and is not necessarily known either to medical men or to veterinary surgeons. Provision should be made for educating inspectors at all the larger slaughter-houses. The small amount of accommodation required should be a charge against capital; the small amount of material required from time to time should be a charge against revenue. The Technical Colleges should be invited to share in this work, to which the scientific staff of the Board would contribute, and power should be given to the Board to define a course of study, to examine, and to certify or refuse to certify candidates at the end of it. If it were understood that the posts of inspector would be filled from the ranks of successful candidates by preference, no doubt a sufficient number of applicants willing to pay a fee which would cover the cost of instruction would be forthcoming.

(e) *Freezing and Canning.*

29. I have reason for saying that the proprietors of meat-works have such an appreciation of the value to them of an efficient officially certified inspection of meat that they would be willing to pay the salary of their inspector (who, of course, would be responsible to the Board alone, as in the case of municipal slaughter-houses). In that case the 3d. police fees paid at present should be remitted.

30. Thus private slaughtering cannot be literally prohibited, and such works, being able to use the stamp for health, could send meat to market in any district provided with a slaughter-house, and might to some extent interfere with the revenue of such slaughterhouse.

31. But all depends on municipal slaughter-houses having a practical monopoly of slaughtering for home consumption; on the other hand meat once stamped for health must be saleable all over the country. After consideration it appears to me that competition in any district between a distant meat-works and the public slaughter-houses may be disregarded, and that it would be enough to forbid any meat-works to supply meat to the local trade within the district in which it stood only.

32. I also have reason for saying that some existent meat-works when suitably situated might be proclaimed to be public slaughter-houses for the district. It is true they would thus temporarily acquire a monopoly of slaughtering within the district; on the other hand the district would not have to borrow any money. This arrangement would be welcomed in some quarters.

(f) *Compensation.*

33. The question of compensation to butchers for losses by condemnation of diseased beasts is sure to be raised.

34. For my own part I am of opinion that payment of any part of such loss out of public moneys would be a wrong step in principle.

35. The most important and commonest cause of condemnations—tuberculosis—is preventable; breeders must learn to produce healthy stock, and butchers must learn to buy with more caution.

36. I believe it is impracticable to require a refund of the purchase money by the seller to butchers who have bought animals which, after slaughter, are condemned for disease—that is, by law.

(g) *Glebe Island.*

37. This slaughter-house stands on unincorporated land.

38. I am informed on competent authority that two years would be required to complete a new metropolitan slaughter-house, from the date at which it was decided it should be built.

39. On the same competent authority, I understand that the existing buildings at the Island could be temporarily extended so as to accommodate all the slaughtering for the metropolitan district, for a sum which would be less than £3,000.

40. Once the stamp for health was instituted, it would only be necessary to have power to declare that unstamped meat might not be sold within areas to be defined by the Board, in order to improve existent inspection as regards the metropolis, and to secure an adequate revenue from this slaughterhouse. If these steps were taken no more houses should be leased at Glebe Island, but all slaughtering should be by dues.

(*h*) *Prevention of Tuberculosis.*

41. All stud cattle and all dairy stock should be sold subject to refund of the purchase money to the buyer on proof furnished within a short term to be fixed that the animal was suffering from tuberculosis. The proof would be slaughter and demonstration of the presence of the disease. But the purchaser would get his motive for slaughtering in the result of the tuberculin test, which the seller could as well apply before selling. The breeder, moreover, can prevent tuberculosis among his herds; and under this arrangement pure herds would very soon be available, and would command the market. The case is quite different from that of cattle sold for slaughter.

42. Every medical inspector and every veterinary inspector of the Board should have power to destroy every animal used in connection with the production of milk which he deemed to be suffering from tuberculosis, and should have power to apply the tuberculin test to every such animal. If an animal thus slaughtered should turn out not to be affected with disease, then compensation should be paid from public moneys, but with a limit of £5.

43. No animal imported for stud purposes should be allowed to leave the quarantine station until it has successfully withstood the tuberculin test applied by a member of the scientific staff of the Board.

44. It should be lawful for the committee of any agricultural association to exclude from competition any animal they deemed to be suffering from tuberculosis, and any animal which the owner on demand declined to submit to the tuberculin test. Any animal so suffering or deemed by the committee to be so suffering should be thereby disqualified.

45. It should not be lawful to feed any milk (except a cow with its calf at foot), nor any separated or skim milk, to any animal unless it has first been brought to boiling point; and no creamery, butter-factory, &c., should be allowed to return any skim or separated milk to its suppliers unless it had first been brought to boiling point.

46. It should not be lawful for any person to take virus for the purpose of inoculating with pleuro-pneumonia from any animal not first ascertained to be free from tuberculosis and from every other disease than pleuro-pneumonia.

47. Presence of a diseased cow in milk on dairy premises or among a dairy herd should be sufficient evidence (see Dairies Supervision Act, 1886, sec. 10) that its milk is sold, and should any such cow be retained after its owner has had written notice of its diseased condition, the penalty should be very heavy.

48. The Board under date the 30th April, 1897, have already had the honor of suggesting in relation to the larger dairying districts appointment of veterinary surgeons to reside therein, to act as supervising inspectors of dairies, and in that capacity to assist farmers to prevent tuberculosis by instruction and demonstrations. It was proposed that three such veterinary inspectors should be appointed on trial in the first place.

49. It should not be lawful to sell or use any tuberculin which has not been submitted to and approved by the Board.

50. The Board might be empowered to supply tuberculin gratuitously on condition that it was used by a veterinary surgeon who was employed and paid by the owner of the cattle to be tested, and on further conditions as to method and report to be fixed by the Board.

J. ASHBURTON THOMPSON,
Chief Medical Officer of the Government, President of the Board.

The Under Secretary for Finance and Trade, B.C.—CLARENCE A. SIMMS, Secretary.

APPENDIX Q.

DIRECTIONS FOR THE PREVENTION OF HYDATID DISEASE; ALSO FOR THE IMMEDIATE TREATMENT OF THE APPARENTLY DROWNED, AND OF SNAKE-BITE AND SUNSTROKE.

[NOTE.—Each direction is also issued in poster form.]

HYDATID DISEASE.

The following suggestions for the prevention of hydatid disease are issued for general information.

J. ASHBURTON THOMPSON, M.D.,
Chief Medical Officer, President.

Health Department, New South Wales, Sydney, January, 1897.

HYDATID disease is caused when man or other animals swallow the eggs of a tape-worm which lives in the intestines of the dog.

These eggs are voided by the dog with its excrement in great numbers. They are too small to be noticed unless they are carefully searched for with a magnifying glass. After being passed they continue alive and capable of hatching for a long time, but they cannot hatch unless they enter the body of man or other animals by being swallowed.

When the eggs have been swallowed by man or other animals and have hatched in the intestines, they do not become tape-worms. The embryos first bore their way to some solid organ of the body—to the liver, the lungs, the heart, brain, &c.—and there they develop into bladder worms. These are what are called hydatids.

If parts of an animal which is infested with hydatids are eaten by the dog, the bladder-worms again become tape-worms in its intestines. Then the dog passes the tape-worm eggs, and this circle of life can recommence.

The minute eggs of the tape-worm of the dog can gain access to man so as to be swallowed by him in various ways. They can be washed by rain into streams, ponds, unprotected wells, &c., and thus may be swallowed with unboiled water; they can be blown about with dry dust and thus reach roofs, whence they may be washed into rain tanks, or they may thus reach and stick to articles of solid food; they may stick to vegetables which are commonly eaten uncooked—to lettuces in the kitchen garden or to watercress in streams. The eggs also cling to the hair of dogs—about their bodies and about their muzzles; thus, if dogs are much handled or allowed to lick the hands, or are fed at meal-times, the eggs may unconsciously be carried direct to man's mouth on his fingers.

HYDATID DISEASE IS PREVENTABLE.

1. Try to prevent dogs from getting the tape-worm. Never allow them to enter slaughter-house premises, nor to eat uncooked offal, nor to pick up food as they stray about; feed them carefully at home. Keep them clean; groom them occasionally; do not allow them to make friends with strange or stray dogs. Regularly scald out their kennels and the ground round any place at which they are chained up; for notwithstanding all precautions any dog may acquire tape-worm, and the eggs are easily killed with boiling water.

2. Ownerless and useless dogs should be systematically destroyed. These pick up their food where they can, and are most likely to have the tape-worm. Cared-for dogs are often infected by stray dogs which have the eggs clinging to their coats.

3. Do not allow dogs to enter the house; do not allow them to play with children; never allow them to lick hands or face; never feed them at meal times, but always apart.

4. Prevent dogs from entering any water which may be used for drink by man. Never drink water from unprotected ponds or streams until it has been boiled; it is very likely to have been contaminated by dogs.

5. Keep dogs strictly out of the kitchen garden. Boil all vegetables before eating them; but if salads are required, wash them in running water (not in a dish) leaf by leaf. It is better to avoid salads taken from unknown or unprotected gardens.

TREATMENT

TREATMENT OF THE APPARENTLY DEAD FROM DROWNING OR SUFFOCATION.

THE following directions are published for general information. All persons habitually on or near water should make themselves familiar with them, and should practise them. Their prompt application may save life which would be otherwise lost.

J. ASHBURTON THOMPSON, M.D.,
Chief Medical Officer, President.

Health Department, New South Wales, Sydney, January, 1897.

DIRECTIONS.

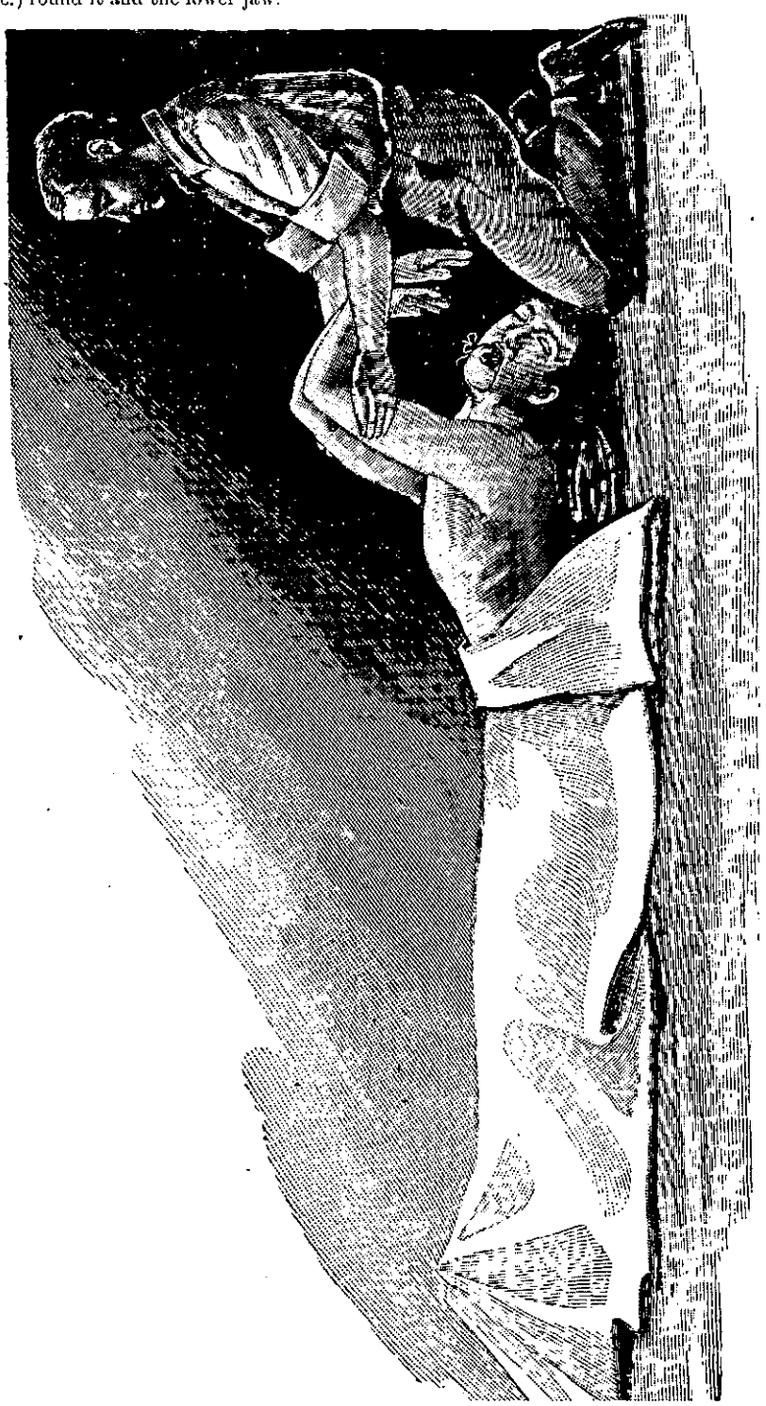
BEGIN the treatment instantly, on the spot; but, if possible, send immediately for a medical man, blankets, and dry clothing.

1.—See that there is nothing to interfere with the patient's breathing, as follows:—

(a) Remove all Clothing from the Neck, Chest, and Waist (especially collar, braces, belt, corset, &c.), so that the breathing parts may have free play.

(b) Clear the Patient's Throat.—Open the mouth and sweep your finger round the back of the mouth and well into the throat, so as to clear it of anything that has got stuck there, such as a piece of food; or of mud, weeds, &c., which often get into the mouth during the struggles of a drowning person.

(c) Pull out the Tongue and keep it out, for it may fall back over the windpipe and block it. Lay the patient flat on his back on a level surface. Place something, such as a rolled up blanket or some clothing, under his shoulders so as to raise them, as in Figures 1 and 2. Keep the head low and with the back turned well to one side. If the tongue does not remain out, fix it to the lower jaw by tying a string of some sort or a cord (strip of linen, handkerchief, &c.) round it and the lower jaw.



(Fig.

2.—Imitate the movements of natural breathing in the following way:—

(a) Fill the Chest with Air (Fig. 1).—Get down on your knees behind the patient's head, grasp his arms just above the elbows, and pull them towards you as far as you can. Hold them there about a second. (b)

(*b*) Empty the Chest of Air (Fig. 2).—Return the arms to the patient's sides and press them firmly against his chest. Hold them there about a second.

Then fill the chest again by pulling the arms back as directed (*a*), then empty it again as directed (*b*). Go on with these movements of filling and emptying, imitating in this way the natural breathing. The movements of filling and emptying will thus be repeated about fifteen times a minute.

(Fig. 2.)

Do not be discouraged if the patient does not soon recover. A case is known where a person has been saved by continuing these movements for 8½ hours; therefore, go on with them as long as you can, until a medical man has pronounced life extinct, or until the patient can breathe for himself.

Other Measures, especially where there is Assistance.

Dry the body, and rub the limbs from the fingers and toes *upwards*—always in this one direction. Keep the body warm by covering it as much as possible with dry clothing, blankets, &c., and by hot-water bottles, hot bricks, &c. These should not be too hot—not uncomfortably hot to your own bare hand. Hot water in sodawater or gingerbeer bottles placed inside stockings answer this purpose very well. Place them in the armpits, between the legs, and at the sides and feet of the patient. Avoid rough usage; never hold the body up by the feet; prevent unnecessary crowding round the body, especially if indoors.

When Natural Breathing has been Restored.

When the power of swallowing has returned, give the patient a few teaspoonfuls of spirits (brandy, whisky, gin, um, &c.) in an equal quantity of water, or some hot wine or hot strong tea or coffee—whichever of these things is most handy. Keep him in bed and encourage him to sleep.

TREATMENT OF SNAKE-BITE.

THE following directions for the immediate treatment of persons suffering from Snake-bite are published for general information.

J. ASHBURTON THOMPSON, M.D.,
Chief Medical Officer, President.

Health Department, New South Wales,
Sydney, January, 1897.

Directions.

A LIGATURE—that is, a strong string, tape, narrow strip of clothing, or handkerchief—should be tied at once round the limb *above* the bitten part. When it has been tied, pass a piece of stick under it, and twist it round and round so as to screw up the ligature as tightly as you can. Leave the stick in the twisted ligature, and secure the end by another string as shown in the Figure (1). Great pain and swelling are caused by this, but cannot be avoided.

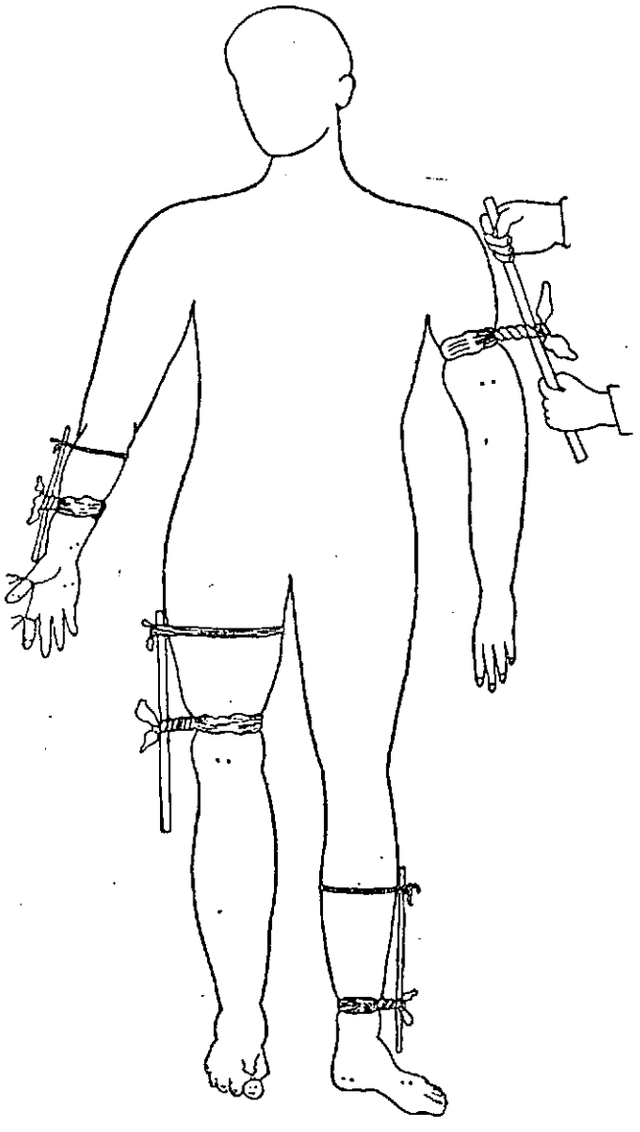


Fig. 1. Diagram showing method of applying ligatures.

At the end of half an hour undo the ligature for five minutes; then tie and screw up again. At the end of another half-hour the ligature may be removed altogether.

In places where a ligature cannot be tied, as on the neck or face, pinch up the bitten part between the finger and thumb, and cut it out (Figure 2).

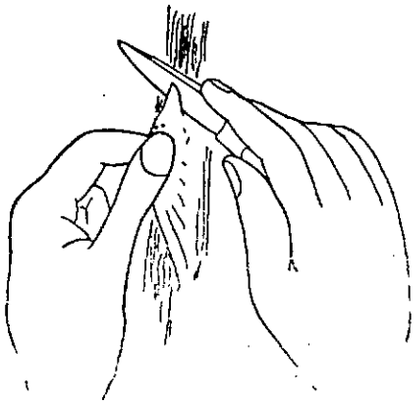


Fig. 2. Diagram showing method of cutting out bitten part

In

In any case the bitten part should be cut into by numerous little cuts over and around the bites, for about half an inch around, and sucked by the mouth freely and perseveringly; and this can be done without danger by any person.

Stimulants, such as brandy, whisky, gin, rum, in small quantities at a time (a few teaspoonfuls), or strong tea or coffee, or wine, may be given if the patient be faint.

Do no more to the patient than is advised above, but obtain the services of a medical man.

SUNSTROKE, HEATSTROKE, OR HEAT-APOPLEXY.

THE following suggestions for the prevention and early treatment of Sunstroke, Heatstroke, or Heat-apoplexy are issued for the general information of the public.

J. ASHBURTON THOMPSON, M.D., D.P.H.,
Chief Medical Officer, President.

Health Department, New South Wales, Sydney, January, 1897.

Prevention.

SUNSTROKE, also called heatstroke, heat-apoplexy, &c., means the effect of excessive heat, not necessarily the immediate action of the sun's rays. It may thus occur at night as well as by day. It is most likely to affect intemperate persons, and those whose health is disordered or who are over-fatigued.

During hot weather everything which tends to lower the general health, such as insufficient rest, dissipation, great bodily or mental fatigue, &c., should be avoided. It is dangerous to expose the uncovered head, neck, or back to the sun's rays, and it is particularly dangerous to lie down upon the hot ground. Within the house, especially at night, the freest possible circulation of air should be provided for. Impure air and overcrowding should be avoided. Open-work screens or blinds kept wet are very useful to cool the air which blows through them. It is very necessary to observe the strictest moderation in the use of alcohol in any form (wine, beer, spirits, &c.) Acid drinks, containing little sugar, should be freely taken. Very little meat should be eaten.

Symptoms and Treatment.

When a sunstroke, heatstroke, or heat-apoplexy *is threatening*, some of the following symptons are usually met with :—

A general feeling of being weak and ill, restlessness, sleeplessness, giddiness, sickness, vomiting, loss of appetite, and hurried breathing. The skin is sometimes pale, moist, and cold, but sometimes it is hot and dry.

When such symptoms are present, all exertion must be at once stopped. The patient should lie down quietly in the shade, in the coolest place that can be found, with plenty of fresh air. All tight and heavy clothing should be removed, and the patient clad in light, loose garments. Cold water may be applied to the face and body, but must not be long continued. Moistening the forehead, fanning the face, and the use of smelling-salts are beneficial. A brisk purgative may be given, if the bowels have not been regularly and well opened.

When a sunstroke, heatstroke, or heat-apoplexy *has occurred*, the patient may be in one of two conditions :—

1. The patient may have become suddenly unconscious, and may have a pale, moist skin, and disturbed breathing.
2. Or he may have high fever, when the skin is very hot; the face, head, and neck are flushed; breathing is disturbed; the mind may wander; there may be convulsions, or a condition like a dead sleep, from which the patient cannot be roused.

In both the above cases, place the patient in the shade. Let him lie on his back, but, if possible, not on the ground. Remove his clothing, and let a stream of cold water fall on the head and neck. A large enema or a brisk purgative (such as half an ounce of Epsom salts, or two tablespoonfuls of castor oil) should be given, or if the patient cannot swallow, 5 grains of calomel should be placed at the back of the tongue.

When there is fever—when the skin is very hot—apply ice or cold water, or cold wet cloths to the patient's body (wrap him in a cold wet sheet, kept moist). Cool him by these means, but take care that he does not become chilled.

In all cases, procure medical aid as soon as possible. Until the doctor comes, do nothing beyond what is recommended above.

APPENDIX R.

YEARLY Abstract of Visits made by the Sanitary Inspector during the Year ending 31st December, 1897.

Class of Premises inspected, and nature of Nuisances.

I.		II.		III.		IV.		V.		VI.	
Licensed under Part A of the Noxious Trades Act.	No. of Visits.	Unlicensed.	No. of Visits.	Other Noxious Trades.	No. of Visits.	Licensed under Part B of the Noxious Trades Act.	No. of Visits.	Nuisances.	No. of Visits.	Public Health Act.	No. of Visits.
a. Fat-melters, fat-extractors, &c.	86	*a.* Fat-melters....	26	*a.* Knackers.....	7	*a.* Pig-keepers....	57	*a.* Defective drainage.	38	*a.* Outbreak of infectious diseases.	26
b. Bone-grinders ..	12	*b.* Soup-driers....	8	*b.* Gut-scrapers ..	5	*b.* Poultry-farmers	68	*b.* Defective w.-c.'s	5	*b.* Common lodging-houses.	39
c. Glue-makers	5					*c.* Pig and poultry farmers.	73	*c.* Offensive accumulations.	11	*c.* Insanitary premises.	23
d. Soup-driers	2							*d.* Garbage nuisances.	16	*d.* Disposal of nightsoil and garbage.	5
e. Gut-scrapers	..							*e.* Pollution of watercourses and waterholes.	8	*e.* Food adulteration.	36
								f. Offensive slaughter-yards and shops.	17		
	105		34		12		198		95		181

Total number of visits..... 625

Sydney: William Applegate Gullick, Government Printer.—1899.

1899.

LEGISLATIVE ASSEMBLY.

NEW SOUTH WALES.

VACCINATION.

(REPORT FOR 1897.)

Presented to Parliament by Command.

Printed under No. 1 *Report from Printing Committee,* 23 *February,* 1899.

The Chief Medical Officer to the Government to The Principal Under Secretary.

Sir, Sydney, 9 February, 1899.

I have the honor to forward herewith, for the information of the Chief Secretary, the Annual Returns of Vaccinations performed during the year 1897 by the Government Vaccinators of New South Wales.

The returns show that 253 vaccinations were performed during the year, of which 244 were successful. Of the total number, 6 were performed in Sydney and its suburbs and 238 in country districts. It will be seen that public vaccination was performed in only 12 country districts. In about 101 districts in which there are Government Vaccinators no vaccinations have been reported, as it is presumed that none have been performed.

Of the successful cases, the patients in 2 were under 1 year; in 32 between 1 and 5 years; in 105 between 5 and 10 years; and in 99 upwards of 10 years of age. The unsuccessful cases were 9, or 3·55 per cent. of the whole number.

The number of births registered in the Colony during 1897 was 37,247, and the vaccinations give a percentage of ·65 on this number. In addition to vaccinations performed by Government vaccinators, a number are performed by private practitioners, but of these no returns are made. There is no reason to believe, however, that these cases would not add very materially to the percentage above given.

The Department continues to supply pure calf-lymph to legally-qualified medical practitioners on application.

I have, &c.,
J. ASHBURTON THOMPSON.

RETURN showing the number of Vaccinations performed by the Government Vaccinators in the Colony of New South Wales during 1897.

Districts.	Under 1 year of age.				From 1 to 5 years.				From 5 to 10 years.				From 10 years upwards.				Total.			
	Males.	Females.	Total.	Successful.	Males.	Females.	Total.	Successful.	Males.	Females.	Total.	Successful.	Males.	Females.	Total.	Successful.	Males.	Females.	Total.	Successful.
Metropolitan	..	..	..	..	..	..	..	..	..	..	..	..	..	6	6	6	..	6	6	6
	..	..	..	..	..	..	..	..	..	..	..	..	..	6	6	6	..	6	6	6
Country Districts:—																				
Bega	..	..	..	..	3	1	4	1	2	4	6	4	4	3	7	5	9	8	17	10
Cootamundra	..	..	..	..	1	..	1	1	..	2	2	2	..	2	2	2	1	4	5	5
Dubbo	..	..	..	..	..	..	..	..	1	5	6	6	..	..	..	..	1	5	6	6
Emmaville	..	..	..	..	..	2	2	2	3	5	8	7	1	6	7	6	4	13	17	15
Lithgow	..	1	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	1
Mudgee	..	..	..	..	..	1	1	1	2	..	2	2	..	1	1	1	2	2	4	2
Parramatta	1	..	1	1	6	13	19	19	17	33	50	50	16	17	33	33	40	63	103	103
Orange	..	..	..	..	..	..	..	..	3	1	4	4	..	4	4	4	3	5	8	8
Rylstone	..	..	..	..	4	1	5	5	2	1	3	3	1	2	3	3	7	4	11	11
Quirindi	..	..	..	..	..	..	..	..	14	9	23	23	24	20	44	44	38	29	67	67
Picton	..	..	..	..	..	1	1	1	..	2	2	2	..	1	1	1	..	4	4	4
Warren	..	..	..	..	2	..	2	2	2	..	2	2	..	..	..	..	4	..	4	4
	1	1	2	2	16	19	35	32	46	62	108	105	46	56	102	99	109	138	247	238
Summary:—																				
Metropolitan	..	..	..	..	..	..	..	..	..	..	..	..	..	6	6	6	..	6	6	6
Country	1	1	2	2	16	19	35	32	46	62	108	105	46	56	102	99	109	138	247	238
	1	1	2	2	16	19	35	32	46	62	108	105	46	62	108	105	109	144	253	244

RETURN showing the number of Births during the past thirty-seven years, and the number of Vaccinations performed by Government Vaccinators during the same period.

Year.	Births.	Vaccinations.	Proportion of Vaccinations to every 100 Births registered.	Year.	Births.	Vaccinations.	Proportion of Vaccinations to every 100 Births registered.
1861	14,681	2,349	16·00	1881	28,993	61,239	211·21
1862	15,434	3,155	20·44	1882	29,702	2,188	7·36
1863	15,679	12,970	82·72	1883	31,281	882	2·81
1864	16,881	10,696	63·36	1884	33,946	7,055	20·78
1865	17,283	8,367	48·41	1885	35,043	2,230	6·36
1866	16,950	7,606	44·87	1886	36,284	1,763	4·85
1867	18,317	6,931	37·83	1887	37,236	3,230	8·67
1868	18,485	11,237	60·79	1888	38,525	2,186	5·67
1869	19,243	21,507	111·76	1889	37,295	2,404	6·45
1870	19,648	7,084	36·54	1890	38,960	2,197	5·64
1871	20,143	6,482	32·16	1891	39,458	1,567	3·97
1872	20,250	17,565	86·74	1892	40,041	4,014	10·02
1873	21,444	3,152	14·69	1893	40,342	2,547	6·31
1874	22,178	4,832	21·78	1894	38,952	1,957	5·02
1875	22,528	3,111	13·80	1895	38,715	2,437	6·29
1876	23,298	4,361	18·71	1896	36,613	945	2·59
1877	23,851	16,881	70·77	1897	37,247	244	·65
1878	25,328	3,512	13·86				
1879	26,933	5,569	20·67	Total	1,025,349	261,481	25·5
1880	28,162	5,029	17·85				

Sydney: William Applegate Gullick, Government Printer.—1899.

1899.

LEGISLATIVE ASSEMBLY.

NEW SOUTH WALES.

VACCINATION.

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The Chief Medical Officer of the Government to The Principal Under Secretary.

Sir, Sydney, 9 February, 1899.

I have the honor to forward herewith, for the information of the Chief Secretary, the Annual Returns of Vaccinations performed during the year 1898 by the Government Vaccinators of New South Wales.

The returns show that 747 vaccinations were performed during the year, of which 716 were successful. Of the total number, 44 were performed in Sydney and its suburbs and 703 in country districts.

It will be seen that public vaccination was performed in only 9 country districts. In about 104 districts in which there are Government Vaccinators no vaccinations have been reported, and it is presumed that none have been performed.

Of the successful cases, the patients in 2 were under 1 year; in 100 between 1 and 5 years; in 352 between 5 and 10 years; and in 262 upwards of 10 years of age. The unsuccessful cases were 31, or 4·14 per cent. of the whole number.

The number of births registered in the Colony during 1898 was 36,212, and the vaccinations give a percentage of 1·97 on this number. In addition to vaccinations performed by Government Vaccinators, a number are performed by private practitioners, but of these no returns are made. There is reason to believe, however, that these cases would not add materially to the percentage above given.

The Department continues to supply pure calf-lymph to legally-qualified medical practitioners on application.

I have, &c.,

J. ASHBURTON THOMPSON.

RETURN (No. 1) showing the number of Births during the past thirty-eight years, and the number of Vaccinations performed by Government Vaccinators during the same period.

Year.	Births.	Vaccinations.	Proportion of Vaccinations to every 100 Births registered.	Year.	Births.	Vaccinations.	Proportion of Vaccinations to every 100 Births registered.
1861	14,681	2,349	16·00	1881	28,993	61,239	211·21
1862	15,434	3,155	20·44	1882	29,702	2,188	7·36
1863	15,679	12,970	82·72	1883	31,281	882	2·81
1864	16,881	10,696	63·36	1884	33,946	7,055	20·78
1865	17,283	8,367	48·41	1885	35,043	2,230	6·36
1866	16,950	7,606	44·87	1886	36,284	1,763	4·85
1867	18,317	6,931	37·83	1887	37,236	3,230	8·67
1868	18,485	11,237	60·79	1888	38,525	2,186	5·67
1869	19,243	21,507	111·76	1889	37,295	2,404	6·45
1870	19,648	7,084	36·54	1890	38,960	2,197	5·64
1871	20,143	6,482	32·16	1891	39,458	1,567	3·97
1872	20,250	17,565	86·74	1892	40,041	4,014	10·02
1873	21,444	3,152	14·69	1893	40,342	2,547	6·31
1874	22,178	4,832	21·78	1894	38,952	1,957	5·02
1875	22,528	3,111	13·80	1895	38,715	2,437	6·29
1876	23,298	4,361	18·71	1896	36,613	945	2·59
1877	23,851	16,881	70·77	1897	37,247	244	·65
1878	25,328	3,512	13·86	1898	36,212	716	1·97
1879	26,933	5,569	20·67				
1880	28,162	5,029	17·85	Total	1,061,561	262,197	24·69

2

RETURN (No. 2) showing the number of persons Vaccinated by the Government Vaccinators of the Colony of New South Wales during the year 1898.

Districts.	Under 1 year of age.				From 1 to 5 years.				From 5 to 10 years.				From 10 years upwards.				Total.			
	Males.	Females.	Total.	Successful.	Males.	Females.	Total.	Successful.	Males.	Females.	Total.	Successful.	Males.	Females.	Total.	Successful.	Males.	Females.	Total.	Successful.
Sydney and Suburbs :—																				
Sydney	..	..	..	..	1	1	2	2	1	1	2	2	2	4	6	5	4	6	10	9
Sydney, North	..	..	..	..	..	..	..	..	5	..	5	5	..	29	29	29	5	29	34	34
	..	..	..	..	1	1	2	2	6	1	7	7	2	33	35	34	9	35	44	43
Country Districts :—																				
Cassilis	..	..	..	..	13	14	27	27	16	18	34	34	12	10	22	22	41	42	83	83
Condobolin	..	..	..	..	1	8	9	9	48	18	66	66	25	11	36	36	74	37	111	111
Cooma	..	..	..	..	4	3	7	6	17	15	32	20	4	18	22	16	25	36	61	42
Coonabarabran	..	..	..	..	13	14	27	27	16	18	34	34	12	10	22	22	41	42	83	83
Emmaville	..	..	..	..	2	..	2	..	5	17	22	16	6	8	14	11	13	25	38	27
Maitland, West	..	..	..	..	2	5	7	7	9	6	15	15	12	14	26	26	23	25	48	48
Newcastle	1	1	2	2	3	..	3	3	6	1	7	7	..	1	1	1	10	3	13	13
Quirindi	..	..	..	..	4	6	10	10	47	40	87	87	29	29	58	58	80	75	155	155
Wilcannia	..	..	..	..	1	8	9	9	48	18	66	66	25	11	36	36	74	37	111	111
	1	1	2	2	43	58	101	98	212	151	363	345	125	112	237	228	381	322	703	673
Summary :—																				
Sydney and Suburbs	..	..	..	..	1	1	2	2	6	1	7	7	2	33	35	34	9	35	44	43
Country District	1	1	2	2	43	58	101	98	212	151	363	345	125	112	237	228	381	322	703	673
	1	1	2	2	44	59	103	100	218	152	370	352	127	145	272	262	390	357	747	716

Sydney : William Applegate Gullick, Government Printer.—1899.

1899.

LEGISLATIVE ASSEMBLY.

NEW SOUTH WALES.

SUNDAY TRADING BILL.

(PETITION FROM JOSEPH WOOD, CHAIRMAN, AND HENRY J. MARSH, D.G.C.T., MEMBERS OF THE "HAND OF FRIENDSHIP" LODGE, AT GILGAI, AGAINST.)

Received by the Legislative Assembly, 22 *February*, 1899.

To the Honorable the Speaker and the Honorable Members of the Legislative Assembly of New South Wales in Parliament assembled.

Your Petitioners, as Members of the "Hand of Friendship" Lodge, 612, of the Independent Order of Good Templars, meeting in the Cambridge Hall, Gilgai,—

HUMBLY PRAY:—

That your Honorable House will not sanction the opening of public-houses on Sundays, but that you will at an early date adopt such provisions as are necessary to make the Sunday-closing clause of the existing Licensing Act more effective.

Humbly praying that your Honorable House will give the subject of this Petition your favourable consideration.

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

Signed on behalf of the meeting,

JOSEPH WOOD, Chairman,

HENRY J. MARSH, D.G.C.T.

1899.

LEGISLATIVE ASSEMBLY.

NEW SOUTH WALES.

SUNDAY TRADING BILL.

(PETITION FROM CERTAIN RESIDENTS OF ROUS AND SURROUNDING DISTRICTS, AGAINST.

Received by the Legislative Assembly, 7 March, 1899.

To the Honorable the Speaker and Honorable Members of the Legislative Assembly of New South Wales, in Parliament assembled.

Your Petitioners, the residents of Rous and the surrounding districts, humbly pray that your Honorable House will not sanction the opening of public-houses on Sundays, but that you will at an early date adopt such provisions as are necessary to make the Sunday-closing clauses of the existing Licensing Act more effective.

Humbly praying that your Honorable House will give the subjects of this Petition your favourable consideration.

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

[*Here follow* 47 *signatures.*]

A similar Petition was received on 7th March, 1899, from certain members of the "Pride of the Richmond," Independent Order of Good Templars, Rous; 14 signatures.

1899.

LEGISLATIVE ASSEMBLY.

NEW SOUTH WALES.

CORPORATION OF THE CITY OF SYDNEY.

(STATEMENT OF RECEIPTS AND EXPENDITURE FOR THE YEAR ENDING 31ST DECEMBER, 1898.)

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

Printed under No. 3 Report from Printing Committee, 23 March, 1899.

STATEMENT of the RECEIPTS and DISBURSEMENTS, TOGETHER WITH STATEMENT OF LIABILITIES OF THE CORPORATION OF THE CITY OF SYDNEY, for the year ending 31st December, 1898.

ABSTRACT of the RECEIPTS and DISBURSEMENTS of the MUNICIPAL COUNCIL of the CITY OF SYDNEY, on account of the CITY FUND, for the Year ending 31st December, 1898.

RECEIPTS.

	£ s. d.	£ s. d.
City Rates	.....	132,417 15 11
Fees and Fines—Building Fees	946 14 0	
" Special Building Fees	59 17 0	
" Hoarding Licenses, &c.	466 16 6	
" Hawkers' Licenses	894 0 0	
" Porters' Licenses	9 15 0	
" Police Dues	644 13 9	
		3,021 16 3
Rents and Dues from Markets—Belmore—Rents	55 5 0	
" " " Dues—(old)	3,862 2 6	
" " " " (new)	3,736 16 6	
" " Eastern Fish—Rents	350 18 0	
" " " Dues	748 15 9	
" " " Cooling Room	960 17 4	
" " Queen Victoria Markets—Rents	2,782 3 4	
" " " " Dues	113 2 9	
		12,610 1 2
Rents from Sussex-street Buildings	731 11 0	
" Hay-street Buildings	393 10 0	
" Haymarket Buildings	1,910 15 0	
" Haymarket Land	75 5 0	
" Public Baths	447 0 0	
" City Wharfs	3,373 13 6	
" Town Hall	2,145 7 0	
" Exhibition Building	266 19 0	
" Pyrmont Pumping Plant	37 10 0	
" Belmore Park	10 0 0	
" Sundry Rents	8 15 0	
		9,400 5 6
Sussex-street Sale-yard Dues	1,346 6 9	
Organ Recitals	972 12 0	
Moore Park—Rent and Agistment	85 3 6	
Bailiffs' Costs	246 3 10	
Auctioneers' Licenses	1,408 18 3	
Law Costs (Refunds)	836 18 6	
		4,896 2 4
Miscellaneous Receipts—		
Repayments for Works	2,847 12 4	
Sundries	221 2 11	
		3,068 15 3
Balance, being Surplus of Cattle Sale-yards Fund Account	9,448 5 6	
Refund from Cattle Sale-yards Sinking Fund (Surplus)	5,200 0 0	
		14,648 5 6
Public Markets Loan—		
Refund of Salaries and Wages debited to City Fund, in error (years 1895–97)	3,111 0 0	
" " " " (year 1898)	568 8 9	
		3,679 8 9
Interest Debenture Account—Unclaimed Balance	.....	159 0 0
Streets Loan Account— " "	.....	0 2 6
Total Receipts for year 1898	.....	183,901 13 2
Bank Overdraft brought forward from 31st December, 1897	115,054 12 3	
Bank Overdraft to carry forward as at 31st December, 1898	119,355 0 5	
Balance, being deficit for the year 1898, and consequent increase in Bank Overdraft	.....	4,300 8 2
		£188,202 1 4

DISBURSEMENTS.

	£ s. d.	£ s. d.
Salaries :—		
Office of Mayor	1,000 0 0	
Town Clerk and Department	1,142 19 0	
City Surveyor and Department	2,228 16 4	
City Treasurer and Department	1,727 7 1	
Inspector of Nuisances and Department	536 4 5	
City Architect and Department	812 2 10	
City Health Officer	250 0 0	
Clerk of Markets	216 5 5	
City Solicitor	500 0 0	
City Organist	500 0 0	
City Assessor and Assistant	317 18 8	
Inspector of Eastern Fishmarkets	181 7 8	
City Auditors	300 0 0	
		9,713 1 5
City Improvements—Wages :—		
Cleaning Streets	37,057 10 9	
Inspector of Nuisances' Department	1,440 0 0	
Street watering	3,764 13 1	
General Works	15,755 9 8	
General Establishment and sundries	5,164 2 8	
City Markets	3,533 17 10	
Streets Loan	260 6 6	
		66,970 0 6
City Improvements :—		
Metal and Charges	2,380 6 7	
Kerb, Guttering, and Flagging	4,057 3 6	
Tar Paving	1,405 17 2	
General Works	1,940 6 11	
Streets Loan Charges	4,576 5 4	
		14,350 18 6
City Markets—Materials	1,089 13 8	
Street watering—Materials	83 4 9	
Fire Brigades Board—Annual contribution	2,813 5 3	
Lighting expenses	14,840 17 1	
		18,827 0 9
Printing, £1,115 4s. 4d. ; Stationery, £193 3s. 7d. ; Advertising, £419 8s. 6d. ; Miscellaneous, £860 1s. 7d.	2,587 18 0	
Government rents and rates	1,469 19 7	
Insurance	676 4 3	
Bank charges, being cost of transmitting funds to pay London interest	846 13 6	
Incidental expenses	2,275 16 7	
Law expenses	556 7 9	
Appropriation to meet Balance Charged Cheque Account (old dishonoured cheques)	67 9 3	
		8,480 8 11
Interest expenses :—		
City Fund—Overdraft, £2,790 11s. 3d. ; Debentures (London, £2,400 ; Sydney, £2,400)	7,590 11 3	
Town Hall Loan Fund (on Debentures—London, £3,000 ; Sydney, £4,500)	12,500 0 0	
Streets Loan Fund (on Debentures, London)	14,000 0 0	
Moore-street Improvement Loan (Debentures, London)	5,655 0 0	
Public Markets Loan Fund (on Debentures—Sydney, £5,250 ; London, £12,000)	17,250 0 0	
		56,995 11 3
Sinking Funds—Annual Contributions :—		
Town Hall Loan, £2,250 ; Colonial Treasurer's Account, £1,400	3,650 0 0	
Streets Loan, £6,000 ; Colonial Treasurer's Account, £700	6,700 0 0	
Public Markets Loan	2,500 0 0	
		12,850 0 0
Total Disbursements for year 1898	.....	188,202 1 4
Bank Overdraft, to carry forward	£119,355 0 5	
		£188,202 1 4

NOTE.—These accounts are submitted in exactly the same form as hitherto, but henceforth our statements will disclose :—1. The sources of all receipts, and the objects of all disbursements. 2. The exact result of the working of each portion of the whole establishment.

Correct, subject to the Half-Yearly Certificates in the Account Books,—

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

Sydney, 16th January, 1899.

ROBT. M. McC. ANDERSON,
City Treasurer.

CATTLE SALE-YARDS FUND, for Year ending 31st December, 1898.

RECEIPTS.	£ s. d.	£ s. d.	DISBURSEMENTS.	£ s. d.	£ s. d.
Revenue by dues—Homebush..	12,298 16 11		Salaries	365 13 5	
Do Sydney.....	1,225 9 3		Wages.....	1,006 15 6	
Office rents	45 10 0		Incidental expenses	407 11 9	
Sale of manure, £73; old tanks, £1 10s.	74 10 0		Interest on Debentures	2,100 0 0	
		13,644 6 2	General Works	316 0 0	4,196 0 8
Refund of Surplus over relative Debenture Debt, from Cattle Sale-yards Sinking Fund ...	.....	5,200 0 0	City Fund (Surplus transferred to)	.....	14,648 5 6
	£	18,844 6 2		£	18,844 6 2

ROBT. M. McC. ANDERSON, City Treasurer.

Correct, subject to the Half-yearly Certificates in the Account Books,—

Sydney, 16th January, 1899. GEO. CHRISTIE, F.S.A.A., JAMES ROBERTSON, F.S.I.A., } City Auditors.

PUBLIC MARKETS LOAN FUND, for Year ending 31st December, 1898.

RECEIPTS.	£ s. d.	DISBURSEMENTS.	£ s. d.	£ s. d.
Balance at Union Bank, 1st January, 1898.....	78,686 17 0	Wages—Refund of	2,484 0 0	
		Salaries—Refund of	1,289 8 9	
		General Works	55,573 0 9	
		Incidental Expenses	227 3 7	59,573 13 1
		Balance due by Union Bank, 31st December, 1898.....	.....	19,113 3 11
£	78,686 17 0		£	78,686 17 0

ROBT. M. McC. ANDERSON, City Treasurer.

Correct, subject to the Half-yearly Certificates in the Account Books,—

Sydney, 16th January, 1899. GEO. CHRISTIE, F.S.A.A., JAMES ROBERTSON, F.S.I.A., } City Auditors.

CITY FUND SUSPENSE ACCOUNT, *RE* MOORE-STREET IMPROVEMENT, for Year ending 31st December, 1898.

RECEIPTS.	£ s. d.	DISBURSEMENTS.		£ s. d.
Annual contributions	5,627 6 1	Balance due to Union Bank, 1st January, 1898	742 18 3	
		Interest expenses (Debentures)	4,345 0 0	5,087 18 3
		Balance due by Union Bank...	.....	539 7 10
£	5,627 6 1		£	5,627 6 1

NOTE.—These accounts are submitted in exactly the same form as hitherto, but henceforward our statements will disclose:—1. The sources of all eceipts and the objects of all disbursements. 2. The exact result of the working of each portion of the whole establishment.

ROBT. M. McC. ANDERSON, City Treasurer.

Correct, subject to the Half-yearly Certificates in the Account Books,—

Sydney, 16th January, 1899. GEO. CHRISTIE, F.S.A.A., JAMES ROBERTSON, F.S.I.A., } City Auditors.

LIABILITIES

LIABILITIES of the MUNICIPAL COUNCIL of the CITY of SYDNEY, 31st December, 1898.

	£ s. d.	£ s. d.
City Fund.		
Debentures outstanding	100,000 0 0	
Add—Amount due to Union Bank	119,355 0 5	219,355 0 5
Cattle Sale-yards Fund.		
Debentures outstanding	.....	35,000 0 0
Town Hall Loan Fund.		
Debentures outstanding	.....	275,000 0 0
Streets Loan Fund.		
Debentures outstanding	.....	300,000 0 0
Moore-street Improvement Fund.		
Debentures outstanding	250,000 0 0	
Less—Amount due by Union Bank	539 7 10	249,460 12 2
Public Markets Loan Fund.		
Debentures outstanding	450,000 0 0	
Less—Amount due by Union Bank	19,113 3 11	430,886 16 1
		1,509,702 8 8
Less Sinking Fund—		
Moore-street Improvement: Invested in N.S.W. Funded Stock, £7,448 3s. 4d.; Amount at Union Bank, £1 13s. 4d.	7,449 16 8	
Cattle Sale-yards: Invested in N.S.W. Funded Stock	32,372 0 4	
Town Hall Loan: Invested in Debentures, £7,000; N.S.W. Funded Stock, £58,975 15s. 1d.; Amount to Credit with Colonial Treasurer, £21,363 4s. 8d.	87,338 19 9	
Streets Loan: Invested in Debentures, £22,700; N.S.W. Funded Stock, £95,902 17s. 9d.; Amount to Credit with Colonial Treasurer, £10,681 12s. 4d.	129,284 10 1	
Public Markets Loan: N.S.W. Funded Stock, £7,603 6s. 9d.	7,603 6 9	264,048 13 7
Liability £	.....	1,245,653 15 1

Note.—Suspense Account: Amount at Credit Union Bank, £1,433 15s. Interest Debenture Account, Sydney, £7,123. Interest Debenture Account, London, £23,301 10s. Amount due to Contractors and others, £1,433 15s. Amount due to Debenture Holders, Sydney, £7,123. Amount due to Debenture Holders, London, £23,301 10s.

ROBT. M. McC. ANDERSON, City Treasurer.

Correct, subject to the Half-yearly Certificates in the Account Books,—

Sydney, 16th January, 1899.

Geo. Christie, F.S.A.A., James Robertson, F.S.I.A., } Auditors.

Sydney: William Applegate Gullick, Government Printer.—1899.

[3d.]

1899.

LEGISLATIVE ASSEMBLY.

NEW SOUTH WALES.

HAY IRRIGATION TRUST.

(STATEMENT OF RECEIPTS AND EXPENDITURE FOR THE YEAR 1898.)

Printed under No. 4 Report from Printing Committee, 28 March, 1899.

STATEMENT of Receipts and Expenditure of the Hay Irrigation Trust, from 1st January to 31st December, 1898.

RECEIPTS.	£	s.	d.	EXPENDITURE.	£	s.	d.
To Balance last audit	115	16	2	By Cheques presented since last audit	13	10	4
Rent	287	0	11	Salary—Engineer	138	10	0
Water rates	323	5	0	,, Secretary	187	14	4
Sale of materials	20	12	0	Wages	158	18	0
Deposits on contracts	9	15	0	Timber, stores, &c.	120	15	4
Transfer fees	1	5	0	Law costs	27	10	0
Colonial Treasurer	381	16	10	Carriage on piles	351	3	9
Cheques unpresented	81	19	8	,, stores	5	7	3
Overdraft, Bank of N.S.W.	141	15	2	Postage, printing, and advertising	19	11	5
Overpaid Bank	0	2	6	Fencing	30	10	3
				Deposits on contracts	4	17	6
				Fuel	257	5	5
				Sundries	40	18	0
				Interest on overdraft	2	12	4
				Refund	0	8	0
				Cash in Secretary's hands	1	16	10
				Balance in City Bank	1	19	6
	£1,363	8	3		£1,363	8	3

We, the undersigned, duly appointed Auditors, do hereby certify that we have examined the accounts of the Hay Irrigation Trust, and vouchers in support thereof, and find the same correct; and the foregoing is a true and correct statement.

31st January, 1899.

M. ARMITAGE, JOHN GEGG, } Auditors.

This is the exhibit marked "A," in the declaration of James Newton, dated 9th March, 1899, before W. H. Barber, J.P.

1899.

LEGISLATIVE ASSEMBLY.

NEW SOUTH WALES.

PHARMACY BOARD OF NEW SOUTH WALES.

(REPORT FOR THE YEAR 1898.)

Printed under No. 5 Report from Printing Committee, 29 March, 1899.

Report of the Proceedings of the Pharmacy Board of New South Wales during 1898.

7, Richmond-terrace, Domain, Sydney, 1 January, 1899.

THE Pharmacy Board of New South Wales, appointed under the Pharmacy Act, 1897, consisted on the 1st day of January, 1898, of the following gentlemen:—R. T. Bellemey, President; H. S. Brothwood, J.P., Hon. Treasurer; Dr. J. Ashburton Thompson, President, Health Department; C. Butcher; W. G. Jones; I. R. Willows; and Ll. P. Williams, J.P.

Mr. Henry William Sadler was appointed member of the Board by Government in April, 1898, to fill the vacancy on the Board created by the resignation of Mr. C. A. Marshall in 1897.

The Board held 12 regular and 5 special meetings, with the following attendance:—R. T. Bellemey, 16; H. S. Brothwood, 17; C. Butcher, 14; W. G. Jones, 15; H. W. Sadler, 2; Dr. Thompson, 0; I. R. Willows, 13; Ll. P. Williams, 17.

Messrs. C. Butcher and Ll. P. Williams retired by ballot in June, 1898, and were re-elected by the pharmacists of New South Wales. Mr. R. T. Bellemey retired as president in August, 1898, and Mr. Ll. P. Williams was elected president by the Board. Mr. H. S. Brothwood was re-elected hon. treasurer.

The Board granted the following registrations under the Pharmacy Act, 1897:—In 1897, 434; in 1898, 238—together, 672.

Pharmacists deceased in 1898, 4, leaving on the register on the 31st December, 1898, 668.

The Pharmacy Board granted 197 poisons licenses to pharmacists and 62 annual poisons licenses to storekeepers remote from large towns under the Sale and Use of Poisons Act, 1876.

Eighty-eight apprentices and assistants sent in their claim to be registered under section (*d*) of clause 11 of the Pharmacy Act on their coming of age and having finished their prescribed service of three years.

The Board have appointed an inspector to look after infringements of the Pharmacy and Poisons Acts, and several prosecutions are pending on the 31st December, 1898.

The Board have made arrangements with the University of Sydney regarding lectures and examinations in chemistry, practical chemistry, botany, and materia medica, as provided in section 2 of clause 11 of the Pharmacy Act, 1897, and they acknowledge the course of lectures and recognise the examinations at the University of Sydney.

FINANCE.

		£ s. d.
Cash in Union Bank on 31st December, 1897		464 16 5
Fees received for registrations in 1898		343 6 0
Exchange remitted		0 2 6
Inspection of register		0 1 0
Total		£808 5 11
Refund of fees	£ 58 10 0	
Salaries	185 0 0	
Legal opinions and expenses	35 12 10	
Stationery	37 5 9	
Advertising, auditors' fees, and petties	16 3 11	
		332 12 6
Leaving a balance of		£475 13 5
Money at the disposal of the Board:—		
Fixed deposit in the Union Bank...		300 0 0
Current account in the Union Bank		198 14 5
Together		£498 14 5
Less cheques for returned fees not called for and still in the hands of the Board		23 1 0
Amount at the disposal of the Board ...		£475 13 5

LL. P. WILLIAMS,
President.

Sydney, 12th January, 1899.

NEW SOUTH WALES.

LEGISLATIVE ASSEMBLY.

No. 1.

NOTICES OF QUESTIONS AND MOTIONS AND ORDERS OF THE DAY.

Wednesday, 22 February, 1899.

QUESTIONS:—

1. MR. DACEY *to ask* THE COLONIAL TREASURER,—
   (1.) Is it a fact that Government assessments under the Land Tax are very much below municipal assessments?
   (2.) Is he aware that the revenues of municipalities are injuriously affected by this discrepancy?
   (3.) Will the Government grant the municipalities compensation for this loss of revenue by special subsidy?

2. MR. DACEY *to ask* THE COLONIAL SECRETARY,—
   (1.) Have the members of the Police Force been in receipt of one holiday per month?
   (2.) Is it the intention of the Government to deprive them of this monthly holiday for the future in return for the fourteen consecutive holidays recently granted by Regulation?
   (3.) Is it a fact that, excepting the one holiday a month in lieu of four Sundays, there are a number of instances in which no holidays have been granted for many years?

3. MR. AFFLECK *to ask* THE POSTMASTER-GENERAL,—
   (1.) Has any decision been arrived at by the Government regarding the employment of the Post Office officials on Sunday, as proposed by him; if so, what is that decision?
   (2.) Has any demand been made for the innovation proposed by him; if so, by whom, and in what way, by petition or personal representation?
   (3.) As the public expression of opinion, since he made known his intention regarding this Sunday work, has apparently been against it, will he now abandon his proposal, and let matters remain as they were?

4. MR. ARCHER *to ask* THE SECRETARY FOR PUBLIC WORKS,—
   (1.) Are the contractors for the sewer now being constructed through Burwood and Strathfield driving the tunnels without any timber in them to protect the lives of the miners?
   (2.) Is it a fact that, although the works are only in progress two months, several of the miners are maimed for life; and will he give instructions to his officers that the shale tunnels must be securely timbered to protect the men employed?
   (3.) Is it also a fact that, in consequence of the contractors not supplying sufficient air to the men, some have been nearly smothered; will he see that steps are taken to protect the lives of workmen in the tunnels by compelling the contractors to erect necessary fans to supply air?

5. MR. NELSON *to ask* THE COLONIAL TREASURER,—In view of the recent boiler explosions which have taken place, and the loss of life and property caused thereby, will he introduce a Boiler Inspection Bill at an early date?

6. MR. PRICE *to ask* THE SECRETARY FOR PUBLIC WORKS,—
   (1.) Is he aware that new Regulations have been made in connection with the Dredge Service, to the effect that no promotion can take place amongst the junior hands unless the man has served as an A.B.?
   (2.) Does this apply to men who joined the Service before this Regulation was issued; if so, will he take steps to cancel its application so far as it relates to men who were in the Service previous to its issue?

7. MR. PRICE *to ask* THE COLONIAL TREASURER,—Has his attention been directed to the cases against Afghans for breaches of agreement in connection with labour covenants; in view of the facts elicited, will he take steps to enforce the provisions of the Aliens Act?

8. MR. PRICE *to ask* THE MINISTER OF JUSTICE,—
   (1.) Has his attention been drawn to the prosecution of Afghans for breaches of agreements; if so, is it his intention to take action in the matter; and what is the nature of such intended action?
   (2.) Is it a fact that Asiatics are engaged in other countries, and imported under labour covenants; do such agreements amount to virtual slavery; will he cause an inquiry to be made into this matter?

(3.)

(3.) Have complaints been made against Asiatic hawkers, by persons in country districts, of acts of intimidation towards women and children; if so, why are licenses granted in such cases; has a report been prepared by the metropolitan Magistrates on this matter; if so, what action has been taken; has he any objection to laying a copy of such papers and reports upon the Table of this House?

(4.) Is he aware that a large proportion of the Asiatics and Chinese are working under conditions and agreements of a degrading nature, amounting to virtual slavery?

(5.) Is it a fact that the traffic in Chinese and Asiatic labour and Asiatic hawkers is controlled by a number of wealthy syndicates?

(6.) Will he cause a report to be prepared, showing—(*a*) the conditions and agreements controlling Asiatic labour; (*b*) the rates of remuneration given; (*c*) the number, ages, and occupations of all Chinese and Asiatics?

9. Mr. Price *to ask* The Secretary for Lands,—

(1.) Is he aware that, in consequence of the ambiguity of the Church and School Lands Act, various interpretations have been given by different Land Boards; if so, will he introduce a short amending Bill, in order to make the intention of the Act clearer?

(2.) Is it his intention to permit of homestead selections consisting of several detached portions being granted as one holding; during the consideration of the measure, did he promise to adopt this course?

10. Mr. Price *to ask* The Secretary for Lands,—

(1.) Is he aware that the Crown tenants and free selectors are unable to meet their obligations to the State in consequence of the disastrous season?

(2.) Is it intended to continue charging 10 per cent. interest on overdue instalments on conditional purchases and other classes of holdings?

(3.) Is it his intention to introduce a measure this Session dealing with the reappraisement of conditional purchases; if not, will he be good enough to reconsider his decision, with a view to the introduction of a measure of relief after the Federal Bill has been dealt with by the Legislative Assembly?

GOVERNMENT BUSINESS—ORDER OF THE DAY:—

1. The Governor's Opening Speech; resumption of the adjourned Debate, on the motion of Mr. Whiddon, That the following Address-in-Reply to the Governor's Opening Speech, as read by the Clerk, be now adopted by this House:—

"*To His Excellency the Right Honorable* Henry Robert, Viscount Hampden, *Knight Grand "Cross of the Most Distinguished Order of Saint Michael and Saint George, Governor and "Commander-in-Chief of the Colony of New South Wales and its Dependencies.*

"May it please Your Excellency,—

"We, Her Majesty's loyal and dutiful subjects, the Members of the Legislative Assembly of "New South Wales, in Parliament assembled, desire to express our thanks for your Excellency's "Speech, and to assure you of our unfeigned attachment to Her Most Gracious Majesty's Throne "and Person.

"We repeat the assurances we have already given of our desire to bring the Federal move-"ment to a successful issue.

"We join your Excellency in a fervent desire that our labours may prove of benefit to the "people of this Country, and of our fellow Australian colonists."

Upon which Mr. Storey had moved, That the Address be amended by the insertion of the following words, to stand paragraph 3:—

"But this House is of opinion that, upon the acceptance of the Amended Convention Bill by the "electors of the Colony, it will be the duty of the Government to bring in a Bill for the reduc-"tion of the Members of the Legislative Assembly by one-third, and also to reduce their "Parliamentary allowances. Further, recognising that increased taxation through the Customs "House will be imperative under Federation, this House is of opinion that a Bill should be intro-"duced immediately the Federal Bill is approved by the electors, for the purpose of enabling New "South Wales manufacturers to obtain a fair start under the conditions which Federation will "impose, and steps should also be taken to remit, as far as practicable, the direct taxation now "existing."

Thursday, 23 February.

QUESTION:—

1. Mr. Affleck *to ask* The Colonial Treasurer,—

(1.) What has been the rate of interest paid to depositors in the Savings Bank of New South Wales for the years 1895–6–7 and 8?

(2.) Have the profits for the said years been different yearly; if so, what was the proportion of interest paid to the profits made each year?

(3.) Have any of the profits made for 1898 been absorbed in a different manner from previous years; if so, how were they absorbed, and why?

NEW SOUTH WALES.

LEGISLATIVE ASSEMBLY.

No. 2.

NOTICES OF QUESTIONS AND MOTIONS AND ORDERS OF THE DAY.

Thursday, 23 February, 1899.

The House, at a quarter-past Three o'clock, proceed to Government House, there at half-past Three o'clock to present to the Governor their Address-in-Reply to His Excellency's Opening Speech.

QUESTIONS :—

1. MR. AFFLECK *to ask* THE COLONIAL TREASURER,—
   (1.) What has been the rate of interest paid to depositors in the Savings Bank of New South Wales for the years 1895-6-7 and 8?
   (2.) Have the profits for the said years been different yearly; if so, what was the proportion of interest paid to the profits made each year?
   (3.) Have any of the profits made for 1898 been absorbed in a different manner from previous years; if so, how were they absorbed, and why?

2. DR. ROSS *to ask* THE SECRETARY FOR MINES,—
   (1.) Have the experiments that have lately been tried with regard to the alleged suppression of the tick pest amongst stock by inoculation proved a success or a failure?
   (2.) Under whose instruction or recommendation was the practice of inoculation of stock for tick fever ordered to be carried out, where did the experiments take place, by whom, and what was the result of the same?
   (3.) Will he cause a copy of the report of the experiments, or the opinion of the Board of Health on the matter (it being a vital matter affecting public health as well as stock owners), to be laid upon the Table of this House for the information of the public?
   (4.) As the disease or pest is one that is alleged to have first broken out in Texas, in America, and in order to grapple with the matter in some radical and practical form in the commercial interest and meat industry of the Colony, will he take into consideration the advisableness of inviting Mr. D. E. Salmond, Chief of the Bureau of Animal Industry and Department of Agriculture at Washington, to visit Australia (or some other competent officer), to confer with our officials and the Board of Health on a matter of vital importance to the Colony?

   Pol. 28. 2. 99

3. DR. ROSS *to ask* THE SECRETARY FOR LANDS.—In reference to Dr. Ross's Question during last Session concerning an application made by the owners of Larras Lake, near Molong, the hearing of which is to take place at Wellington on or about the 2nd March, for an exchange of barren, inferior, waterless land for a "water reserve" on the Bell River, and consisting of rich agricultural land, and a never failing supply of water, will he in the interest of settlers, teamsters, and general public, instruct the Local Land Board to hear the application at Molong (where the land is situated), in place of removing the case to Wellington, which is 40 miles distant from Molong, and which precludes witnesses from attending to give evidence against the exchange?

4. DR. ROSS *to ask* THE SECRETARY FOR PUBLIC WORKS,—
   (1.) Has he yet received an official report, in answer to Dr. Ross's Question of last Session, in reference to the construction of a weir at Nyrong Creek, near Canowindra, in Molong District; and what is the result of the same?
   (2.) Is the work likely to be carried out; if so, when, and what is the estimated cost of the same?

5. DR. ROSS *to ask* THE COLONIAL SECRETARY,—The number of convictions that have taken place under the Public Health Act and Food and Liquor Adulteration Act?

6. MR. HUGHES *to ask* THE MINISTER OF JUSTICE,—
   (1.) Has his attention been directed to the verdict of manslaughter returned by the jury at the inquest in connection with the boiler explosion at Albury?
   (2.) Has he taken any action in the matter?
   (3.) Is he aware that evidence was given at the inquest to the effect that many other boilers in the town of Albury were in an unsafe condition?
   (4.) If so, does he intend to take steps to remedy this by introducing a Land Boilers Bill?

7. MR. WADDELL *to ask* THE SECRETARY FOR MINES,—Will he consider the advisability of introducing early next Session a Bill to amend the law relating to mining on private property, so that copper can be mined for on private property?

8. Mr. Price *to ask* The Colonial Treasurer,—Is he aware that the work of those engaged at Port Stephens and Seal Rocks lighthouses is more or equally arduous as compared to that performed at other lighthouses; if so, will he take steps to make the remuneration equal?

9 Mr. Lyne *to ask* The Secretary for Lands,—Will he lay upon the Table of this House copies of all papers in the hands of the Government (not already laid before Parliament) in connection with the removal of Colonel Spalding from his position at Norfolk Island; and all papers, documents, &c., reflecting upon the character or making any charges against Colonel Spalding, and any replies thereto?

10. Mr. Haynes *to ask* The Colonial Treasurer,—Is it a fact a number of officers of the Civil Service, to whom the smaller increases have been made, have not yet had the increases paid them?

Pol. 29 9 96

11. Mr. Moore *to ask* The Secretary for Mines,—Will he introduce during the present Session his promised Amending Mining Bill, so as to afford Honorable Members and miners generally the fullest opportunity of studying its provisions before next Session?

GOVERNMENT BUSINESS—ORDER OF THE DAY:—

1. Australasian Federation Enabling Bill; consideration in Committee of the Whole of the expediency of bringing in a Bill to make provision for the acceptance and enactment of a Federal Constitution for Australia.

NEW SOUTH WALES.

LEGISLATIVE ASSEMBLY.

No. 3.

NOTICES OF QUESTIONS AND MOTIONS AND ORDERS OF THE DAY.

Tuesday, 28 February, 1899.

QUESTIONS:—

1. DR. ROSS *to ask* THE SECRETARY FOR MINES,—
   (1.) Have the experiments that have lately been tried with regard to the alleged suppression of the tick pest amongst stock by inoculation proved a success or a failure?
   (2.) Under whose instruction or recommendation was the practice of inoculation of stock for tick fever ordered to be carried out, where did the experiments take place, by whom, and what was the result of the same?
   (3.) Will he cause a copy of the report of the experiments, or the opinion of the Board of Health on the matter (it being a vital matter affecting public health as well as stock owners), to be laid upon the Table of this House for the information of the public?
   (4.) As the disease or pest is one that is alleged to have first broken out in Texas, in America, and in order to grapple with the matter in some radical and practical form in the commercial interest and meat industry of the Colony, will he take into consideration the advisableness of inviting Mr. D. E. Salmond, Chief of the Bureau of Animal Industry and Department of Agriculture at Washington, to visit Australia (or some other competent officer), to confer with our officials and the Board of Health on a matter of vital importance to the Colony?

2. MR. MOORE *to ask* THE SECRETARY FOR MINES,—Will he introduce during the present Session his promised Amending Mining Bill, so as to afford Honorable Members and miners generally the fullest opportunity of studying its provisions before next Session?

3. MR. ARTHUR GRIFFITH *to ask* THE MINISTER OF JUSTICE,—Seeing that there will not be time this Session to move a motion on the matter, will he have any objection to laying upon the Table of this House the papers in connection with the granting of an inquiry under section 383 of the Criminal Law Amendment Act in the case of Thomas Roffe?

4. MR. CARROLL *to ask* THE COLONIAL TREASURER,—
   (1.) Will he be so good as to state when the outstanding increments to officers (other than those who were on the maximum of their grades) in sub-departments of the Treasury will be gazetted?
   (2.) Will he state the reason for the delay in publishing the increments in question?

5. MR. RICHARDS *to ask* THE SECRETARY FOR MINES,—Will he consider the advisability of establishing a Veterinary College in the Colony?

6. MR. RICHARDS *to ask* THE SECRETARY FOR MINES,—
   (1.) Is he aware that the diamond drill worked at Log Paddock, near Mudgee, has successfully indicated a deep gold-bearing lead?
   (2.) Will he consider the advisability of bringing the diamond drill into operation in other of the old gold-fields throughout the Colony, with a view to proving the deep leads said to exist?

7. MR. WOOD *to ask* THE SECRETARY FOR LANDS,—
   (1.) Is it a fact that Messrs. C. Scott and G. Walters have been appointed to act with Mr. Chesbrough, Chief Inspector of Forests, as a Board to inquire into and report upon the matter of royalty to be charged for timber cut on Crown lands?
   (2.) Is he aware that these gentlemen were at the time of their appointment principals in a timber company on the Manning River (Scott as agent, Walters as mill manager), which is now in liquidation, and that an amount of £600, representing fifty or sixty men's wages for a period of three months, is yet unpaid by the company?
   (3.) Will he state—(*a*) the scope of the proposed inquiry to be held; (*b*) is it to deal solely with the question of royalties, or does it embrace the question of opening or closing forest reserves; (*c*) will the inquiry deal with the various timber districts of the Colony, or is it to be confined to the North Coast hardwood districts?
   (4.) What remuneration are these gentlemen to receive; and when is the Board's report expected?

GOVERNMENT BUSINESS—ORDER OF THE DAY:—

1. Australasian Federation Enabling Bill; second reading.

NEW SOUTH WALES.

LEGISLATIVE ASSEMBLY.

No. 4.

NOTICES OF QUESTIONS AND MOTIONS AND ORDERS OF THE DAY.

Wednesday, 1 March, 1899.

QUESTIONS:—

1. DR. ROSS *to ask* THE COLONIAL TREASURER,—Can he state what the possible, probable, or even approximate "revenue and expenditure" will be to carry on the functions of the State or Provincial Parliament in New South Wales after the Commonwealth Bill comes into operation?

2. MR. ROSE *to ask* THE COLONIAL TREASURER,—
   (1.) Has the Sub-board, appointed to regrade officers of the Public Service in the Professional Division, furnished their report to the Public Service Board?
   (2.) If yes, when are the recommendations embodied likely to take effect?
   (3.) Will any increases date back to 1st July, 1898?
   (4.) Does such report provide for granting annual increases on a similar basis to that which has been adopted in connection with the Clerical and General Division of the Service?

   Pol. 7 March

3. MR. LYNE *to ask* THE COLONIAL TREASURER,—
   (1.) Are the returns of revenue, receipts, and expenditure, published in the *Government Gazette*, Nos. 855 and 3, of 1st October, 1898, and 3rd January, 1899, respectively, substantially correct?
   (2.) Do these returns show the revenue for the six months ended 31st December, 1898, as being £4,676,981, and the expenditure from Consolidated Revenue for same period as £4,909,649, or an excess expenditure over revenue for the half-year of £232,668?
   (3.) Are the returns of revenue, receipts, and expenditure, published in the *Government Gazette*, No. 99, of 1st February, 1899, substantially correct?
   (4.) Do these returns show that the expenditure for the month of January, 1899, was £775,743, and the revenue £703,878, or an excess of expenditure over revenue for the month of £71,865, or an excess of £304,533 since the 1st July, 1898?
   (5.) Is it a fact that during the month of January, 1899, a sum of £134,223 was paid out of Consolidated Revenue, in adjustment of the vote "Advance to Treasurer," 1897–98?
   (6.) Is it a fact that the Consolidated Revenue was further debited during January, 1899, with a fresh amount of £100,000, as an Advance to the Treasurer?
   (7.) Is it a fact that during the past seven months the expenditure from the Consolidated Revenue Account has exceeded the revenue by about £538,756, as shown by the published accounts?

GOVERNMENT BUSINESS—ORDER OF THE DAY:—

1. Australasian Federation Enabling Bill; resumption of the adjourned Debate, on the motion of Mr. Reid, "That this Bill be now read a second time."

Thursday, 2 March.

QUESTION:—

1. MR. SMITH *to ask* THE COLONIAL TREASURER,—
   (1.) Is it a fact that the Marine Board permit ocean-going steamers to engage in ocean excursion trips, carrying passengers beyond the number sanctioned by the sea-going passenger certificate?
   (2.) Is it a fact that river and harbour passenger steamers, carrying certificates, are restricted to harbours and rivers limits?
   (3.) Will he instruct the Marine Board to prevent steamers leaving Newcastle and Sydney on ocean excursion trips with passengers in excess of the number authorised to be carried by their sea-going certificates?

NEW SOUTH WALES.

LEGISLATIVE ASSEMBLY.

No. 5.

NOTICES OF QUESTIONS AND MOTIONS AND ORDERS OF THE DAY.

Tuesday, 7 March, 1899.

QUESTIONS:—

1. MR. SMITH *to ask* THE COLONIAL TREASURER,—
   (1.) Is it a fact that the Marine Board permit ocean-going steamers to engage in ocean excursion trips, carrying passengers beyond the number sanctioned by the sea-going passenger certificate?
   (2.) Is it a fact that river and harbour passenger steamers, carrying certificates, are restricted to harbours and rivers limits?
   (3.) Will he instruct the Marine Board to prevent steamers leaving Newcastle and Sydney on ocean excursion trips with passengers in excess of the number authorised to be carried by their sea-going certificates?

2. MR. ROSE *to ask* THE COLONIAL TREASURER,—
   (1.) Has the Sub-board, appointed to regrade officers of the Public Service in the Professional Division, furnished their report to the Public Service Board?
   (2.) If yes, when are the recommendations embodied likely to take effect?
   (3.) Will any increases date back to 1st July, 1898?
   (4.) Does such report provide for granting annual increases on a similar basis to that which has been adopted in connection with the Clerical and General Division of the Service?

3. MR. PHILLIPS *to ask* THE COLONIAL TREASURER,—
   (1.) Is it a fact that the Professional Division of the Public Service has been excluded from benefiting by the vote of £15,000, passed last Session, "to meet adjustments of salaries on revision "by the Public Service Board"?
   (2.) If so, why is the Professional Division so excluded?
   (3.) What is the cause of the delay in formulating a scheme for securing increments to the Professional Division of the Public Service?
   (4.) Will the scheme when formulated secure that any increments provided for therein will in point of time relate back to the date of commencement of the increments now secured to the Clerical Division?
   (5.) If not, what are the reasons for treating the Professional Division less favourably than the Clerical Division?

4. MR. HASSALL *to ask* THE COLONIAL SECRETARY,—
   (1.) Has his attention been drawn to the recent decisions of Mr. Acting Justice O'Connor, in respect to the Fisheries and Oyster Fisheries Acts?
   (2.) Is he aware that the present Acts bristle with defects, which make the duty of administration difficult?
   (3.) Does he intend to introduce remedial legislation; and, if so, when?

5. MR. HASSALL *to ask* THE COLONIAL SECRETARY,—
   (1.) Has he received any communication through the Agent-General for New South Wales on the matter of developing the fisheries of the Colony?
   (2.) If so, what is the nature thereof, and by whom was it sent?
   (3.) Has Mr. Frank Farnell any connection with the project, and has Mr. Farnell advised a compliance with the request made?
   (4.) Will he lay upon the Table of this House a copy of the correspondence that has taken place on the subject, together with the result of the Cabinet's consideration of the matter, if such has been given?

6. MR. HASSALL *to ask* THE SECRETARY FOR PUBLIC WORKS,—
   (1.) Have all the claims for compensation in connection with the Darling Island Railway been met; if not, when is it likely they will be?
   (2.) How many cases are in abeyance; and what are the dates of the notices of resumption in each case?

7. Mr. Hassall *to ask* The Secretary for Public Works,—In connection with the agitation for a trial survey of a line for a proposed railway from Singleton to join the Main Suburban line, will he give consideration to the question of making an alternative survey from Petersham, through Gladesville, Pennant Hills, and then on to Singleton, *via* Dural?

8. Mr. Hassall *to ask* The Minister of Public Instruction,—Will he give favourable consideration to the question of assisting Municipal and other bodies in the matter of providing public baths by recommending a grant for the purpose, and allowing (where facilities can be given) all Public and other school children to be taught the art of swimming free of charge as to the use of the baths?

9. Mr. Hassall *to ask* The Colonial Treasurer,—
(1.) Is it contemplated to make any alteration in the hours of labour of the permanent men employed at Darling Harbour by asking them to do work which has always been done and paid for as overtime?
(2.) Do the Commissioners approve of the innovation of asking the permanent men to cease work for three hours in the middle of the day, so as to do away with casual labourers after 5 p.m., and fill their places with men making full time under the above conditions?
(3.) What are the permanent men to do during the three hours referred to when off duty?

10. Mr. McGowen *to ask* The Colonial Treasurer,—*Re* the examination of clerks in receipt of maximum salary of their grades, held on Monday, 27th February, at the University, will the successful candidates receive an increase of salary for the current financial year?

GOVERNMENT BUSINESS—ORDER OF THE DAY:—

1. Advances to Settlers Bill; second reading.

NEW SOUTH WALES.

LEGISLATIVE ASSEMBLY.

No. 6.

NOTICES OF QUESTIONS AND MOTIONS AND ORDERS OF THE DAY.

Wednesday, 8 March, 1899.

QUESTIONS:—

1. MR. HURLEY *to ask* THE SECRETARY FOR MINES,—In view of the fact that geological lectures would do good, and be much appreciated by miners in the mining districts of New South Wales, will he cause the Government Geologist to visit the mining centres, and lecture on the local formations of each district he may visit, and thereby impart invaluable information to miners, and be the means of saving much prospecting aid on useless sites and formations?

2. MR. HURLEY *to ask* THE SECRETARY FOR MINES,—
(1.) Are there any records in the Mines Department, showing that Mr. W. F. Hurley did illegally peg out some valuable mineral land at Peak Hill?
(2.) Are there any records in the Mines Department, showing that Mr. W. F. Hurley went under an examination, or any part of an examination, for a mining inspectorship?
(3.) Are there any records in the Mines Department, showing that Mr. W. H. J. Slee, Chief Inspector of Mines, did at any time officially inspect and report on the Clyde Metallurgical Works, and expressed his approval of the machinery, and of Mr. Taylor's ability to perform useful work for the mining community?
(4.) Are there any records in the Mines Department, showing that Mr. Pittman, Government Geologist, has at any time reported officially on the Government Metallurgical Works at Clyde?

3. MR. O'SULLIVAN *to ask* THE MINISTER OF PUBLIC INSTRUCTION,—
(1.) Is it a fact that the Public Service Board, in determining the amount of pension to be paid to Public School Teachers on retiring, calculates the period of service from the passing of the Public Instruction Act in 1880?
(2.) Who advised the Public Service Board that teachers who had been in the Service many years before the passing of the above Act are not entitled to have such service recognised in the calculation of their retiring allowances?
(3.) If the answer to Question 1 be in the affirmative, do the Government contemplate introducing any remedial legislation in the interests of those affected?
(4.) Do the Government contemplate introducing any legislative enactment providing that public servants shall, on retirement, be credited with full service, whether broken or not?
(5.) Are the Government aware that, by the Regulations of the Public Service Board, teachers, after twenty years' continuous good service, are entitled to only three months' leave of absence on full pay, whereas other public servants, after the same period of service, are given six months leave on full pay?
(6.) Will the Government direct the Board to rectify the anomalous distinction made between Public School teachers and other public servants in the matter of extended leave of absence?

4. MR. W. W. DAVIS *to ask* THE COLONIAL TREASURER,—
(1.) Is it a fact that concessions in railway or tramway fares are made to the students attending the Technical College?
(2.) Is it also a fact that the same concessions are refused to students attending the classes at the School of Arts?
(3.) Why is this distinction made?

5. MR. CHANTER *to ask* THE MINISTER OF PUBLIC INSTRUCTION,—
(1.) Is he aware that eleven Aboriginal children, fully and properly clothed, were sent to the Public School at Gulargambone on the 7th February last, at the instance of the Aborigines Protection Board, and on the 20th day of the same month were told by the teacher not to attend the school again?
(2.) What are the reasons advanced by the teacher for taking this extreme step?
(3.) Will he issue instructions that, in all cases and at all Public Schools, when aboriginal and half-caste children, properly clothed and clean in their persons, desire to attend, they shall be admitted?
(4.) Will he obtain a report from the Aborigines Protection Board as to the cleanliness and orderly conduct of the aboriginal children attending Public Schools, and as to whether there is any valid reason why these children should not attend the Public Schools, and become educated and taught to become useful and respectable members of society?

6. Mr. Lyne *to ask* The Colonial Treasurer,—
(1.) Is he aware that in several instances last Session a Bill passed by this House to sanction the construction of a railway was so amended by the Legislative Council as to impose a betterment tax in certain cases upon the persons whose freeholds and leaseholds were to be served by such railway?
(2.) Is he aware that the Constitution Act, Section I, vests the origination of all rates, taxes, and imposts exclusively in this House?
(3.) In view of the fact that the Constitution Act does not permit of the collection of any tax which was not originated in this House, what course is it proposed to take in regard to the collection of the said tax?

7. Mr. J. C. L. Fitzpatrick *to ask* The Colonial Treasurer,—Will he, in view of the strong feeling which exists with reference to the high salaries paid to officers in the Military Service, cause the Public Service Board, sitting as a Royal Commission, to make inquiry into the whole working and ramifications of same, with a view towards its rearrangement on a more equitable and satisfactory basis?

8. Mr. J. C. L. Fitzpatrick *to ask* The Secretary for Mines,—What was the value of seed wheat distributed to farmers throughout the Colony during the past five years; and what proportion of such value has been repaid by the recipients?

9. Mr. J. C. L. Fitzpatrick *to ask* The Secretary for Lands,—
(1.) Is he aware of the fact that a very great number of the travelling stock routes in the back country are leased; that water and other reserves are rented; and that much loss and inconvenience is thereby caused in such a dry season as the present to owners of migratory sheep and cattle?
(2.) Is he cognisant of the fact that in some districts the only available public watering places are not only leased, but are fenced-in by the lessees, and that strangers travelling are unable to secure access to water by reason of their want of knowledge of the locality?

10. Mr. J. C. L. Fitzpatrick *to ask* The Colonial Treasurer,—Will he take up the Defamation Bill, passed by the Legislative Council, this Session?

11. Mr. J. C. L. Fitzpatrick *to ask* The Colonial Treasurer,—What was the total cost to this Colony of the Coral Boring Expedition to Funafuti?

12. Mr. J. C. L. Fitzpatrick *to ask* The Colonial Treasurer,—
(1.) What does the salary, &c., of the Chief Justice of New South Wales amount to?
(2.) During his occupancy of the post of Lieutenant-Governor, what portion (if any) of the salary drawn by the Vice-Regal Representative does the Chief Justice receive?

13. Mr. J. C. L. Fitzpatrick *to ask* The Colonial Treasurer,—
(1.) How many officers of the Public Service are there included amongst the officers and men of the Lancers' Contingent to England?
(2.) What are their names, positions, and salaries?
(3.) Do they go to England on twelve months' leave with full salary; or what are the conditions under which they do go?

14. Mr. Levien *to ask* The Colonial Treasurer,—
(1.) Is it a fact that the Public Service Board has recently decided that the services of teachers and officers under the Department of Public Instruction are allowed to be reckoned as per clause 48 of the Civil Service Act only from 1880 under the retiring clauses of the Civil Service Act of 1884, and the Public Service Act of 1895, as to pensions, and as to retiring allowances as provided for in clause 62 of the Public Service Act of 1895?
(2.) If so, when was this decision arrived at; and why are not the employees of the Education Department allowed their years of service on retiring now as they were previously, and as the officers of the other Departments are?

15. Mr. Stevenson *to ask* The Colonial Treasurer,—Is it a fact that the whole of the Civil Servants entitled to increases in their salaries were paid on the 1st March instant, except those employed in the Customs Department; and, if so, why was exception made in the case of those employed in that Department?

16. Mr. Barnes *to ask* The Secretary for Public Works,—In reference to the answer given to Mr. Barnes' Question (without Notice) on 22nd December, in reference to the Temora-Wyalong railway, as the Public Works Committee will be taking evidence concerning the Grenfell-Wyalong line, will he supply the Committee with plans and any other information to enable them to take evidence *re* the alternate line?

17. Mr. J. C. L. Fitzpatrick *to ask* The Secretary for Public Works,—
(1.) Has any official consideration lately been given to the question of connecting Merriwa and Cassilis with the railway system of the Colony?
(2.) Is it not a fact that some years since a survey was made, and a scheme devised, having this object in view?
(3.) Will he explain why nothing further was done in connection with the matter?
(4.) Does he propose at an early date to move in the direction of referring this suggested line to the Public Works Committee?

18. Mr. Affleck *to ask* The Colonial Treasurer,—
(1.) Is it a fact that the Railway Department have lately received and carried fruit by train on Sundays?
(2.) If they have, is it the intention of the Commissioners to extend the same privilege to all other fruit-growing districts?
(3.) If this is to become general, do the Government intend to extend the desecration of the Sabbath in all Government Departments; if not, why in the above Department?

19. Mr. Haynes *to ask* The Colonial Treasurer,—
(1.) Has he considered the expediency of creating a Board of Appeal in connection with the Public Service Board?
(2.) Does he approve of such a Board of Appeal?

20. Mr. Haynes *to ask* The Postmaster-General,—
(1.) By whose authority were the increases to forty officers of the Postal Department refused?
(2.) Is it his intention to restore those increases if they have been refused?

21. Mr. Fegan *to ask* The Secretary for Mines,—Will he lay upon the Table of this House the Bill to provide for a Miners' Accident Fund before the close of the present Session, so that those people interested can have the opportunity of making themselves acquainted with its provisions during the recess?

GOVERNMENT BUSINESS—ORDER OF THE DAY:—

1. Advances to Settlers Bill; resumption of the adjourned Debate, on the motion of Mr. Carruthers, "That this Bill be now read a second time."

GENERAL BUSINESS—NOTICE OF MOTION:—

1. Mr. Arthur Griffith to move, That an Address be presented to the Lieutenant-Governor, praying that His Excellency will be pleased to cause to be laid upon the Table of this House the papers in connection with the granting of an inquiry, under section 383 of the Criminal Law Amendment Act, in the case of Thomas Rofe.

Thursday, 9 March.

GENERAL BUSINESS—NOTICE OF MOTION:—

1. Mr. O'Sullivan to move, That, in the opinion of this House, the Federal question having been settled so far as this branch of the Legislature is concerned, and a measure for the relief of the selectors having been introduced, it is now the imperative duty of Ministers to prolong the Session in order to pass the Early Closing, Arbitration, and Navigation Act Amendment Bills; a measure to provide better accommodation for shearers; to initiate public works of a reproductive character, and that will absorb the unemployed during the winter; and to effect such a reform of the Public Service Act as will ensure fair consideration for the servants of the State.

NEW SOUTH WALES.

LEGISLATIVE ASSEMBLY.

No. 7.

NOTICES OF QUESTIONS AND MOTIONS AND ORDERS OF THE DAY.

Tuesday, 14 March, 1899.

QUESTIONS:—

1. MR. SPRUSON *to ask* THE COLONIAL TREASURER,—Can he give any approximate estimate of the expenditure of the Government—(*a*) from Loans, (*b*) from Revenue, during the past five years in the Metropolis and in the country respectively?

2. MR. SPRUSON *to ask* THE SECRETARY FOR LANDS,—
(1.) Is it the intention of the Government to use Dawes Point Reserve for commercial purposes, and not to retain it for the purpose of public recreation?
(2.) Has the property been found suitable for a reserve site; if so, why is it proposed to use it for commercial purposes?
(3.) In whom is the title to this property vested; if in the Imperial Government, how and when was it conveyed to them?
(4.) Is it a fact that the Government is about to spend a large sum of money building a wharf and approaches on this property, notwithstanding the fact that it is in the possession of the Imperial Government?
(5.) Is it a fact that the Government previously declined to spend any money on the road leading to this property for the reason that they were not in possession of it?
(6.) Is there any intention of selling or leasing any part of the property?

3. MR. HASSALL *to ask* THE COLONIAL TREASURER,—
(1.) Is it a fact that several Civil Servants hold positions as organists and conductors of choirs?
(2.) Is it not a Regulation of the Civil Service that its employees shall not undertake work outside the scope of their official duties which may bring them into competition with people dependent on such work who are not in receipt of a Government salary?
(3.) Will he cause inquiries to be made into the matter, and take the necessary steps to put a stop to such competition should he find it existing?

4. MR. MOLESWORTH *to ask* THE COLONIAL TREASURER,—Has he any objection to lay upon the Table of this House the report of the Officer Commanding Naval Forces for 1897?

5. MR. HOLMAN *to ask* THE COLONIAL TREASURER,—
(1.) Is it a fact that the Naval Brigade bandsmen who performed at the recent Military tattoo were allowed no extra remuneration for duty on that night?
(2.) Is this the usual rule?
(3.) Were they, as representing the senior service, not entitled to priority of position, and is that not the invariable rule in the Imperial service?

6. MR. MOORE *to ask* THE COLONIAL TREASURER,—Is it the intention of the Public Service Board to issue a supplementary list of increases to Post and Telegraph masters?

GOVERNMENT BUSINESS—ORDER OF THE DAY:—

1. Advances to Settlers Bill; to be further considered in Committee.

GENERAL BUSINESS—NOTICES OF MOTIONS:—

1. MR. O'SULLIVAN to move, That, in the opinion of this House, the Federal question having been settled so far as this branch of the Legislature is concerned, and a measure for the relief of the selectors having been introduced, it is now the imperative duty of Ministers to prolong the Session in order to pass the Early Closing, Arbitration, and Navigation Act Amendment Bills; a measure to provide better accommodation for shearers; to initiate public works of a reproductive character, and that will absorb the unemployed during the winter; and to effect such a reform of the Public Service Act as will ensure fair consideration for the servants of the State.

2. MR. BARNES to move, That the Return to an Order, "Penny Postage System" laid upon the Table of this House, referred to the Printing Committee, and reported upon on 22nd December, 1898, be again referred to such Committee for its reconsideration.

3. MR. ARTHUR GRIFFITH to move, That an Address be presented to the Lieutenant-Governor, praying that His Excellency will be pleased to cause to be laid upon the Table of this House the papers in connection with the granting of an inquiry, under section 383 of the Criminal Law Amendment Act, in the case of Thomas Rofe.

NEW SOUTH WALES.

LEGISLATIVE ASSEMBLY.

No. 8.

NOTICES OF QUESTIONS AND MOTIONS AND ORDERS OF THE DAY.

Tuesday, 21 March, 1899.

QUESTIONS:—

1. DR. ROSS *to ask* THE SECRETARY FOR MINES,—
   (1.) When phylloxera was first discovered in vineyards near Geelong, did New South Wales contribute to the Government of Victoria a sum of £8,000 towards its eradication?
   (2.) Did Sir Henry Parkes make that gift on the assurance from the Government of Victoria that they would come to the aid of New South Wales in the event of phylloxera appearing in the vineyards of this Colony?
   (3.) Has Victoria ever fulfilled the promise given to Sir Henry Parkes, as Chief Secretary of New South Wales, in this respect?
   (4.) Is it not a fact that phylloxera exists in the vineyards around Geelong, in the neighbourhood of Bendigo, and in other localities in Victoria?
   (5.) Have the Agricultural Department of New South Wales contributed phylloxera-resisting stocks to Victoria?
   (6.) Notwithstanding the prevalence of phylloxera in several districts in Victoria, do the Government of that Colony absolutely prohibit the importation of grapes from New South Wales into that Colony?
   (7.) Will he consider the expediency of prohibiting the importation of grapes from the phylloxera-infested Colony of Victoria into New South Wales?
   (8.) If not, will he make representations to the Government of Victoria, with the view to the removal by them of the prohibition against the importation of New South Wales grapes into Victoria?

2. DR. ROSS *to ask* THE COLONIAL TREASURER,—
   (1.) Is it a fact that Queensland, at the time of obtaining separation from the Colony of New South Wales, agreed to pay to this Colony the sum of £60,000 for expenses, or local expenditure, that had been incurred by New South Wales on the Northern or Moreton Bay territory prior to the separation of Queensland from New South Wales?
   (2.) Have the Government of New South Wales ever received this money, or any portion of it, or is the amount still due to this Colony?
   (3.) If owing, have the Government of New South Wales ever made any demand or effort to obtain the money from Queensland; and if not settled, for what reason has the matter been so long delayed?
   (4.) Is it the intention of the Government to insist on the money being paid?

3. MR. COHEN *to ask* THE COLONIAL SECRETARY,—
   (1.) Is not the amount of license fees and the rents derived from oyster leases sufficient to warrant the appointment of an Inspector of Fisheries at Port Stephens?
   (2.) Why has not an Inspector been appointed?
   (3.) Does the Chief Inspector and Secretary to the Commissioners of Fisheries hold any other appointment under the Government?
   (4.) Is it a fact that none of the fishermen at Port Stephens holds a fishing license?
   (5.) Is it a fact that one Stuart Smith was fined £5 for stealing oysters from Crown lands at Port Stephens, and that the fine was not enforced; if so, what was the reason?

4. MR. LEVIEN *to ask* THE COLONIAL SECRETARY,—Will he, as soon as the plans are approved, grant a special sum out of next year's Vote to enable the trustees to commence building the much-needed hospital at Quirindi?

5. MR. LEVIEN *to ask* THE SECRETARY FOR LANDS,—
   (1.) When will the land granted as a site for the Quirindi Hospital be gazetted and formally handed over to the trustees?
   (2.) What is causing the delay?

6. MR. CHANTER *to ask* THE SECRETARY FOR LANDS,—
   (1.) Is it intended to proceed with the forest-thinning in the Murray River District?
   (2.) If so, seeing that there are a large number of unemployed in the district, will he arrange that local men have precedence over others?

Pol 2
22 Mch

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7. Mr. J. C. L. Fitzpatrick *to ask* The Colonial Treasurer,—Will he, in view of the strong feeling which exists with reference to the high salaries paid to officers in the Military Service, appoint a Royal Commission of experts to make inquiry into the whole working and ramifications of same, with a view towards its rearrangement on a more equitable and satisfactory basis?

8. Mr. Nobbs *to ask* The Secretary for Lands,—
(1.) What are the names of the auctioneers on the list for the sale of Crown lands within the Metropolitan Land District of Sydney?
(2.) What are the names of the auctioneers and the names of the estates that they have sold on behalf of the Government since 1st January, 1897, and up to 1st March instant?

9. Mr. Dacey *to ask* The Colonial Secretary,—
(1.) How long has Superintendent Read been a member of the New South Wales Police Force?
(2.) What is his age at the present time?
(3.) What amount of pension is he entitled to upon retiring?
(4.) Is it a fact that his advanced age, together with physical infirmity, militates against the successful performance of his duties?

10. Mr. Dacey *to ask* The Colonial Treasurer,—
(1.) How many Members of Parliament, past and present, have abstained from drawing their Parliamentary allowance?
(2.) What is the amount of money (if any) standing to the credit of such gentlemen, together with their names?

11. Mr. Dacey *to ask* The Colonial Treasurer,—
(1.) Did he publicly promise, eight months ago, to see that all members of the Police Force received fourteen days' holiday in each year in addition to the thirteen days which a portion of them then enjoyed?
(2.) Will he definitely state when this promise will be fulfilled?
(3.) Is he aware that instructions have been issued to the effect that members of the Force may obtain fourteen days' holiday on condition they forfeit all holidays heretofore allowed?
(4.) Do these instructions meet with his approval?
(5.) Was a sum of money placed upon the Estimates to facilitate the granting of these additional holidays?
(6.) Is he aware that the police in London are allowed thirty-three holidays in the year?
(7.) Is he prepared to allow the New South Wales police twenty-seven holidays in the year, namely, one day per month, one day in lieu of Christmas Day, and fourteen days' leave of absence?

12. Mr. Carroll *to ask* The Postmaster-General,—
(1.) Is he aware that there are some Postal and Telegraph masters receiving £200 per annum, whilst other officers, their seniors in the Service, are only receiving £130?
(2.) Is he also aware that those officers who are now receiving £200 per annum were, prior to the Public Service Board grading, on £130 per annum, whilst others now receiving £130 less £20 per annum for quarters were then on £140 without any deduction for quarters?
(3.) Is it intended to regrade the officers of the Postal and Telegraph Department?

13. Mr. W. W. Davis *to ask* The Secretary for Mines.—As artesian wells have been put down at the respective towns of Enngonia, Barringun, Yantabulla, and Wanaaring, why is it necessary for the residents of the important centre of population, the township of Ford's Bridge, to come under the Artesian Wells Act before their urgent water requirements will receive attention?

14. Mr. W. W. Davis *to ask* The Secretary for Mines,—Will he cause a special and strict inquiry into the way in which the lessee of the Belalie Government Bore supplied water to starving stock, before allowing any compensation?

15. Mr. W. W. Davis *to ask* The Colonial Treasurer,—Will he take into consideration the advisability and the urgency of adjusting the management of the artesian bores, with a view to producing revenue and a more humane treatment of the people than is at present carried out?

16. Mr. W. W. Davis *to ask* The Secretary for Mines,—Is it a fact that a dam was placed in the Warrego to back the water upwards, and not to let the flow continue down to relieve the settlers' starving stock, as authorised by the Government, in connection with Belalie Bore?

17. Mr. Dacey *to ask* The Colonial Secretary,—
(1.) Is it a fact that the number of days which a nurse at the Coast Hospital has been compelled to be absent from duty by sickness has been or is to be deducted from her annual holiday?
(2.) What are the Regulations now in force in reference to the absence from duty through illness of these nurses; how long have they been in force?
(3.) Is it a fact that, through the absence of screens or other protection to the covered way between the wards, the kitchens, and other offices during wet and windy weather, especially when the wind is from the east, the nurses at the Coast Hospital unavoidably get wet through at such times in the course of their ordinary duty?
(4.) Was not attention called to this circumstance prior to last winter; and is it true that nothing has yet been done to remedy this grave evil?
(5.) What officer is responsible for this neglect?
(6.) Is it a fact that all the hot water required in the wards at the Coast Hospital, often in very large quantities, has to be carried by hand from the kitchen to the wards, this duty generally falling on the nurses, if they are not relieved of it by the aid of any convalescent patient who may chance to be well enough to do this arduous work for them?
(7.) Is it not a fact that some of the wards are so distant from the source of hot water supply as to necessitate it being carried nearly, if not quite, 100 yards?
(8.) Has his attention been called to the necessity for some means of supplying hot water to the wards without such excessive labour to the nurses?
(9.) What has been done to remedy this state of things; if nothing has been done, what official is responsible for this neglect?

18. Mr. Meagher *to ask* The Secretary for Public Works,—
(1.) Has a survey been made of the country from Lismore to Tenterfield, *via* Casino, for the purpose of railway construction?
(2.) What is the number of miles and estimated cost of such construction?
(3.) Will he give the House an early opportunity of dealing with the matter?
(4.) What is the number of miles and estimated cost of the proposed railway route from Grafton to Glen Innes?
(5.) Are there any reports showing the area and character of country to be opened up by the respective projected routes—Grafton to Glen Innes and Lismore to Tenterfield; if so, will he lay them upon the Table of this House?

19. Mr. Richards *to ask* The Minister of Public Instruction,—In view of the continuous reported occurrence of diseases in animals throughout the country, and the necessity for prompt detection and treatment of such diseases, will he consider the advisability of establishing a Veterinary College in the Colony, to afford young men opportunity of studying such diseases, and the scientific treatment of same?

GOVERNMENT BUSINESS—ORDER OF THE DAY:—

1. Advances to Settlers Bill; third reading.

GENERAL BUSINESS—NOTICES OF MOTIONS:—

1. Mr. O'Sullivan to move, That, in the opinion of this House, it is the duty of the Government to resume the shores of Chowder Bay, and by the construction of a breakwater there establish a commodious bathing place for the residents of Sydney and its suburbs.

2. Mr. Perry to move, That there be laid upon the Table of this House all papers and correspondence *re* an application by Messrs. P. L. C. Shepherd and A. R. Pullen to lease the land on which the old police buildings are erected, at the corner of George and Pitt Streets, Sydney.

3. Mr. O'Sullivan to move, That, in the opinion of this House, the Federal question having been settled so far as this branch of the Legislature is concerned, and a measure for the relief of the selectors having been introduced, it is now the imperative duty of Ministers to prolong the Session in order to pass the Early Closing, Arbitration, and Navigation ActAmendment Bills; a measure to provide better accommodation for shearers; to initiate public works of a reproductive character, and that will absorb the unemployed during the winter; and to effect such a reform of the Public Service Act as will ensure fair consideration for the servants of the State.

4. Mr. Barnes to move, That the Return to an Order, "Penny Postage System" laid upon the Table of this House, referred to the Printing Committee, and reported upon on 22nd December, 1898, be again referred to such Committee for its reconsideration.

5. Mr. Arthur Griffith to move, That an Address be presented to the Lieutenant-Governor, praying that His Excellency will be pleased to cause to be laid upon the Table of this House the papers in connection with the granting of an inquiry, under section 383 of the Criminal Law Amendment Act, in the case of Thomas Rofe.

NEW SOUTH WALES.

LEGISLATIVE ASSEMBLY.

No. 9.

NOTICES OF QUESTIONS AND MOTIONS AND ORDERS OF THE DAY.

Wednesday, 22 March, 1899.

QUESTIONS:—

1. MR. CHANTER *to ask* THE SECRETARY FOR LANDS,—
(1.) Is it intended to proceed with the forest-thinning in the Murray River District?
(2.) If so, seeing that there are a large number of unemployed in the district, will he arrange that local men have precedence over others?

2. MR. WILLIS *to ask* THE SECRETARY FOR PUBLIC WORKS,—
(1.) What has been the cause of the great delay in completing the trial surveys of the proposed railways to Walgett and Collarendabri, as recommended by the Public Works Committee?
(2.) If the present staff is not capable of doing the work with ordinary expedition, will he, in the public interest, increase same?
(3.) Is he aware that the want of railway communication to the important centres named has caused hundreds of pastoralists and settlers to lose their stock during the present drought?
(4.) Is he further aware that the completion of these railways will, under Federation, bring the trade of the occupiers of millions of acres of Queensland country into direct touch and communication of trade and interest with Newcastle and Sydney?
(5.) Does he consider it advisable under all these circumstances, including the great dearth of labour in the Colony, to allow protracted delays to take place in this matter?

3. MR. WILLIS *to ask* THE SECRETARY FOR PUBLIC WORKS,—
(1.) What are the reasons for the very great delay in commencing the construction of the Byrock-Brewarrina Railway?
(2.) Is he aware that hundreds of men are waiting for this work to be commenced, and that they are in an almost destitute condition?
(3.) In view of this circumstance, will he order the sleepers and commence the first 10 or 15 miles by day-labour?

4. MR. WILLIS *to ask* THE SECRETARY FOR LANDS,—
(1.) Is he aware that in many parts of the Colony, where the drought is raging with its attendant disadvantages to settlers, the Local Land Boards are harrying the settlers by summoning them to attend meetings of the Board to determine matters of insignificance to anybody?
(2.) Is he aware that in many cases settlers have to travel distances ranging from 50 to 150 miles, entailing upon them very great hardship, expense, and worry?
(3.) In view of all the circumstances, will he, in cases where the Crown can intervene, postpone cases on application to him when fair and reasonable grounds are made out?

5. MR. WILLIS *to ask* THE MINISTER OF JUSTICE,—
(1.) Have any steps been taken with a view to the appointment of a Police Magistrate for Brewarrina?
(2.) Having regard to the importance of this town and district, and the serious inconvenience suffered by litigants in cases wherein honorary magistrates object to act, will he make the appointment without further delay?

6. MR. WILLIS *to ask* THE COLONIAL TREASURER,—
(1.) Is it a fact that, under the Public Health Act, duly qualified medical practitioners are compelled, under penalty, to report cases of fever and infectious disease to the Board of Health?
(2.) Is it further a fact that, under the said Act, no such conditions or penalties are imposed upon unqualified men or nurses attending such cases of fever or infectious disease?
(3.) If so, will he, in the public interest, amend the Act forthwith, so as to make all persons amenable to the conditions of an Act which has for its object the protection of the health and lives of the people?

7. MR. WILLIS *to ask* THE COLONIAL TREASURER,—
(1.) Have any cases of fever been reported to the Board of Health from the Craigend Private Hospital this year?
(2.) If so, (*a*) how many; (*b*) and the dates whereon reported?

8. Dr. Ross *to ask* The Secretary for Mines,—
(1.) Is it true that the Health Department are recommending the inoculation of cattle with poisoned blood drawn directly from a diseased beast?
(2.) Have the Government contemplated the effect this action of inoculating cattle with poisoned blood will have upon the export of meat and dairy products?

9. Mr. Perry *to ask* The Secretary for Public Works,—
(1.) Has his attention been drawn to the fact that many accidents, some of which have been fatal, have been caused by trees falling across public roads?
(2.) Will he give instructions to his Roads officers to have all trees which are likely to fall across public roads cut down at as early a date as possible?

10. Mr. O'Sullivan *to ask* The Colonial Treasurer,—
Pos'd 28 Mch.
(1.) With reference to his reply to the effect that teachers retiring would be credited with service prior to 1880 in the calculation of their pensions, are teachers who may be desirous of retiring now to understand that they will receive the consideration referred to before any fresh legislation is introduced?
(2.) Will the public servants whose service has not been continuous be credited for pension purposes with the term served prior to the break in their service?

11. Dr. Ross *to ask* The Colonial Secretary,—Considering the many serious accidents and deaths so frequently arising from fires (such as has recently occurred in America) at large hotels, theatres, &c., will he have some inquiry made as to the necessity of having large hotels, &c., in the city and in centres of population amply provided with proper means of fire-escapes in the event of fires occurring in such places?

12. Mr. McGowen *to ask* The Colonial Treasurer,—
Pos'd 28 Mch
(1.) Is it a fact that J. Hunter & Co. are making military boots as part of a Government contract?
(2.) Is it a fact that hand labour has been dispensed with, and that this work is to be done by machinery?
(3.) Did not the Government prevent another firm from doing similar work by machinery?
(4.) If so, will the same course be pursued in this instance?

13. Mr. J. C. L. Fitzpatrick *to ask* The Colonial Treasurer,—
(1.) Has he made any promise of a grant towards meeting the cost of sending an Australian rifle team to Bisley?
(2.) Does he propose to do anything in this direction?

14. Mr. J. C. L. Fitzpatrick *to ask* The Minister of Public Instruction,—
(1.) Has he yet arrived at any determination with regard to securing a site and erecting new buildings for the reception and housing of the gift of books of Mr. David Mitchell?
(2.) If not, when is it likely that something definite will be done?

15. Mr. Chanter *to ask* The Secretary for Lands,—
(1.) Has he decided to proceed with the work of thinning the forests on the reserves in the Murray River district?
(2.) Is it true that 150 or any other number of the unemployed of Sydney are to be sent to do this work?
(3.) Has he received petitions, presented by Mr. Chanter, M.P., from the unemployed in various parts of the Deniliquin electorate, asking that this work should be given to them?
(4.) Will he, considering the dire distress existing in those districts, give this work to local men only, and provide other employment for the unemployed of Sydney?

16. Mr. Sleath *to ask* The Secretary for Mines,—
(1.) Is it a fact that four mining licenses have been issued to Chinamen to enable them to mine on the White Cliffs opal-fields?
(2.) If so, under what regulations (if any) have such licenses been issued?

17. Mr. Anderson *to ask* The Colonial Treasurer,—Will he take into consideration the desirability of appointing a representative of the Railway employees to sit at appeals on behalf of officers and other employees?

18. Mr. Hughes *to ask* The Minister of Public Instruction,—
(1.) Is it his intention to classify the boys sent to the Reformatory by creating another institution to which the refractory boys may be drafted?
(2.) Is this extension to be on shore, or is another ship to be purchased?

19. Mr. Price *to ask* The Secretary for Public Works,—
(1.) Is he aware that the trade of Port Stephens is proportionately larger than the Manning and other Northern rivers?
(2.) Is it a fact that the work performed by the grab-dredges has been more disastrous than beneficial; if so, is it the intention of the Department to continue the use of grab-dredges at this port?
(3.) Is he aware that the cutting of Corrie Creek has not been made sufficiently wide to admit of the passage of two vessels at the same time?
(4.) Is he aware that Corrie Creek is silting up at several places; if so, will he take steps to have the dredge "Sigma" retained to carry out the work?
(5.) Is it a fact that punts and steamers are unable to travel, without going aground, over the Myall River, between Bulladelah and Port Stephens; if so, will he take steps to carry out the work required to make the river navigable; will he retain the dredge "Sigma" for the carrying out of this work?

GENERAL BUSINESS—NOTICES OF MOTIONS:—

1. Mr. Fegan to move, That there be laid upon the Table of this House the evidence taken at the Dudley Colliery Explosion Inquiry.

2. Mr. Perry to move, That there be laid upon the Table of this House all papers and correspondence *re* an application by Messrs. P. L. C. Shepherd and A. R. Pullen to lease the land on which the old police buildings are erected, at the corner of George and Pitt Streets, Sydney.

3. Mr. O'Sullivan to move, That, in the opinion of this House, the Federal question having been settled so far as this branch of the Legislature is concerned, and a measure for the relief of the selectors having been introduced, it is now the imperative duty of Ministers to prolong the Session in order to pass the Early Closing, Arbitration, and Navigation Act Amendment Bills; a measure to provide better accommodation for shearers; to initiate public works of a reproductive character, and that will absorb the unemployed during the winter; and to effect such a reform of the Public Service Act as will ensure fair consideration for the servants of the State.

4. Mr. Barnes to move, That the Return to an Order, "Penny Postage System" laid upon the Table of this House, referred to the Printing Committee, and reported upon on 22nd December, 1898, be again referred to such Committee for its reconsideration.

5. Mr. Arthur Griffith to move, That an Address be presented to the Lieutenant-Governor, praying that His Excellency will be pleased to cause to be laid upon the Table of this House the papers in connection with the granting of an inquiry, under section 383 of the Criminal Law Amendment Act, in the case of Thomas Rofe.

Thursday, 23 March.

QUESTION:—

1. Mr. Smith *to ask* The Minister of Justice,—
   (1.) Is it a fact that the Hunter River New Steam Navigation Company was recently fined for dangerously overcrowding the s.s. "Newcastle" upon an excursion trip from Newcastle to Broken Bay?
   (2.) Is he aware that the Stipendiary Magistrate suggested that the defendant company should make application for a refund of the fines imposed?
   (3.) Is it a fact that the defendant company have made an application for such refund?
   (4.) Has the application been favourably considered; if so, on what grounds?

Tuesday, 28 March.

GENERAL BUSINESS—NOTICE OF MOTION:—

1. Mr. O'Sullivan to move, That, in the opinion of this House, it is the duty of the Government to resume the shores of Chowder Bay, and by the construction of a breakwater there establish a commodious bathing place for the residents of Sydney and its suburbs.

NEW SOUTH WALES.

LEGISLATIVE ASSEMBLY.

No. 10.

NOTICES OF QUESTIONS AND MOTIONS AND ORDERS OF THE DAY.

Thursday, 23 March, 1899.

QUESTIONS:—

1. MR. SMITH *to ask* THE MINISTER OF JUSTICE,—
   (1.) Is it a fact that the Hunter River New Steam Navigation Company was recently fined for dangerously overcrowding the s.s. "Newcastle" upon an excursion trip from Newcastle to Broken Bay?
   (2.) Is he aware that the Stipendiary Magistrate suggested that the defendant company should make application for a refund of the fines imposed?
   (3.) Is it a fact that the defendant company have made an application for such refund?
   (4.) Has the application been favourably considered; if so, on what grounds?

2. MR. DACEY *to ask* THE COLONIAL SECRETARY,—
   (1.) In reference to the replies given by him to Mr. Dacey's Questions relating to the Coast Hospital nurses on 21st March, will he cause inquiry to be made as to the accuracy of the reply furnished to him by the Chief Medical Officer to Question No. 3, and definite answers to be given to Questions Nos. 4 and 5, all in reference to the exposure of these young women to wet when they are compelled by their duty to traverse the covered way connecting the wards with the kitchen, &c., during windy and rainy weather?
   (2.) Is it a fact that the papers relating to the subject referred to, the first document on which bears a date of about May, 1898, cannot be found; if so, who was the officer in whose possession they last were?
   (3.) In reference to the reply to Mr. Dacey's Questions Nos. 6 and 7, to the effect that "nurses "do not carry large quantities of hot water; small jugs full are often fetched by them," will he ascertain whether hot baths are entirely excluded from the treatment of patients in the Coast Hospital, or, if not, are they provided by means of the "small jugs full" of hot water carried the 100 yards which the answer shows it is necessary to traverse between the hot water supply and some of the wards?

3. MR. PRICE *to ask* THE COLONIAL TREASURER,—
   (1.) When will the grading of the officers of the Land Tax Department be completed?
   (2.) Is it a fact that a sub-board was appointed to grade the various officers; if so, was a report furnished by such sub-board; was the report ignored by the head of the Land Tax Department, and a further grading prepared by him?
   (3.) Is he aware that several officers were granted increases, and that payments dating back to 1st July were allowed?
   (4.) Have a number of officers appealed against the grading; have such appeals been lodged some months; if so, will he be good enough to cause an inquiry to be made, with a view to the expediting of same?
   (5.) Are Land Tax officers allowed the same holidays as other Civil Servants; if not, why not?
   (6.) Is he aware that the grading has caused great dissatisfaction; has he any objection to lay the report of the sub-board on the Table of this House?

GENERAL BUSINESS—NOTICES OF MOTIONS:—

1. MR. FEGAN to move, That there be laid upon the Table of this House the evidence taken at the Dudley Colliery Explosion Inquiry.

2. MR. PERRY to move, That there be laid upon the Table of this House all papers and correspondence *re* an application by Messrs. P. L. C. Shepherd and A. R. Pullen to lease the land on which the old police buildings are erected, at the corner of George and Pitt Streets, Sydney.

3. MR. O'SULLIVAN to move, That, in the opinion of this House, the Federal question having been settled so far as this branch of the Legislature is concerned, and a measure for the relief of the selectors having been introduced, it is now the imperative duty of Ministers to prolong the Session in order to pass the Early Closing, Arbitration, and Navigation Act Amendment Bills; a measure to provide better accommodation for shearers; to initiate public works of a reproductive character, and that will absorb the unemployed during the winter; and to effect such a reform of the Public Service Act as will ensure fair consideration for the servants of the State.

4. Mr. Barnes to move, That the Return to an Order, "Penny Postage System" laid upon the Table of this House, referred to the Printing Committee, and reported upon on 22nd December, 1898, be again referred to such Committee for its reconsideration.

5. Mr. Arthur Griffith to move, That an Address be presented to the Lieutenant-Governor, praying that His Excellency will be pleased to cause to be laid upon the Table of this House the papers in connection with the granting of an inquiry, under section 383 of the Criminal Law Amendment Act, in the case of Thomas Rofe.

Tuesday, 28 March.

QUESTIONS:—

1. Mr. O'Sullivan *to ask* The Colonial Treasurer,—
   (1.) With reference to his reply to the effect that teachers retiring would be credited with service prior to 1880 in the calculation of their pensions, are teachers who may be desirous of retiring now to understand that they will receive the consideration referred to before any fresh legislation is introduced?
   (2.) Will the public servants whose service has not been continuous be credited for pension purposes with the term served prior to the break in their service?

2. Mr. McGowen *to ask* The Colonial Treasurer,—
   (1.) Is it a fact that J. Hunter & Co. are making military boots as part of a Government contract?
   (2.) Is it a fact that hand labour has been dispensed with, and that this work is to be done by machinery?
   (3.) Did not the Government prevent another firm from doing similar work by machinery?
   (4.) If so, will the same course be pursued in this instance?

GENERAL BUSINESS—NOTICE OF MOTION:—

1. Mr. O'Sullivan to move, That, in the opinion of this House, it is the duty of the Government to resume the shores of Chowder Bay, and by the construction of a breakwater there establish a commodious bathing place for the residents of Sydney and its suburbs.

NEW SOUTH WALES.

LEGISLATIVE ASSEMBLY.

No. 11.

NOTICES OF QUESTIONS AND MOTIONS AND ORDERS OF THE DAY.

MEMORANDA :—

(1.) *The House meet at Four o'clock p.m. This Day.*

(2.) *Free Conference with the Legislative Council at Five o'clock p.m., in the Back Library, on the subject of the Assembly's disagreements to the Legislative Council's amendments in the Australasian Federation Enabling Bill.*

Tuesday, 28 March, 1899.

QUESTIONS :—

1. MR. O'SULLIVAN *to ask* THE COLONIAL TREASURER,—
   (1.) With reference to his reply to the effect that teachers retiring would be credited with service prior to 1880 in the calculation of their pensions, are teachers who may be desirous of retiring now to understand that they will receive the consideration referred to before any fresh legislation is introduced?
   (2.) Will the public servants whose service has not been continuous be credited for pension purposes with the term served prior to the break in their service?

2. MR. MCGOWEN *to ask* THE COLONIAL TREASURER,—
   (1.) Is it a fact that J. Hunter & Co. are making military boots as part of a Government contract?
   (2.) Is it a fact that hand labour has been dispensed with, and that this work is to be done by machinery?
   (3.) Did not the Government prevent another firm from doing similar work by machinery?
   (4.) If so, will the same course be pursued in this instance?

3. MR. CARROLL *to ask* THE COLONIAL TREASURER,—
   (1.) Is Mr. T. J. Bown still chairman of the Fire Brigades Board?
   (2.) If so, is he the same Mr. T. J. Bown who is agent for the Shand and Mason's fire engines and appliances in this Colony?
   (3.) Was the last fire engine imported obtained through his agency?
   (4.) At what cost?
   (5.) Is the chairman of the Fire Brigades Board the same Mr. T. J. Bown who carries on a brass-works in this city, and contracts with the Fire Brigades Board for work required?
   (6.) What salary does the chairman of the Fire Brigades Board receive per annum (if any)?

4. DR. ROSS *to ask* THE COLONIAL TREASURER,—Referring to clause 96 of Schedule 3 to the Australasian Federation Enabling Bill, viz.—"During a period of ten years after the establishment of the "Commonwealth and thereafter, until the Parliament otherwise provides, the Parliament may grant "financial assistance to any State on such terms and conditions as the Parliament thinks fit,"—
   (1.) Is it intended that the financial assistance contemplated shall apply to cover expenditure incurred by every State which had been sanctioned by the Federal Parliament; or will it be optional with the State or States to incur whatever debts they please in anticipation of the Federal Parliament having to pay them?
   (2.) Is it intended that the States which borrow the money from the Federal Parliament shall vote upon the particular question of financial assistance to them in determining such terms and conditions as Parliament thinks fit?
   (3.) Do the terms and conditions referred to apply to the amount of the assistance only, or do they extend also to the repayment of the loans?

GOVERNMENT BUSINESS—ORDER OF THE DAY :—

1. Advances to Settlers Bill; consideration in Committee of the Whole of the Legislative Council's amendments.

GENERAL BUSINESS—NOTICES OF MOTIONS :—

1. MR. O'SULLIVAN to move, That, in the opinion of this House, it is the duty of the Government to resume the shores of Chowder Bay, and by the construction of a breakwater there establish a commodious bathing place for the residents of Sydney and its suburbs.

2. MR. FEGAN to move, That there be laid upon the Table of this House the evidence taken at the Dudley Colliery Explosion Inquiry.

3. Mr. Perry to move, That there be laid upon the Table of this House all papers and correspondence *re* an application by Messrs. P. L. C. Shepherd and A. R. Pullen to lease the land on which the old police buildings are erected, at the corner of George and Pitt Streets, Sydney.

4. Mr. O'Sullivan to move, That, in the opinion of this House, the Federal question having been settled so far as this branch of the Legislature is concerned, and a measure for the relief of the selectors having been introduced, it is now the imperative duty of Ministers to prolong the Session in order to pass the Early Closing, Arbitration, and Navigation Act Amendment Bills; a measure to provide better accommodation for shearers; to initiate public works of a reproductive character, and that will absorb the unemployed during the winter; and to effect such a reform of the Public Service Act as will ensure fair consideration for the servants of the State.

5. Mr. Barnes to move, That the Return to an Order, "Penny Postage System" laid upon the Table of this House, referred to the Printing Committee, and reported upon on 22nd December, 1898, be again referred to such Committee for its reconsideration.

6. Mr. Arthur Griffith to move, That an Address be presented to the Lieutenant-Governor, praying that His Excellency will be pleased to cause to be laid upon the Table of this House the papers in connection with the granting of an inquiry, under section 383 of the Criminal Law Amendment Act, in the case of Thomas Rofe.

NEW SOUTH WALES.

LEGISLATIVE ASSEMBLY.

No. 12.

NOTICES OF QUESTIONS AND MOTIONS AND ORDERS OF THE DAY.

Wednesday, 29 March, 1899.

QUESTIONS:—

1. MR. RICHARDS *to ask* THE COLONIAL TREASURER,—
   (1.) What are the qualifications of inspectors of slaughter-houses in country districts?
   (2.) Does the Board of Health direct the municipal authorities that such inspectors shall pass a specified examination before appointment can be confirmed?
   (3.) Is he aware that at the present time reports are frequent as to the prevalence of diseases in sheep and cattle, and that, in consequence, great danger to public health in country districts exists because of the unfitness of many persons holding positions of inspectors of slaughter-houses?
2. MR. ROSE *to ask* THE COLONIAL SECRETARY,—
   (1.) Is it a fact that Major-General French has abolished the Sergeant's mess?
   (2.) If yes, is not such abolition against the Queen's Regulation?
3. MR. AFFLECK *to ask* THE COLONIAL TREASURER,—
   (1.) Is he aware what the grade of the approaches to the proposed Strathfield Bridge over the Railway line will be?
   (2.) If so, will he inform the House what the grade is; and if 1 in 12, or near that, will he see that an easier grade will be secured?
4. MR. BARTON *to ask* THE MINISTER OF JUSTICE,—
   (1.) Is he aware that in the last Parliament Mr. Gould, the then Minister of Justice, stated that a Bill was being prepared by the Parliamentary Draftsman, having for its object better provision against frauds on the part of agents, and that such a measure would be introduced on the first favourable opportunity?
   (2.) Will he during the recess make inquiries, with a view to the introduction of such a Bill early next Session?
5. MR. BARTON *to ask* THE COLONIAL TREASURER,—
   (1.) Is it his intention to refer the question of the prevention and mitigation of floods in the Hunter River District to a commission presided over by Mr. Napier Bell, C.E., as stated some time ago in the daily papers?
   (2.) If so, will he consider the advantage of extending the scope of the inquiry, so as to include other Northern districts which are seriously affected by the ravages of floods?

GOVERNMENT BUSINESS—ORDER OF THE DAY:—

1. Advances to Settlers Bill; consideration in Committee of the Whole of the Legislative Council's amendments.

GENERAL BUSINESS—NOTICES OF MOTIONS:—

1. MR. O'SULLIVAN to move, That, in the opinion of this House, it is the duty of the Government to resume the shores of Chowder Bay, and by the construction of a breakwater there establish a commodious bathing place for the residents of Sydney and its suburbs.
2. MR. FEGAN to move, That there be laid upon the Table of this House the evidence taken at the Dudley Colliery Explosion Inquiry.
3. MR. PERRY to move, That there be laid upon the Table of this House all papers and correspondence *re* an application by Messrs. P. L. C. Shepherd and A. R. Pullen to lease the land on which the old police buildings are erected, at the corner of George and Pitt Streets, Sydney.
4. MR. O'SULLIVAN to move, That, in the opinion of this House, the Federal question having been settled so far as this branch of the Legislature is concerned, and a measure for the relief of the selectors having been introduced, it is now the imperative duty of Ministers to prolong the Session in order to pass the Early Closing, Arbitration, and Navigation Act Amendment Bills; a measure to provide better accommodation for shearers; to initiate public works of a reproductive character, and that will absorb the unemployed during the winter; and to effect such a reform of the Public Service Act as will ensure fair consideration for the servants of the State.
5. MR. BARNES to move, That the Return to an Order, "Penny Postage System" laid upon the Table of this House, referred to the Printing Committee, and reported upon on 22nd December, 1898, be again referred to such Committee for its reconsideration.
6. MR. ARTHUR GRIFFITH to move, That an Address be presented to the Lieutenant-Governor, praying that His Excellency will be pleased to cause to be laid upon the Table of this House the papers in connection with the granting of an inquiry, under section 383 of the Criminal Law Amendment Act, in the case of Thomas Rofe.

NEW SOUTH WALES.

LEGISLATIVE ASSEMBLY.

No. 13.

NOTICES OF QUESTIONS AND MOTIONS AND ORDERS OF THE DAY.

Thursday, 30 March, 1899.

GENERAL BUSINESS—NOTICES OF MOTIONS:—

1. MR. O'SULLIVAN to move, That, in the opinion of this House, it is the duty of the Government to resume the shores of Chowder Bay, and, by the construction of a breakwater there, establish a commodious bathing place for the residents of Sydney and its suburbs.

2. MR. PERRY to move, That there be laid upon the Table of this House all papers and correspondence *re* an application by Messrs. P. L. C. Shepherd and A. R. Pullen to lease the land on which the old police buildings are erected, at the corner of George and Pitt Streets, Sydney.

3. MR. O'SULLIVAN to move, That, in the opinion of this House, the Federal question having been settled so far as this branch of the Legislature is concerned, and a measure for the relief of the selectors having been introduced, it is now the imperative duty of Ministers to prolong the Session in order to pass the Early Closing, Arbitration, and Navigation Act Amendment Bills; a measure to provide better accommodation for shearers; to initiate public works of a reproductive character, and that will absorb the unemployed during the winter; and to effect such a reform of the Public Service Act as will ensure fair consideration for the servants of the State.

4. MR. BARNES to move, That the Return to an Order, "Penny Postage System," laid upon the Table of this House, referred to the Printing Committee, and reported upon on 22nd December, 1898, be again referred to such Committee for its reconsideration.

5. MR. ARTHUR GRIFFITH to move, That an Address be presented to the Lieutenant-Governor, praying that His Excellency will be pleased to cause to be laid upon the Table of this House the papers in connection with the granting of an inquiry, under section 383 of the Criminal Law Amendment Act, in the case of Thomas Rofe.

1899.

LEGISLATIVE ASSEMBLY.

NEW SOUTH WALES.

BUSINESS UNDISPOSED OF AT THE CLOSE OF THE SESSION.

(PROROGUED 30 MARCH, 1899.)

GENERAL BUSINESS—NOTICES OF MOTIONS:—

1. MR. O'SULLIVAN to move, That, in the opinion of this House, it is the duty of the Government to resume the shores of Chowder Bay, and, by the construction of a breakwater there, establish a commodious bathing place for the residents of Sydney and its suburbs.

2. MR. PERRY to move, That there be laid upon the Table of this House all papers and correspondence *re* an application by Messrs. P. L. C. Shepherd and A. R. Pullen to lease the land on which the old police buildings are erected, at the corner of George and Pitt Streets, Sydney.

3. MR. O'SULLIVAN to move, That, in the opinion of this House, the Federal question having been settled so far as this branch of the Legislature is concerned, and a measure for the relief of the selectors having been introduced, it is now the imperative duty of Ministers to prolong the Session in order to pass the Early Closing, Arbitration, and Navigation Act Amendment Bills; a measure to provide better accommodation for shearers; to initiate public works of a reproductive character, and that will absorb the unemployed during the winter; and to effect such a reform of the Public Service Act as will ensure fair consideration for the servants of the State.

4. MR. BARNES to move, That the Return to an Order, "Penny Postage System," laid upon the Table of this House, referred to the Printing Committee, and reported upon on 22nd December, 1898, be again referred to such Committee for its reconsideration.

5. MR. ARTHUR GRIFFITH to move, That an Address be presented to the Lieutenant-Governor, praying that His Excellency will be pleased to cause to be laid upon the Table of this House the papers in connection with the granting of an inquiry, under section 383 of the Criminal Law Amendment Act, in the case of Thomas Rofe.

Legislative Assembly Office,
Sydney, 30th March, 1899.

F. W. WEBB,
Clerk of the Legislative Assembly.

No. 1.—Contingent Notices of Amendments and Clauses to be moved in Committee of the Whole.

AUSTRALASIAN FEDERATION ENABLING BILL.

MR. HAYNES to move :—

Page 4. First Schedule, line 24. *After* "Ballot Paper" *omit* remainder of Schedule. *Insert*

(1) "Are you in favour of the proposed Federal Constitution "Bill as amended at the Conference of Premiers in "Melbourne?"

(2) "Are you in favour of the proposed Federal Constitution "Bill as amended by the Legislative Assembly of New "South Wales?"

No. 1.—"Yes."

No. 2.—"Yes."

"Of these two proposals strike out only the one you are "against."

No. 2.—Contingent Notices of Amendments and Clauses to be moved in Committee of the Whole.

AUSTRALASIAN FEDERATION ENABLING BILL.

MR. HAYNES to move :—

Page 4. First Schedule, line 24. *After* "Ballot Paper" *omit* remainder of Schedule. *Insert*

(1) "Are you in favour of the proposed Federal Constitution "Bill as amended at the Conference of Premiers in "Melbourne?"

(2) "Are you in favour of the proposed Federal Constitution "Bill as amended by the Legislative Assembly of New "South Wales?"

No. 1.—"Yes."

No. 2.—"Yes."

"Of these two proposals strike out only the one you are "against."

MR. HUGHES to move :—

Page 3. Clause 7, line 33. *After* "Colonies" *insert* "and "Queensland"

No. 3.—Contingent Notice of Amendment and Clause to be moved in Committee of the Whole.

ADVANCES TO SETTLERS BILL.

MR. WATSON to move:—

Page 3, clause 9. To stand as subsection (*e*)—

(*e*) No such advance shall be made in respect of land subject to mortgage unless the consent of the mortgagee or mortgagees shall first have been lodged with the board.
